

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

AMENDMENT NO. 3**TO****FORM S-4****REGISTRATION STATEMENT****UNDER****THE SECURITIES ACT OF 1933****INFONAUTICS, INC.**

(Exact Name of Registrant as Specified in Its Charter)

Pennsylvania
(State or Other Jurisdiction of
Incorporation or Organization)

7389
(Primary Standard Industrial
Classification Code Number)

23-2707366
(I.R.S. Employer
Identification Number)

590 North Gulph Road
King of Prussia, PA 19406
(610) 971-8840

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

David Van Riper Morris
President and Chief Executive Officer
Infonautics, Inc.
590 North Gulph Road
King of Prussia, PA 19406
(610) 971-8840

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

Copies to:

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Approximate date of commencement of proposed sale to the public: At the effective time of the merger of a wholly owned subsidiary of the registrant with and into Tucows Inc., which will occur as soon as practicable after this Registration Statement becomes effective and all other conditions to the proposed merger have been satisfied or waived.

If the securities being registered on this form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

CALCULATION OF REGISTRATION FEE

Title Of Each Class Of Securities To Be Registered	Amount To Be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(2)	Amount Of Registration Fee(2)
Common Stock, no par value	60,054,111	N/A	\$15,185	\$4(3)

- (1) Based upon the maximum number of shares expected to be issued to stockholders of Tucows Inc. in the merger described herein.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(f)(2) under the Securities Act of 1933, as amended. Pursuant to Rule 457(f)(2), because Tucows has an accumulated capital deficit, the proposed maximum aggregate offering price of the registrant's common stock was calculated as one-third of the aggregate par value of 45,554,390 shares of Tucows common stock (the maximum number of shares of Tucows common stock outstanding immediately prior to the effective time of the merger assuming the exercise and conversion of all outstanding and convertible securities of Tucows).
- (3) Previously paid.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

INFONAUTICS, INC.
590 North Gulph Road
King of Prussia, Pennsylvania 19406
, 2001

Dear Infonautics Shareholder:

You are cordially invited to attend the annual meeting of shareholders of Infonautics, Inc. to be held at the Philadelphia Marriott West, Matsonford Road at Front Street, 111 Crawford Avenue, West Conshohocken, Pennsylvania, on Friday, August 17, 2001, at 9:30 a.m. (local time). At the annual meeting, you will be asked to:

- approve the issuance of shares of Infonautics common stock to the stockholders of Tucows in a merger of Tucows with a newly formed subsidiary of Infonautics. In the merger, Infonautics will issue approximately 60,054,100 shares of Infonautics common stock and options in exchange for all the outstanding capital stock and options of Tucows. Following the merger, former stockholders of Tucows will own approximately 80% of Infonautics.
- approve an amendment and restatement of the articles of incorporation of Infonautics, the principal purpose of which is to increase the number of authorized shares of Infonautics common stock to 250,000,000.
- elect five directors, each for a one-year term and until the election and qualification of his successor.
- approve an amendment to Infonautics' 1996 equity compensation plan to increase the number of shares of common stock reserved for issuance under the plan from 2,500,000 to 10,000,000.

We cannot complete the merger unless the proposals to increase the number of shares of Infonautics authorized common stock and to issue Infonautics shares in the merger receive the affirmative vote of the holders of a majority of the votes cast by holders of Infonautics common stock at the annual meeting.

The Infonautics common stock is not traded on any national securities exchange or the Nasdaq Stock Market. It trades on the OTC Bulletin Board maintained by Nasdaq.

The board of directors of Infonautics has approved the merger agreement, the amendment and restatement of the articles of incorporation and the amendment to the 1996 equity compensation plan and unanimously recommends that you vote in favor of all three of these proposals. The Infonautics board of directors also recommends election of the five nominees as directors.

Enclosed with this letter is a notice of annual meeting and joint proxy statement/prospectus. The document contains important information about Infonautics, Tucows and the merger and the other proposals. Please read it carefully. **In particular, you should carefully consider the discussion in "Risk Factors" beginning on page 19 of the joint proxy statement/prospectus.**

It is important that your shares be represented at the annual meeting, whether or not you attend the meeting and regardless of the number of shares you own. We look forward to seeing you on August 17, 2001.

Yours very truly,

/s/ David Van Riper Morris

David Van Riper Morris
President and Chief Executive Officer

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued in the merger or determined if this joint proxy statement/prospectus is accurate or complete. Any representation to the contrary is a criminal offense.

This joint proxy statement/prospectus is dated _____, 2001, and is first being mailed to shareholders of Infonautics and stockholders of Tucows on or about _____, 2001.

INFONAUTICS, INC.
590 North Gulph Road
King of Prussia, Pennsylvania 19406

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS
August 17, 2001 at 9:30 a.m.

To the Shareholders of Infonautics, Inc.:

Notice is given that the annual meeting of shareholders of Infonautics, Inc. will be held on August 17, 2001 at 9:30 a.m., local time, at the Philadelphia Marriott West, Matsonford Road at Front Street, 111 Crawford Avenue, West Conshohocken, Pennsylvania, to:

1. Consider and vote upon a proposal to approve the issuance of shares of Infonautics common stock, as provided in an agreement and plan of merger by and among Infonautics, Tucows Inc. and TAC Merger Sub Corporation, a wholly owned subsidiary of Infonautics, under which TAC Merger Sub Corporation will merge with and into Tucows, and Tucows will become a wholly owned subsidiary of Infonautics;
2. Consider and vote upon a proposal to adopt an amendment and restatement of the Infonautics articles of incorporation;
3. Elect five directors, each for a one-year term and until the election and qualification of his successor;
4. Consider and vote upon a proposal to amend Infonautics' 1996 equity compensation plan to increase the number of shares of common stock reserved for issuance under the plan to 10,000,000; and
5. Transact any other business as may properly come before the annual meeting or any adjournment or postponement of the annual meeting.

These items of business are described in the attached joint proxy statement/prospectus. Holders of record of Infonautics common stock at the close of business on July 20, 2001, the record date, are entitled to notice of, and to vote at, the annual meeting and any adjournments or postponements of the annual meeting. A list of shareholders entitled to vote at the annual meeting will be available for inspection during normal business hours for ten days before the annual meeting at Infonautics' executive offices at 590 North Gulph Road, King of Prussia, Pennsylvania 19406.

Your vote is very important, regardless of the number of shares you own. Please vote as soon as possible to make sure that your shares are represented at the meeting. To vote your shares, you may complete and return the enclosed proxy card. If you are a holder of record, you may also cast your vote in person at the annual meeting. If your shares are held in an account at a brokerage firm or bank, you must instruct them on how to vote your shares.

By Order of the Board of Directors,

/s/ Gerard J. Lewis, Jr.

Gerard J. Lewis, Jr.
Secretary

King of Prussia, Pennsylvania
, 2001

TUCOWS INC.
96 Mowat Avenue
Toronto, Ontario M6K 3M1
Canada

Dear Tucows Stockholder:

You are cordially invited to attend a special meeting of the stockholders of Tucows Inc. to be held at Tucows executive offices located at 96 Mowat Avenue, Toronto, Ontario M6K 3M1, Canada on Friday, August 17, 2001, at 10:00 a.m. (local time).

At the special meeting, you will be asked to approve the agreement and plan of merger by and among Infonautics, Inc., Tucows Inc. and TAC Merger Sub Corporation, a wholly owned subsidiary of Infonautics, under which TAC Merger Sub Corporation will merge with and into Tucows, and Tucows will become a wholly owned subsidiary of Infonautics.

In the merger, Infonautics will issue up to approximately 60,054,100 shares of Infonautics common stock and options in exchange for all the outstanding capital stock and options of Tucows. Following the merger, former stockholders of Tucows will own approximately 80% of Infonautics.

You should carefully review the considerations discussed in “Risk Factors” in the accompanying joint proxy statement/prospectus.

Tucows’ board of directors has unanimously approved the merger agreement and the merger and recommends that you vote to approve the merger agreement and the merger at the special meeting. The merger agreement is attached to the accompanying joint proxy statement/prospectus which contains details about the matters to be voted upon at the special meeting. We encourage you to read the merger agreement and the joint proxy statement/prospectus carefully.

Whether or not you plan to attend the meeting, please complete, sign and date the accompanying proxy card and return it in the enclosed postage prepaid envelope. It is important that your shares be voted whether or not you attend the meeting in person. If you attend the meeting, you may vote in person even if you have returned your proxy card. Your prompt cooperation will be greatly appreciated.

Yours very truly,

/s/ Elliot Noss

Elliot Noss
President and Chief Executive Officer

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued in the merger or determined if this joint proxy statement/prospectus is accurate or complete. Any representation to the contrary is a criminal offense.

This joint proxy statement/prospectus is dated _____, 2001, and is first being mailed to shareholders of Infonautics and stockholders of Tucows on or about _____, 2001.

TUCOWS INC.

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

August 17, 2001 at 10:00 a.m.

To the Stockholders of Tucows Inc.:

Notice is given that a special meeting of stockholders of Tucows Inc. will be held on August 17, 2001 at Tucows' executive offices at 96 Mowat Avenue, Toronto, Ontario M6K 3M1, Canada at 10:00 a.m., local time, to:

1. Consider and vote upon a proposal to adopt an agreement and plan of merger by and among Infonautics, Tucows Inc. and TAC Merger Sub Corporation, a wholly owned subsidiary of Infonautics, under which TAC Merger Sub Corporation will merge with and into Tucows, and Tucows will become a wholly owned subsidiary of Infonautics.
2. Transact any other business that may properly come before the special meeting or any adjournment or postponement of the special meeting.

These items of business are described in the attached joint proxy statement/prospectus. Holders of record of shares of Tucows common stock and series A convertible preferred stock at the close of business on June 26, 2001, the record date, are entitled to notice of, and to vote at, the special meeting and any adjournments or postponements of the special meeting. A list of stockholders entitled to vote at the special meeting will be available for inspection during normal business hours for ten days before the special meeting at Tucows' executive offices at 96 Mowat Avenue, Toronto, Ontario M6K 3M1, Canada.

Your vote is very important, regardless of the number of shares you own. Please vote as soon as possible to make sure that your shares are represented at the meeting. To vote your shares, you may complete and return the enclosed proxy card. If you are a holder of record, you may also cast your vote in person at the special meeting. If you do not vote, it will have the same effect as voting against the merger.

Under Delaware law, holders of shares of Tucows common stock and series A convertible preferred stock who submit a written demand for appraisal of their shares and who comply with the other statutory procedures, including not voting in favor of adoption of the merger agreement, will be entitled to appraisal rights and to receive payment in cash for the fair value of their shares as determined by the Delaware Chancery Court. A summary of the applicable provisions of Delaware law is contained in the accompanying joint proxy statement/prospectus under "The Merger—Appraisal Rights." The text of the applicable provisions of Delaware law is attached as annex 6 to this joint proxy statement/prospectus.

By Order of the Board of Directors,

/s/ Stanley Stern

Stanley Stern
Secretary

Toronto, Ontario
, 2001

REFERENCE TO ADDITIONAL INFORMATION

The accompanying joint proxy statement/prospectus incorporates important business and financial information about Infonautics from documents that are not included in or delivered with the accompanying joint proxy statement/prospectus. This information is available to you without charge upon request. You can obtain documents incorporated by reference in the accompanying joint proxy statement/prospectus by requesting them in writing or by telephone from Infonautics at the following address and telephone number:

Infonautics, Inc.
Gerard J. Lewis, Jr.
Vice President and General Counsel
590 North Gulph Road
King of Prussia, PA 19406
(610) 971-8840

If you would like to request documents, please do so by August 6, 2001 to receive them before the meeting.

Also, see “Where You Can Find More Information” on page 140.

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Annexes:

1	Agreement and Plan of Merger
2	Second Amended and Restated Articles of Incorporation of Infonautics, Inc.
3	Form of Infonautics Shareholder Agreement
4	Form of Tucows Stockholder Agreement
5	Opinion of Janney Montgomery Scott
6	Section 262 of the Delaware General Corporation Law
7	Infonautics Audit Committee Charter

QUESTIONS AND ANSWERS ABOUT THE MERGER

Q: How will the merger be structured?

A: Infonautics and Tucows have entered into a merger agreement that provides for the merger of Tucows and a newly formed wholly owned subsidiary of Infonautics. Following the merger, Tucows will become a wholly owned subsidiary of Infonautics, and Infonautics' name will be changed to Tucows Inc. Tucows is a privately held Delaware corporation with its principal offices in Toronto, Canada. We urge you to read carefully the entire merger agreement, which is attached to this joint proxy statement/prospectus as annex 1.

Q: What will stockholders of Tucows and shareholders of Infonautics receive in the merger?

A: Infonautics will issue approximately 60,054,100 shares of Infonautics common stock and options to purchase Infonautics common stock in exchange for all outstanding shares of Tucows capital stock. After the merger, Tucows stockholders will own approximately 80% of Infonautics. Infonautics shareholders will not receive any additional shares in the merger.

Q: Why are Infonautics and Tucows proposing the merger and the merger consideration?

A: The boards of directors of Infonautics and Tucows are proposing the merger because they believe that the combination of Infonautics' and Tucows' complementary digital content distribution businesses, Tucows' business of providing Internet based applications and services and Infonautics' liquid capital assets will give the combined company the potential to become a leading on-line provider of digital applications and services. The boards of directors of Infonautics and Tucows also believe that integrating the products and services of the two companies may open up new markets.

In deciding to recommend the merger to Infonautics shareholders, the board of directors of Infonautics analyzed historical and prospective information concerning the business, financial condition, operations, technology and competitive position of Infonautics and Tucows, including the financial analysis and opinion of Janney Montgomery Scott dated March 26, 2001, and a variety of other factors discussed in more detail under "Infonautics Reasons for the Merger" beginning on page 42 of this joint proxy statement/prospectus. Based on valuations of the two companies that the Infonautics board considered to be reasonable, the Infonautics board concluded the amount of merger consideration issuable to Tucows stockholders is fair to Infonautics shareholders.

The merger was structured as an acquisition of Tucows by Infonautics so that Tucows stockholders would receive Infonautics common stock in the merger and would have an increased possibility of liquidity for their holdings.

Q: Is it necessary to amend the Infonautics articles of incorporation to complete the merger?

A: Yes. Infonautics does not have enough authorized shares of common stock to issue the shares to be issued to Tucows stockholders in the merger, so the Infonautics articles of incorporation must be amended to increase the number of authorized shares of common stock. Infonautics is proposing that its shareholders approve an amendment and restatement of its articles of incorporation, which is attached to this joint proxy statement/prospectus as annex 2.

Q: How do I vote?

A: After reading and considering the information contained in this joint proxy statement/prospectus, you should complete, sign and date your proxy card and return it in the enclosed postage-paid envelope as soon as possible. You may also attend your company's meeting instead of submitting a proxy.

Q: What if I don't vote on the merger proposal?

A: If you are an Infonautics shareholder:

- If you fail to respond, your shares will not be counted for any purpose, including determining whether a quorum is present so that business can be done at the Infonautics annual meeting. If your shares are held in street name by your broker, your broker will vote your shares on the merger proposal only if you provide instructions on how to vote. You should follow the directions provided by your broker about how to instruct your broker to vote your shares. If your broker returns a proxy without instructions, your shares will be considered present for purposes of determining a quorum but will not be voted at the annual meeting on the merger.
- If you respond and do not indicate how you want to vote, your proxy will be counted as a vote in favor of the issuance of shares of common stock in the merger and the amendment and restatement of the articles of incorporation.
- If you respond and abstain from voting, your shares will be counted for determining whether there is a quorum, but will otherwise have no effect.

If you are a Tucows stockholder:

- If you fail to respond, it will have the same effect as a vote against the merger.
- If you respond and do not indicate how you want to vote, your proxy will be counted as a vote in favor of the merger.
- If you respond and abstain from voting, your proxy will have the same effect as a vote against the merger.

Q: Can I change my vote after I have delivered my proxy?

A: Yes. You can change your vote at any time before your proxy is voted. You can do this in one of three ways. First, you can revoke your proxy. Second, you can submit a new proxy. If you choose either of these two methods, you must submit your notice of revocation or your new proxy to the secretary of Infonautics or Tucows as appropriate, before your company's meeting. If your Infonautics shares are held in an account at a brokerage firm or bank, you should contact your brokerage firm or bank to change your vote. Third, if you are a holder of record, you can attend your company's meeting and vote in person.

Q: Should I send in my stock certificates now?

A: No. After the merger is completed, Tucows stockholders will receive written instructions from the exchange agent on how to exchange their stock certificates for stock certificates of Infonautics. Infonautics shareholders will keep their existing stock certificates. Please do not send in your stock certificates with your proxy.

Q: Who can help answer my questions?

A: If you have any questions about the merger or how to submit your proxy, or if you need additional copies of this joint proxy statement/prospectus or the enclosed proxy card, you should contact:

- if you are an Infonautics shareholder:

Infonautics, Inc.
Gerard J. Lewis, Jr.
Vice President and General Counsel
590 North Gulph Road
King of Prussia, PA 19406-2800
U.S.A.
(610) 971-8840
glewis@infonautics.com

- if you are a Tucows stockholder:

Tucows Inc.
Brenda Lazare
General Counsel
96 Mowat Avenue
Toronto, Ontario M6K 3M1
Canada
(416) 535-0123
blazare@tucows.com

SUMMARY OF THE JOINT PROXY STATEMENT/PROSPECTUS

This summary highlights selected information in the joint proxy statement/prospectus and may not contain all of the information that is important to you. You should carefully read this entire joint proxy statement/prospectus and the other documents to which we refer for a more complete understanding of the merger. In particular, you should read the documents attached to and accompanying this joint proxy statement/prospectus, including the merger agreement which is attached as annex 1.

The Companies

Infonautics, Inc.

590 North Gulph Road
King of Prussia, Pennsylvania 19406-2800
U.S.A.
(610) 971-8840
<http://www.infonautics.com>

Infonautics is a provider of personalized information agents and websites. Infonautics delivers information over the Internet and other communications mediums such as e-mail. Infonautics' sites provide users with relevant information they cannot conveniently locate in any one place elsewhere on the Internet. Infonautics' content notification sites are personal portals that provide users with comprehensive information on a specific topic or area of interest. Infonautics' search and reference sites deliver archival research content in response to users' questions. As the amount of information on the Internet continues to grow, Infonautics believes that users value its delivery of relevant information.

Infonautics' content notification sites—Company Sleuth and Job Sleuth—are intelligent personalized information agents that are designed to deliver the information users want, when and where they want it. These content notification sites produce revenue in a variety of ways, including through advertising and affiliate marketing.

Infonautics' search and reference sites—Electric Library, Encyclopedia.com, and Newsdirectory.com—provide relevant information in response to users' questions and preferences from sites that are highly differentiated from traditional search engines and directories. These search and reference sites produce revenue primarily through Electric Library subscription fees, and also through advertising, affiliate marketing and co-branding.

Infonautics was incorporated in Pennsylvania in November 1992.

Tucows Inc.

96 Mowat Avenue
Toronto, Ontario M6K 3M1
Canada
(416) 535-0123
<http://www.tucows.com>

Tucows manages a global Internet-based distribution network through which business applications, services and content are delivered to customers including Internet service providers and web hosting, telecommunications and cable companies. Tucows refers to its customers as managed service providers or MSPs. Tucows distribution network includes over 5,000 MSPs in over 100 countries.

Tucows offers its MSPs and other customers:

- Domain name registration services and ancillary services. Tucows' OpenSRS software system provides a technical infrastructure that allows MSPs to register and manage the delivery of domain names and the sale of web certificates to end-user consumers. Tucows also provides

retail domain name registration services as a registrar and a service that allows registrars accredited by ICANN, the Internet Corporation for Assigned Names and Numbers, to use Tucows' technical systems to process domain name registrations.

- Digital content distribution. Tucows distributes software and other digital content both directly to consumers and indirectly through its accelerated content delivery network, a system that allows Tucows' network of over 1,000 partners located around the world to deliver software and digital content efficiently to their local consumers. Revenue is produced from the content websites through advertising.

Tucows' objective is to use its global sales and distribution channel to become a leading distributor of e-business applications and services on the Internet.

Tucows was incorporated in Delaware in April 1999.

The Meetings—see pages 34 and 37

Annual Meeting of Infonautics Shareholders. The Infonautics annual meeting will be held at the Philadelphia Marriott West, Matsonford Road at Front Street, 111 Crawford Avenue, West Conshohocken, Pennsylvania, on August 17, 2001, starting at 9:30 a.m., local time.

Special Meeting of Tucows Stockholders. The Tucows special meeting will be held at 96 Mowat Avenue, Toronto, Ontario M6K 3M1, Canada on August 17, 2001, starting at 10:00 a.m., local time.

The Merger

Infonautics, Tucows and TAC Merger Sub Corporation, a newly formed wholly owned subsidiary of Infonautics, have entered into a merger agreement that provides for the merger of TAC Merger Sub Corporation with Tucows. Tucows will become a wholly owned subsidiary of Infonautics, and stockholders of Tucows will become shareholders of Infonautics.

After the merger, former Tucows stockholders will own approximately 80% of Infonautics, and the name of Infonautics will be changed to Tucows Inc.

Infonautics shareholders are being asked to approve the issuance of shares of Infonautics common stock in the merger. Tucows stockholders are being asked to adopt the merger agreement.

The merger agreement is attached to this joint proxy statement/prospectus as annex 1.

Merger Consideration—see page 54

In the merger, Infonautics will issue approximately 60,054,100 shares of Infonautics common stock and options to purchase Infonautics common stock in exchange for all outstanding shares of Tucows capital stock and options.

The total merger consideration to be issued to Tucows stockholders will be equal to four times the sum of

- 12,574,406, which is the number of issued and outstanding shares of Infonautics common stock on March 27, 2001, the date of the merger agreement, plus
- any restricted shares of Infonautics common stock issued or to be issued to employees of Infonautics in exchange for the cancellation of previously granted stock options,

less 80,000.

The exchange ratio that determines the number of shares of Infonautics common stock to be issued in exchange for each share of Tucows common stock or Tucows preferred stock is:

- the total merger consideration, divided by
- the number of shares of Tucows common stock and preferred stock outstanding immediately before the effective time of the merger, excluding any shares issuable on exercise or conversion of any Tucows employee stock options, estimated to be approximately 36,131,000.

For example, assume that 371,100 shares of restricted stock will be issued to Infonautics shareholders in exchange for previously granted options and no additional shares of Tucows capital stock are issued before the effective time of the merger. On that basis, the total number of shares of Infonautics common stock to be issued to Tucows stockholders will be 51,702,024, and each issued and outstanding share of Tucows common stock or Tucows preferred stock will be converted into 1.4309 shares of Infonautics common stock.

Infonautics shareholders will not receive any additional shares in the merger.

After the merger former Tucows stockholders will own approximately 80% of the combined company.

Treatment of Tucows Stock Options—see page 55

When the merger is completed, each outstanding Tucows option to purchase common stock will be converted into an option to purchase the number of shares of Infonautics common stock into which the option would have been converted if it had been exercised immediately before the effective time of the merger. The exercise price per share for each Tucows stock option after the merger will be the exercise price of the Tucows stock option divided by the exchange ratio for exchanging Tucows capital stock for Infonautics common stock in the merger. It is estimated that approximately 5,836,700 Tucows stock options will be converted to options to purchase Infonautics common stock.

It is a condition to Infonautics' obligation to complete the merger that all of Tucows' outstanding options to purchase Tucows preferred stock must have been amended or canceled so that exercise of these options will not require the issuance of any additional shares of Infonautics common stock or cause an increase in the total merger consideration to be issued to Tucows stockholders. It is anticipated that each outstanding option to purchase Tucows preferred stock will be canceled before completion of the merger.

Stockholder Approvals—see pages 34 and 37

The affirmative vote of the holders of a majority of the votes cast by holders of Infonautics common stock at a meeting at which a quorum is present is required to approve the issuance of Infonautics common stock to Tucows stockholders in the merger. Each holder of record of Infonautics common stock on July 20, 2001 is entitled to one vote per share. Under a stockholder agreement in the form attached to this joint proxy statement/prospectus as annex 3, Marvin Weinberger and Fran Solow Weinberger, who own beneficially approximately 9.1% of Infonautics common stock outstanding as of March 27, 2001, have agreed to vote all of their shares for approval of the issuance of Infonautics common stock in the merger.

The holders of a majority of the shares of Tucows common stock and preferred stock, voting together as a single class, are required to approve the merger agreement and the merger. Each holder of record of Tucows common stock or Tucows preferred stock as of June 26, 2001 is entitled to cast one vote per share. Under stockholder agreements in the form attached to this joint proxy statement/prospectus as annex 4, principal stockholders of Tucows owning beneficially approximately 54% of the Tucows voting securities outstanding as of March 27, 2001 have agreed to vote all of their shares for

approval of the merger agreement and the merger and against any other proposal to acquire Tucows. Approval of the merger by the Tucows stockholders is assured.

Recommendations of the Boards of Directors—see pages 43 and 53

To Infonautics Shareholders: The Infonautics board of directors believes that the merger is fair to you and in your best interest and unanimously voted to approve the merger agreement and unanimously recommends that you vote FOR the issuance of shares of Infonautics common stock in the merger.

To Tucows Stockholders: The Tucows board of directors has unanimously voted to approve the merger agreement and unanimously recommends that you vote FOR the adoption of the merger agreement.

Opinion of Infonautics' Financial Advisor—see page 43

In deciding to approve the merger, the Infonautics board of directors considered the opinion of its financial advisor, Janney Montgomery Scott LLC, that, as of the date of its opinion, and subject to and based on the considerations referred to in its opinion, the consideration to be received in the merger is fair, from a financial point of view, to the holders of Infonautics common stock. The full text of this opinion is attached as annex 5 to this joint proxy statement/prospectus. Infonautics urges its shareholders to read the opinion of Janney Montgomery Scott in its entirety. Under the terms of Infonautics' engagement with Janney Montgomery Scott, Infonautics has paid Janney Montgomery Scott a fee of \$125,000 for its financial advisory services related to the merger. Upon completion of the merger, Infonautics will pay Janney Montgomery Scott an additional \$50,000 for its financial advisory services related to the merger. Infonautics has also agreed to reimburse Janney Montgomery Scott for its out-of-pocket expenses.

Appraisal Rights—see page 60

Infonautics shareholders have no rights of appraisal in the merger.

Under Delaware law, Tucows stockholders who comply with statutory procedures will be entitled to appraisal rights and to receive payment in cash for the fair value of their shares as determined by the Delaware Chancery Court. Tucows stockholders who desire to exercise their appraisal rights must:

- file a written notice with Tucows before the Tucows special meeting of an intention to exercise appraisal rights;
- not vote in favor of the merger; and
- comply with other statutory procedures if the merger is approved.

Under the merger agreement, Infonautics is not obligated to complete the merger if holders of more than 150,000 shares of Tucows capital stock request appraisal rights and do not withdraw their requests.

Board of Directors and Management Following the Merger—see page 115

The merger agreement provides that the board of directors of Infonautics after the merger will be composed of nine directors. Seven of the directors will be designated by Tucows. Two of the directors of Infonautics who will be elected at the Infonautics annual meeting will continue as directors after the merger.

Interests of Directors and Executive Officers in the Merger—see pages 50 and 53

Some of the directors and executive officers of Tucows and Infonautics have interests in the merger that are different from the interests of holders of their company's capital stock.

Directors and officers of Infonautics have the following interests that differ from the interests of shareholders of Infonautics:

- David Van Riper Morris, a director of Infonautics and its president and chief executive officer, holds 193,040 restricted shares of Infonautics common stock that will vest on completion of the merger, with a market value of \$158,293 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Mr. Morris also holds options to purchase 100,000 shares of Infonautics common stock with exercise prices that are higher than the market price of the stock. Mr. Morris also has the right to receive up to \$250,000 in severance pay when he leaves the employ of Infonautics, of which \$83,000 is payable only if he remains with Infonautics until completion of the merger.
- Federica F. O'Brien, Infonautics' vice president, chief financial officer and treasurer, holds 18,900 restricted shares of Infonautics common stock that will vest on completion of the merger, with a market value of \$15,498 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Ms. O'Brien also has the right to receive up to \$200,000 in severance pay when she leaves the employ of Infonautics, of which \$67,000 is payable only if she remains with Infonautics until completion of the merger.
- Gerard J. Lewis, Jr., Infonautics' vice president, general counsel and secretary, holds 10,000 restricted shares of Infonautics common stock that will vest on completion of the merger, with a market value of \$8,200 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Mr. Lewis also holds options to purchase 90,000 shares of Infonautics common stock with exercise prices that are higher than the market price of the stock. Mr. Lewis also has the right to receive up to \$200,000 in severance pay when he leaves the employ of Infonautics, of which \$67,000 is payable only if he remains with Infonautics until completion of the merger.
- Cedarampattu S. Mohan, Infonautics' vice president and chief technical officer, holds 49,300 restricted shares of Infonautics common stock that will vest on completion of the merger, with a market value of \$40,426 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Mr. Mohan also has the right to receive up to \$200,000 in severance pay when he leaves the employ of Infonautics, of which \$67,000 is payable only if he remains with Infonautics until completion of the merger.
- David Van Riper Morris and Lloyd Morrisett will continue as directors of the combined company after the merger.
- Under the merger agreement, all Infonautics directors have the right to continuation of their existing indemnification arrangements.

Directors and officers of Tucows have the following interests that differ from the interests of stockholders of Tucows:

- Elliot Noss, a director of Tucows and its president and chief executive officer, will continue in those roles in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of Cdn\$150,000 per year.
- Scott Swedorski, Tucows' founder and editor-in-chief, will continue in those roles in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of US\$100,000 per year.

- Michael Cooperman, Tucows' chief financial officer, will continue in that role in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of Cdn\$150,000 per year.
- Graham Morris, Tucows' chief operating officer will serve as chief operating officer of the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of Cdn\$150,000 per year.
- Supriyo Sen, Tucows' chief technology officer, will continue in that role in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of US\$125,000 per year.
- Dennis Bennie, Erez Gissin, Stanley Stern and Robert F. Young, who are directors of Tucows, will serve as directors of the combined company after the merger.

Under the Tucows employment agreements, the salary of the executive is subject to periodic increases by the board of directors at its discretion, and the executive is eligible for an annual bonus and other benefits.

Material U.S. Federal Income Tax Consequences—see page 55

It is a condition to Tucows' obligation to complete the merger that the opinion of its tax counsel, Skadden, Arps, Slate, Meagher & Flom LLP, that the merger will qualify as a reorganization within the meaning of section 368(a) of the Internal Revenue Code be reconfirmed at the time of the merger. Assuming that the merger will qualify as a reorganization, no gain or loss will be recognized by the U.S. holders of Tucows common stock who exchange their shares of Tucows common stock for Infonautics common stock in the merger, except for cash received instead of fractional shares of Infonautics common stock.

Tucows urges you to consult your tax advisor for a full understanding of the tax consequences of the merger to you.

Overview of the Merger—see page 62

Conditions to the Completion of the Merger. The obligations of Tucows and Infonautics to complete the merger are subject to the satisfaction or waiver of the principal conditions listed below.

Conditions to Obligations of Tucows and Infonautics

- The Infonautics shareholders must approve the increase of Infonautics' authorized common stock, which is included in the amended and restated Infonautics articles of incorporation, and the issuance of shares of Infonautics common stock in the merger.
- The merger agreement must be adopted by the Tucows stockholders.
- The registration statement of which this joint proxy statement/prospectus forms a part must be declared and remain effective.
- No law, injunction or order preventing the completion of the merger may be in effect.

Conditions to Obligations of Infonautics

- There must not have occurred any event that has had a material adverse effect on the business, financial condition or results of operations of Tucows and its subsidiaries taken as a whole or on the ability of Tucows to complete the merger.
- Holders of more than 150,000 shares of Tucows capital stock must not have exercised and not withdrawn their rights of appraisal.

- All of Tucows outstanding preferred stock must have been converted into common stock.
- All outstanding options to purchase Tucows capital stock other than employee stock options must have been amended or canceled so that exercise of these options will not require the issuance of any additional shares of Infonautics common stock or cause an increase in the total merger consideration.
- The representations and warranties of Tucows must be true in all material respects.
- Tucows must have complied with its covenants in all material respects.

Conditions to Obligations of Tucows

- There must not have occurred any event that has had a material adverse effect on the business, financial condition or results of operations of Infonautics and its subsidiaries taken as a whole or on the ability of Infonautics to complete the merger.
- The opinion of tax counsel to Tucows that the merger will qualify as a tax-free reorganization for U.S. federal income tax purposes must be reconfirmed at the time of the merger.
- The representations and warranties of Infonautics must be true in all material respects, including the representation that Infonautics will have at least \$7.5 million in cash, cash equivalents and marketable securities, net of specified short-term liabilities, at the time of completion of the merger.
- Infonautics must have complied with its covenants in all material respects.

Termination of the Merger Agreement. Tucows and Infonautics can jointly agree to terminate the merger agreement at any time. Either company may also terminate the merger agreement if:

- The merger is not completed on or before August 31, 2001, unless the failure to complete the merger is the result of:
 - action or failure to act by the company seeking to terminate the merger agreement;
 - delays in effectiveness of the registration statement of which this joint proxy statement/prospectus forms a part on account of delays in review by the Securities and Exchange Commission or delays in obtaining other regulatory approvals; or
 - in the case of Infonautics, delays in filing the registration statement which are not caused by a failure of Tucows to provide necessary information;
- The Infonautics shareholders do not approve the amendment and restatement of Infonautics articles of incorporation to increase the number of authorized shares of Infonautics common stock and the issuance of shares of Infonautics common stock in the merger at Infonautics annual meeting;
- A condition to the obligations of that party to complete the merger cannot be satisfied by August 31, 2001 because of a law, injunction or order; or
- The other company breaches its representations, warranties or covenants in the merger agreement in a material way.

Tucows can terminate the merger agreement if:

- Infonautics board of directors changes its recommendation that the Infonautics shareholders approve the amendment and restatement of Infonautics articles of incorporation to increase the number of authorized shares of Infonautics common stock and the issuance of shares of

Infonautics common stock in the merger or breaches its obligation to call the Infonautics shareholders' meeting; or

- Infonautics delivers audited financial statements that differ in any material respect from draft financial statements delivered to Tucows.

Infonautics can terminate the merger agreement if:

- Infonautics receives a superior acquisition proposal from a third party and:
 - Infonautics provides Tucows the opportunity to modify its proposal;
 - the Infonautics board of directors concludes that the third party's acquisition proposal remains superior; and
 - Infonautics pays a termination fee as described under "Termination Fees" below; or
- Tucows delivers audited financial statements that differ in any material respect from draft financial statements delivered to Infonautics.

Termination Fees. The merger agreement provides that Infonautics must pay to Tucows a termination fee of:

- \$1.0 million if the Infonautics shareholders fail to approve the amendment and restatement of Infonautics articles of incorporation to increase the number of authorized shares of Infonautics common stock and the issuance of shares of Infonautics common stock in the merger at Infonautics annual meeting; or
- \$1.3 million if the Infonautics board of directors receives and accepts a superior acquisition proposal. If the merger agreement is terminated under these circumstances, Tucows must refund any amount by which its fees and expenses relating to the merger agreement and the transactions called for by the merger agreement are less than \$300,000; or
- the lesser of \$1.0 million plus Tucows' fees and expenses relating to the merger agreement and the transactions called for by the merger agreement, or \$1.3 million, if:
 - Infonautics receives an acquisition proposal from a third party after the date of the merger agreement; and
 - either Tucows or Infonautics terminates the merger agreement; and
 - within nine months after the termination of the merger agreement, Infonautics enters into an acquisition agreement relating to the third party acquisition proposal.

Provisions Prohibiting Other Transactions. The merger agreement contains provisions prohibiting Tucows and Infonautics from seeking an alternative transaction. These no solicitation provisions prohibit Tucows and Infonautics and their officers, directors, subsidiaries and representatives, from taking any action to solicit an acquisition proposal as described on page 63. The merger agreement does not, however, prohibit Infonautics or its board of directors from considering, and potentially recommending, an unsolicited superior proposal from a third party as described on pages 64 and 65.

Loan by Infonautics to Tucows. As required under the merger agreement, on April 26, 2001, Infonautics loaned Tucows \$1.3 million. The loan is due and payable on August 31, 2001 and bears interest at a rate of 8% per year. The loan is secured by a security interest in substantially all of the assets of Tucows.

Tucows required additional capital for its operations until the introduction of the .info generic top-level domain which, at the time of signing of the merger agreement, was expected to occur in the second quarter of 2001. Tucows could only have obtained financing on terms which might have been

detrimental to Tucows and the continuing company after the merger. Because Infonautics' board of directors determined that the merger is in the best interest of the Infonautics shareholders, Infonautics' board decided it was appropriate to use part of Infonautics' available cash to make a loan to Tucows on more palatable terms.

Completion and Effectiveness of the Merger. The merger will be completed when all of the conditions to completion of the merger are satisfied or waived. The merger will become effective when a certificate of merger is filed with the state of Delaware. Infonautics and Tucows expect to complete the merger during the third quarter of 2001.

Recent Developments

When the merger agreement was signed, the .info generic top-level domain was expected to launch in the second quarter of 2001. The unexpected negotiations between VeriSign, Inc., ICANN and the U.S. Department of Commerce concerning VeriSign's continued operation of the .com, .net and .org registries and the delay in securing agreements between ICANN and Afilias concerning the .info registry have delayed the introduction of the registry to late in the third quarter of 2001. Tucows' projected revenues for the sale of .info domain names have been correspondingly delayed.

Liberty Registry Management Services Inc., a recently created, wholly owned subsidiary of Tucows, has contracted with Afilias to provide back end registry services for the .info registry. Liberty is required by contract to be fully operational before the launch of the registry and is incurring expenses as it acquires equipment and facilities necessary to operate the .info registry. The delay in the launch of the .info registry has led Tucows to require bridging financing until the registry begins to produce revenue.

In June 2001, XDL, Capital Corporation, the management company related to a Tucows stockholder, XDL U.S. Holdings Inc., agreed to provide Tucows with a loan of \$2.5 million. The loan is due and payable on the earlier of four months from the date of the first drawdown or ten business days after completion of the merger with Infonautics. The loan is secured by a security interest in substantially all of the assets of Tucows. XDL's security interest is subordinate to Infonautics' security interest.

Since entering into the merger agreement, Infonautics has taken steps to conserve its cash. Infonautics has reduced its personnel so that it now employs 27 people, down from 38 full-time employees and eight part-time employees on March 25, 2001. Infonautics has also reduced expenses that it does not believe affect its core business operations. Infonautics has also converted many of its Electric Library subscribers from a monthly to an annual basis, increasing cash flow in the short term. Infonautics also increased its cash by selling approximately 17,000 shares of eBay which were held in escrow until July 2001, netting \$1.17 million.

Market Price Information

Before June 21, 2001, shares of Infonautics common stock were traded on the Nasdaq SmallCap market. On March 27, 2001, the last trading day before the public announcement of the merger, Infonautics common stock closed at \$0.531 per share. On June 20, 2001, Nasdaq notified Infonautics that it had determined to delist the Infonautics common stock from the SmallCap market for failure to maintain a minimum bid price of \$1.00 for 30 consecutive trading days as required by the Nasdaq Marketplace Rules. As of June 21, 2001, Infonautics' common stock is quoted on the OTC Bulletin Board maintained by Nasdaq. On July 17, 2001 the closing price on that market was \$0.82. Management has not determined when or whether it will apply again for listing on the Nasdaq SmallCap market.

There is no public market for shares of Tucows capital stock.

Other Proposals for Infonautics Shareholders Only

Amendment and Restatement of Infonautics Articles of Incorporation—see page 118

Infonautics shareholders are being asked to approve an amendment and restatement of Infonautics articles of incorporation. The principal purposes of the amendment and restatement are to:

- Increase the number of authorized shares of Infonautics common stock to 250,000,000; and
- Eliminate several classes of Infonautics capital stock that have previously been converted or retired and no longer have any shares outstanding or issuable.

The amended and restated articles of incorporation of Infonautics are attached to this joint proxy statement/prospectus as annex 2.

The affirmative vote of the holders of a majority of the votes cast by holders of Infonautics common stock at a meeting at which a quorum is present is required to adopt the amendment and restatement of the Infonautics articles of incorporation.

Election of Directors of Infonautics—see page 119

Infonautics shareholders are being asked to vote upon the election of five directors, each for a one-year term and until the election and qualification of his successor. The board of directors has nominated for election as directors: Lloyd N. Morrisett, Israel J. Melman, Howard L. Morgan, David Van Riper Morris and Brian Segal. If the merger with Tucows is completed, three of the Infonautics directors elected at the annual meeting will resign, the Infonautics board of directors will be increased to nine members and seven nominees of Tucows will be elected to fill the vacancies.

The five nominees who receive the highest number of votes actually cast will be elected.

Amendment of 1996 Equity Compensation Plan—see page 122

Infonautics shareholders are being asked to approve an amendment to Infonautics' 1996 equity compensation plan to increase the number of shares of common stock reserved for issuance under the plan from 2,500,000 to 10,000,000.

The affirmative vote of the holders of a majority of the votes cast by holders of Infonautics common stock at a meeting at which a quorum is present is required to adopt the amendment of the plan.

SELECTED HISTORICAL AND PRO FORMA FINANCIAL DATA

The following tables present:

- selected historical financial data of Infonautics;
- selected historical financial data of Tucows; and
- selected unaudited pro forma consolidated financial data of Infonautics that reflect the merger.

INFONAUTICS, INC.

Selected Historical Financial Data

The selected historical financial data of Infonautics has been obtained from the audited historical consolidated financial statements and related notes of Infonautics for each year in the five-year period ended December 31, 2000, which have been audited by PricewaterhouseCoopers LLP, independent accountants. The selected historical financial data for the three months ended March 31, 2000 and March 31, 2001 has been obtained from Infonautics' unaudited consolidated financial statements, which, in the opinion of Infonautics' management, includes all adjustments necessary for fair presentation of its financial position and results of operations for these periods. The historical data is only a summary, and you should read it with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the historical consolidated financial statements and related notes contained in Infonautics' annual report on Form 10-K for the year ended December 31, 2000 and its quarterly report on Form 10-Q for the quarter ended March 31, 2001, which accompany this joint proxy statement/prospectus.

	Year Ended December 31,					Quarter Ended March 31,	
	1996	1997	1998	1999	2000	2000	2001
						(unaudited)	(unaudited)
	(in thousands, except share and per share data)						
Consolidated Statements of Operations Data:							
Revenue	\$ 1,441	\$ 6,832	\$ 14,925	\$ 23,234	\$ 11,161	\$ 3,041	\$ 1,839
Costs and expenses:							
Cost of revenues	822	2,641	4,384	7,164	3,079	804	539
Customer support expenses	324	578	1,093	1,147	426	20	103
Technical operations and development expenses	5,210	6,272	7,606	8,375	6,175	1,430	814
Sales and marketing expenses	6,142	10,674	14,835	11,773	8,179	2,883	740
General and administrative expenses	3,927	5,029	4,609	3,068	3,814	703	1,698
Total costs and expense	16,425	25,194	32,527	31,527	21,673	5,840	3,895
Loss from operations	(14,984)	(18,362)	(17,602)	(8,293)	(10,512)	(2,799)	(2,056)
Equity in net losses of unconsolidated affiliate	—	—	—	(413)	(10,606)	(2,499)	—
Gain on sale of net assets	—	—	—	34,919	—	—	—
Other income	—	—	—	—	6,616	—	43
Interest income (expense), net	1,198	1,003	154	(1,516)	181	5	822
Net income (loss)	(13,786)	(17,359)	(17,448)	24,697	(14,321)	(5,293)	(1,191)
Redemption of preferred stock in excess of carrying amount	—	—	—	(75)	—	—	—
Net income (loss) applicable to common shareholders	<u>\$ (13,786)</u>	<u>\$ (17,359)</u>	<u>\$ (17,448)</u>	<u>\$ 24,622</u>	<u>\$ (14,321)</u>	<u>\$ (5,293)</u>	<u>\$ (1,191)</u>
Net income (loss) per common equivalent share—basic	\$ (1.61)	\$ (1.83)	\$ (1.77)	\$ 2.10	\$ (1.16)	\$ (0.44)	\$ (0.09)
Weighted average number of common and equivalent shares outstanding—basic	8,549,800	9,491,600	9,830,900	11,729,900	12,348,100	12,034,300	12,629,269
Net income (loss) per common equivalent share—diluted	\$ (1.61)	\$ (1.83)	\$ (1.77)	\$ 1.88	\$ (1.16)	\$ (0.44)	\$ (0.09)
Weighted average number of common and equivalent shares outstanding	8,549,800	9,491,600	9,830,900	13,126,300	12,348,100	12,034,300	12,629,269

	Year Ended December 31,					Quarter Ended March 31,	
	1996	1997	1998	1999	2000	2000	2001
						(unaudited)	
	(in thousands)						
Consolidated Balance Sheet Data:							
Cash, cash equivalents and investments	\$27,379	\$12,997	\$ 3,268	\$ 3,739	\$12,346	\$14,563	\$10,878
Working capital (deficit)	25,841	7,163	(5,561)	11,511	10,192	9,396	8,196
Total assets	30,227	18,794	10,192	30,061	15,796	24,929	13,816
Long-term Obligations, Net of Current Portion . .	—	404	577	—	111	—	91
Shareholders' equity (deficit)	27,688	10,460	(3,298)	22,916	12,452	18,565	10,344

TUCOWS INC.

Selected Historical Financial Data

The selected historical financial data as of December 31, 1999 and December 31, 2000, and for the period from May 4, 1999 to December 31, 1999, the year ended December 31, 2000, and the three months ended March 31, 2000 and March 31, 2001, reflects the financial position and results of operations of Tucows Inc. The selected historical financial data for the years ended December 31, 1997 and 1998, and for the period from January 1, 1999 to May 3, 1999, reflects the financial position and results of operations of Tucows' predecessor entity, the Tucows division of Tucows Interactive Limited. The statement of operations for the year ended December 31, 1999 is prepared on a pro forma basis as though Tucows' acquisition of the assets of the Tucows division had occurred on January 1, 1999.

The balance sheet data as of December 31, 1999 and 2000 and the statements of operations data for the period from May 4, 1999 to December 31, 1999 and the year ended December 31, 2000 are obtained from Tucows' financial statements that have been audited by KPMG LLP, independent accountants, and that are included in this joint proxy statement/prospectus beginning on page F-13.

The balance sheet data as of May 3, 1999 and December 31, 1998 and the statement of operations data for the year ended December 31, 1998 and for the period from January 1, 1999 to May 3, 1999, are obtained from the financial statements of the Tucows division of Tucows Interactive Limited that have been audited by KPMG LLP, independent accountants, which are included in this joint proxy statement/prospectus beginning on page F-2.

The statement of operations data for the year ended December 31, 1997 are obtained from the financial statements of the Tucows division of Tucows Interactive Limited that have been audited by KPMG LLP, independent accountants, which are not included in this joint proxy statement/prospectus.

The balance sheet data as of March 31, 2001 and the statement of operations data for the three month periods ended March 31, 2000 and March 31, 2001 has been obtained from Tucows unaudited financial statements that are included in this joint proxy statement/prospectus beginning on page F-13 which, in the opinion of Tucows' management, include all adjustments that Tucows considers necessary for fair presentation of its financial position and results of operations for those periods.

The historical data is only a summary, and you should read it with "Tucows Management's Discussion and Analysis of Financial Condition and Results of Operations" that begins on page 79 of this joint proxy statement/prospectus and the historical consolidated financial statements and related notes of Tucows that are included in this joint proxy statement/prospectus beginning on page F-2.

	Tucows Division			Tucows Division	Tucows Inc.		Tucows Inc.	
	Year Ended December 31,			Period from	Period from	Tucows Inc.	Quarter Ended March 31,	
	1997	1998	1999(1)	Jan. 1, 1999 to May 3, 1999	May 4, 1999 to Dec. 31, 1999	Year Ended Dec. 31, 2000	2000	2001
							(Unaudited)	(Unaudited)
(in thousands, except share and per share data)								
Statements of Operations								
Data:								
Net Revenue	\$1,137	\$2,271	\$ 3,580	\$ 746	\$ 2,834	\$ 14,440	\$ 1,549	\$ 6,392
Cost of Revenues	64	98	341	58	283	7,785	613	4,092
Gross Profit	1,073	2,173	3,239	688	2,551	6,655	936	2,300
Operating Expenses:								
Sales and Marketing . . .	357	696	2,499	379	2,120	11,121	1,810	1,951
Technical Operations and Development Expenses	223	494	1,385	290	1,095	4,132	518	1,246
General and Administrative	416	691	2,750	508	2,242	4,704	753	844
Amortization of Property and Equipment	60	169	280	53	228	1,701	396	691
Amortization of Intangible Assets . . .	—	—	10,995	—	7,330	11,617	2,749	926
Write-down of Intangible Assets . . .	—	—	—	—	—	11,325	—	—
Total Operating Expenses	1,056	2,050	17,909	1,230	13,015	44,600	6,226	5,658
Income (loss) from Operations	17	123	(14,670)	(542)	(10,464)	(37,945)	(5,290)	(3,358)
Interest Income (expense), net	(4)	(5)	30	—	30	215	21	26
Income (loss) before Provision for Income Taxes	13	118	(14,640)	(542)	(10,434)	(37,730)	(5,269)	(3,332)
Provision for Income Taxes (recovery)	8	55	(63)	(63)	—	—	—	—
Income (loss) for the Period	\$ 5	\$ 63	\$ (14,577)	\$ (479)	\$ (10,434)	\$ (37,730)	\$ (5,269)	\$ (3,332)
Basic and Diluted Loss per Common Share: . . .			\$ (4.86)		\$ (3.48)	\$ (12.58)	\$ (1.76)	\$ (1.01)
Shares used in Computing Basic and Diluted Loss per Common Share: . . .			3,000,000		3,000,000	3,000,000	3,000,000	3,295,982
Balance Sheet Data:								
Cash and Cash Equivalents	\$ 3	\$ 128	—	\$ 100	\$ 1,670	\$ 2,170	—	\$ 1,081
Working Capital (deficit) .	(106)	122	—	(301)	1,352	(9,729)	—	(9,587)
Total Assets	198	659	—	715	30,677	22,526	—	23,659
Deferred Revenue	55	215	—	308	676	15,808	—	17,747
Long-term Obligations, Net of Current Portion .	52	29	—	22	—	—	—	—
Shareholders' Equity (deficiency)	—	—	—	—	29,083	(1,697)	—	(1,964)
Divisional Equity (deficiency)	(14)	230	—	(153)	—	—	—	—

(1) The selected historical statement of operations data for the year ended December 31, 1999 is prepared on a pro forma basis as though Tucows' acquisition of the assets of the Tucows division had occurred on January 1, 1999.

INFONAUTICS, INC.

Selected Unaudited Pro Forma Consolidated Financial Data

The selected unaudited pro forma consolidated financial data of Infonautics have been obtained from, and should be read with, the unaudited pro forma consolidated condensed financial statements beginning on page 72 of this joint proxy statement/prospectus.

The unaudited pro forma statement of operations data for the year ended December 31, 2000 gives effect to the proposed merger as if it had taken place on January 1, 2000 and for the three month period ended March 31, 2001 gives effect to the proposed merger as if it had taken place on January 1, 2001. The unaudited pro forma balance sheet data for March 31, 2001 gives effect to the proposed merger as if it had taken place on March 31, 2001.

The selected unaudited pro forma consolidated financial data are presented for informational purposes only and, while they are based on assumptions that we believe are reasonable, they are not necessarily indicative of the financial position or results of operations that would have occurred had the merger been completed as of the dates indicated and are not meant to project Infonautics' financial position or results of operations for any period or as of any date.

	<u>Year Ended December 31, 2000</u>	<u>Quarter Ended March 31, 2001</u>
	(unaudited)	
	(in thousands, except share and per share data)	
Statement of Operations Data:		
Revenues	\$ 25,601	\$ 8,231
Operating income (loss)	(47,769)	(5,213)
Interest income, net	396	70
Equity in net losses of unconsolidated affiliate	(10,606)	—
Other income	6,616	822
Income (loss)	(51,363)	(4,321)
Income (loss) per share		
Basic and diluted	(0.82)	(0.07)
Average common shares		
Basic and diluted	62,348,100	62,629,269
		<u>March 31, 2001</u>
Balance Sheet Data:		
Cash and equivalents		\$ 10,632
Working capital deficiency		(1,681)
Total assets		35,843
Debt due within one year		74
Long-term debt		91
Stockholders' equity		6,458

RISK FACTORS

The merger involves a high degree of risk. Tucows stockholders will be choosing to invest in Infonautics common stock by voting in favor of adoption of the merger agreement. An investment in Infonautics common stock involves a high degree of risk. Infonautics shareholders and Tucows stockholders should carefully consider the following risk factors in deciding whether to vote for the proposals relating to the merger.

Risk Factors Related to the Merger and the Merger Agreement

The issuance of approximately 60,054,100 shares of Infonautics common stock to Tucows stockholders in the merger and the issuance of additional shares authorized by the increase in the number of authorized shares of Infonautics common stock included in the proposed amended and restated articles of incorporation of Infonautics will substantially reduce the percentage interests of Infonautics shareholders.

If the merger is completed, approximately 60,054,100 shares of Infonautics common stock will be issued to Tucows stockholders, and former Tucows stockholders will own approximately 80% of Infonautics. After the adoption and filing of the amended and restated articles of incorporation of Infonautics, a significantly greater number shares of common stock will be available for issuance. The issuance of approximately 60,054,100 shares of common stock to Tucows stockholders will cause a significant reduction in the relative percentage interests of current shareholders of Infonautics in earnings, voting, liquidation value and book and market value. The issuance of additional shares in future transactions could further reduce the percentage interests of current Infonautics shareholders and could also reduce the percentage interests of former Tucows stockholders.

The Infonautics common stock has been delisted, and investors may find it more difficult to sell Infonautics common stock.

The Infonautics common stock has been delisted from the Nasdaq SmallCap market because Infonautics has failed to maintain a minimum bid price of \$1.00 for 30 consecutive trading days as required by Nasdaq's minimum listing requirements.

The merger agreement does not include a condition requiring that the Infonautics common stock be listed on an exchange or Nasdaq, and Tucows has no right to terminate the merger agreement because the Infonautics common stock has been delisted.

After the delisting:

- The Infonautics common stock is quoted on the OTC Bulletin Board as maintained by Nasdaq.
- Infonautics is subject to an SEC rule concerning the trading of so-called penny stocks. Under this rule broker-dealers who sell securities governed by the rule to persons who are not established customers or accredited investors must make a special suitability determination and must receive the purchaser's written consent to the transaction prior to sale.

Delisting is likely to make trading Infonautics shares more difficult for broker-dealers, shareholders and investors, potentially leading to further declines in share price. It may also make it more difficult for Infonautics to raise additional capital. An investor may find it more difficult to sell Infonautics common stock or to obtain accurate quotations of the share price of the Infonautics common stock.

Management has not determined when or whether it will apply again for listing on the Nasdaq SmallCap market.

Infonautics may need to manage its cash reserves in a manner that could be detrimental to its continuing operations to comply with a requirement under the merger agreement that Infonautics have at least \$7.5 million in cash on hand on completion of the merger.

Under the merger agreement Infonautics has represented to Tucows that, at the completion of the merger, Infonautics will have at least \$7.5 million in cash on hand, which is defined to mean cash, cash equivalents and marketable securities, including the principal of, and accrued but unpaid interest on, the loan made by Infonautics to Tucows under the merger agreement, net of specified short term liabilities. To satisfy this requirement, it may be necessary for Infonautics to reduce its expenditures for its ongoing operations, such as, for example, by reductions in staffing, to an extent that may be detrimental to continuing those operations, whether the merger is completed or not. As of July 13, 2001, Infonautics had approximately \$9.7 million in cash on hand under the definition in the merger agreement.

The combined company may fail to realize the anticipated benefits of the merger, and growth in revenue, earnings and cash flow may not be realized.

The success of the merger will depend, in part, on the ability of the combined company to realize the anticipated growth opportunities and synergies from the merger. To realize the anticipated benefits of this combination, members of the management team of the combined company must develop strategies to:

- use Infonautics' liquid capital assets efficiently to develop the business of the combined company,
- effectively and efficiently integrate the content distribution businesses of Infonautics and Tucows and
- successfully retain and attract key employees of the combined company, including operating management and key technical personnel, during a period of transition and in light of the competitive employment market.

If members of the management team of the combined company are not able to develop strategies and implement a business plan that achieves these objectives, the anticipated benefits of the business combination may not be realized. For example, the sales and marketing staff of the combined company may not be able to develop anticipated opportunities to cross-sell each company's subscription Internet services to the other company's customers. Infonautics' content management and manipulation tools may not provide anticipated synergies with Tucows' software and content distribution business. If this occurs, growth in revenue, earnings and cash flow may not be realized, which would diminish the prospects of the combined company and could result in a lower market price for its common stock.

Directors and officers of Infonautics and Tucows have potential conflicts of interest that may have influenced them to recommend the merger.

Some of the directors of Infonautics and Tucows who recommend that you vote in favor of the merger and the officers of Infonautics and Tucows who provided information to their board of directors relating to the merger have employment, indemnification and severance benefit arrangements and rights to acceleration of stock options and restricted stock grants that provide them with interests in the merger that differ from yours.

The receipt of compensation or other benefits in the merger may have influenced these directors in making their recommendation that you vote in favor of the transactions called for by the merger agreement and these officers in making recommendations to their board of directors relating to the merger.

The merger agreement obligates Infonautics to pay a significant fee if the agreement is terminated under specified circumstances. Payment of this fee would reduce Infonautics' available cash and could limit its ability to continue its operations.

The merger agreement requires Infonautics to pay Tucows:

- \$1.0 million if the Infonautics shareholders do not approve the amendment and restatement of Infonautics articles of incorporation and the issuance of shares of Infonautics common stock in the merger; or
- \$1.3 million if the Infonautics board of directors receives and accepts a superior acquisition proposal. If the merger agreement is terminated under these circumstances, Tucows must refund any amount by which its fees and expenses concerning the merger agreement and the transactions called for by the merger agreement are less than \$300,000; or
- the lesser of \$1.0 million plus Tucows' fees and expenses relating to the merger agreement and the transactions called for by the merger agreement, or \$1.3 million, if:
 - Infonautics receives an acquisition proposal from a third party after the date of the merger agreement; and
 - either Tucows or Infonautics terminates the merger agreement; and
 - within nine months after the termination, Infonautics enters into an acquisition agreement relating to the third party acquisition proposal.

The obligation to pay these fees makes it significantly less likely that Infonautics will receive a superior acquisition proposal or, if Infonautics should receive an acquisition proposal after the date of the merger agreement and the merger agreement were terminated, that Infonautics will be able to complete a transaction relating to that proposal earlier than nine months after termination of the merger agreement. If Infonautics were required to pay a termination fee, it would reduce Infonautics' available cash and could limit its ability to continue its operations.

Any fee that is payable if the merger agreement is terminated may not be paid or, if paid, may not be sufficient to compensate for Tucows' lost business opportunities.

Payment of a termination fee by Infonautics under the merger agreement is not secured by its assets. Infonautics may not have sufficient funds to pay the termination fee or may not be willing to pay the termination fee. If either party terminates the agreement under circumstances under which a termination fee is payable to Tucows, the termination fee may not be sufficient to cover all of the costs and expenses of pursuing the merger or to compensate for any business opportunities that Tucows had foregone in favor of pursuing the merger.

Infonautics is not entitled to any termination fee, and no termination fee may be payable to Tucows in some cases, so that cash and expenses incurred by the parties may not be recovered.

The merger agreement does not require Tucows to pay any termination fee to Infonautics if the merger agreement is terminated, and the merger agreement may be terminated under circumstances that do not require the payment of any termination fee by Infonautics to Tucows. Although the merger agreement provides that a party in breach of the agreement may be liable to the other party if the agreement is terminated, if the agreement is terminated under circumstances under which no termination fee is payable, the parties will have incurred costs and expenses that may not be recovered.

Tucows' principal stockholders will control Infonautics after the merger, which will limit your ability to influence corporate matters.

As of March 28, 2001, Tucows' principal stockholders beneficially owned approximately 93% of Tucows' voting stock and, after the merger with Infonautics, will beneficially own approximately 75% of

Infonautics voting stock. These stockholders could control the outcome of any corporate transaction or other matter submitted to Infonautics shareholders for approval, including mergers, consolidations and the sale of all or substantially all of Infonautics' assets, and also could prevent or cause a change in control. The interests of these stockholders may differ from the interests of Infonautics' other shareholders. Third parties may be discouraged from making a tender offer or bid to acquire Infonautics because of this concentration of ownership.

Risk Factors Relating to Infonautics

Infonautics relies on subscriptions for its revenue from the Electric Library site. If Infonautics does not acquire new subscribers and retain existing subscribers or the cost of acquiring or retaining subscribers increases, Infonautics' revenue from this site will decline and its ability to achieve profitability will be impaired.

Infonautics obtains most of its subscription-based revenue from the fee-based Electric Library site. The following factors affect Infonautics' net revenue from Electric Library:

- Infonautics pays fees to third party websites and services to obtain new subscribers to Electric Library. Infonautics may be required to make payments even if the agreements don't result in revenues from new subscribers sufficient to cover Infonautics' costs. One or more of these agreements may not be renewed, which could reduce Infonautics' revenue from new subscribers.
- Infonautics may choose to limit spending on subscriber acquisition, which will likely result in fewer new subscribers.
- Infonautics' customers may not renew their subscriptions after their subscription period has ended.
- Infonautics may reduce the selling price of Electric Library in response to increased competition or loss of customers.

If Infonautics' subscriber acquisition, retention and renewal rates or pricing decreases significantly, its net revenues from Electric Library will decline.

Infonautics relies on advertising and e-commerce partners for its revenue from its content notification sites and search and reference sites. If funds from these sources decrease or their cost increases, Infonautics' revenue from these sites will decline and its ability to achieve profitability will be impaired.

Infonautics' content notification sites such as Job Sleuth and the non-Electric Library search and reference sites are generally free to the user. These sites are primarily advertising and e-commerce supported. Infonautics' ability to earn significant revenues from the content notification and non-Electric Library search and reference sites will depend in part on their acceptance by a substantial number of users to attract advertising revenues and their inclusion in e-commerce programs. The following factors affect Infonautics' net revenue from these sites:

- Infonautics depends in part on establishing and maintaining distribution relationships with high-traffic web sites for its content notification and non-Electric Library search and reference sites. Infonautics may not be able to enter into placement agreements on commercially reasonable terms or at all.
- Distribution relationships with websites may not result in significant numbers of users, even though Infonautics may have to pay significant fees to establish these relationships.
- Because few standards have been widely accepted to measure the effectiveness of web advertising and e-commerce programs, it is difficult to reliably report the results of web advertising and e-commerce programs, and it may be difficult to attract advertisers who desire clearly measurable results.

- Advertisers and e-commerce partners require Infonautics to track and measure advertising and e-commerce metrics, such as the size of advertising inventories, the number of advertising impressions, the number of page views and the number of registered users. Providing these metrics requires Infonautics to contract with third parties to provide some of the metrics for a fee and to incur development costs to provide some metrics itself. Infonautics' failure accurately to provide these metrics could cause it to fail to obtain new advertisers or affiliates, lose existing ones or renegotiate advertising and e-commerce contracts.

If Infonautics is unable to maintain existing and obtain new advertisers and e-commerce partners or its cost to do so increases significantly, its net revenues from its content notification and non-Electric Library search and reference sites may decline.

The competition Infonautics faces from other providers of electronic information is intense, and Infonautics may not be able to compete effectively or successfully attract and retain customers.

Competition in Infonautics' business of providing electronic information is intense. Infonautics' competitors, Yahoo!, America Online, About.com, Britannica.com, and Northern Light, may have greater resources and name recognition than Infonautics. Many of these competitors have substantially greater experience and larger customer bases than Infonautics. Infonautics' competitors may succeed in:

- responding more quickly to new or emerging technologies;
- responding more rapidly to changes in customer requirements;
- devoting greater resources to the development, promotion and sale of their products or services than Infonautics; and
- establishing relationships with affiliates, advertisers, content providers, and others who have not entered into agreements with Infonautics.

Infonautics' competitors may also succeed in developing services and products which are superior to those of Infonautics and also may prove more successful in marketing their products or services to the same customers to which Infonautics intends to market its products or services. Because of this competition, Infonautics may not be successful in attracting and retaining customers which would cause revenues to decline.

bigchalk.com, inc. or a third party could purchase the Electric Library end user business from Infonautics. Infonautics would receive cash in this transaction, and its revenues would likely decline.

Infonautics' agreements with Bell & Howell Company give bigchalk.com, inc. a right of first refusal and exclusive call option to purchase the Electric Library site and end user business from Infonautics. This right and option expire December 15, 2001. Infonautics can sell the Electric Library site and end user business to a third party on terms negotiated with the third party if bigchalk.com declines to purchase that site and business by matching the terms. If the Electric Library site and end user business have not already been purchased, bigchalk.com has the right to acquire that site and business for a purchase price equal to the preceding 12 months net revenue for the site and business multiplied by two. If a third party or bigchalk.com purchases the Electric Library site and business, Infonautics would receive cash and its revenues would likely decline.

Infonautics depends on third parties for published content, technology and technology services. Loss of these services could restrict Infonautics' ability to do business and could result in reduced revenue.

Infonautics relies on bigchalk.com for published content and technology and technology services. bigchalk.com is Infonautics' preferred provider of published content for Electric Library, and Infonautics' other sites if Infonautics requests, under a license which gives bigchalk.com a right of first refusal to provide this type of content to Infonautics. The loss of the bigchalk.com content license

could require Infonautics to change Electric Library and any other site using the content licensed from bigchalk.com. These changes may cause interruptions in Infonautics' business and could cause it to incur substantial costs to replace any lost content.

Infonautics also depends on licenses of additional content on a cost-effective basis from sources other than bigchalk.com. If Infonautics is unable to license content at a reasonable cost, its ability to deliver its sites could be impaired which could cause it to lose customers or fail to attract new customers.

bigchalk.com also licenses the Electric Library site and related software, technology, and systems to Infonautics. The license is royalty free and perpetual, but bigchalk.com has a right to terminate the license on a change of control of Infonautics. The loss of this license could hurt Infonautics' business and cause its revenues to decline. bigchalk.com has waived its right to terminate this license because of the completion of the merger between Infonautics and Tucows.

Infonautics also depends on bigchalk.com to provide technical and data center support and services for Electric Library for individual end users. This agreement expires on December 15, 2002 and may be renewed by the mutual written agreement of the parties. The loss of this agreement could force Infonautics to provide technical and data center support and services itself, or hire a third party to provide those services. This could cause Infonautics' business to suffer interruptions and require it to incur substantial costs.

Infonautics depends on third parties for free and low cost web-based content.

Infonautics accesses and provides web-based content for its content notification and other sites. Infonautics accesses this content mainly by searching selected websites and then providing links to relevant content from the individual sites, such as Job Sleuth. Usually, Infonautics pays no fee, or a small fee, for accessing web-based content in this manner. Infonautics' ability to continue to use web-based content in this manner without cost, or for small fees, is fundamental to its goal of providing free, or low cost, content notification sites.

Infonautics may be subject to government regulation and legal liabilities which may be costly and may interfere with its ability to conduct business.

Infonautics is not subject to direct regulation by any United States or state government agency other than the laws and regulations applicable to businesses generally. There are few laws or regulations directly applicable to access to or commerce on the Internet. Infonautics believes these laws and regulations do not seriously affect its operations and that it is materially in compliance with them.

Although transmission of Infonautics' sites primarily originates in Pennsylvania and the United States, the Internet is global in nature. Governments of foreign countries might try to regulate Infonautics' transmissions or prosecute it for violations of their laws.

Because of the increasing popularity and use of the Internet, federal, state and foreign governments may adopt laws or regulations in the future concerning commercial online services and the Internet, about:

- user privacy;
- children;
- copyrights and other intellectual property rights and infringement;
- domain names;
- pricing;
- content regulation;

- defamation;
- taxation; and
- the characteristics and quality of products and services.

Laws and regulations directly applicable to online commerce or Internet communications are becoming more prevalent. Laws and regulations such as those listed above or others could expose Infonautics to substantial liability, if enacted, and increase its costs of compliance and doing business.

Infonautics' stock price may vary significantly which may make it difficult to resell your shares when you want to at prices you find attractive.

If Infonautics' stock price continues to vary significantly, the price of its common stock may decrease in the future regardless of its operating performance. You may be unable to resell your shares of common stock following periods of volatility because of the market's adverse reaction to this volatility. The following factors may contribute to this volatility:

- actual or anticipated variations in Infonautics' quarterly operating results;
- interruptions in Infonautics' services;
- seasonality of the markets and businesses of Infonautics' customers;
- announcements of new technologies or new services by Infonautics or its competitors;
- changes in financial estimates or recommendations by securities analysts;
- the operating and stock price performance of other companies that investors may view as comparable to Infonautics;
- news relating to Infonautics' industry as a whole; and
- news relating to trends in Infonautics' markets.

The stock market in general, and the market for Internet-related companies, including Infonautics, in particular, have experienced extreme volatility. This volatility often has been unrelated to the operating performance of these companies. These broad market and industry fluctuations may cause the price of Infonautics' stock to drop, regardless of Infonautics' performance.

From January 1, 2000 through June 20, 2001, Infonautics' stock price on the Nasdaq SmallCap market varied from a high close of \$15.94 per share to a low close of \$0.40 per share. Infonautics common stock was delisted from the Nasdaq SmallCap market effective June 21, 2001, and it now is quoted on the OTC Bulletin Board maintained by Nasdaq. The volatility of Infonautics' stock price could increase because of this change.

Your percentage interest in Infonautics may be reduced by the exercise of Infonautics' outstanding warrants.

As of June 15, 2001, the following warrants were outstanding:

- a warrant to purchase 522,449 shares of common stock issued to the purchaser of a debenture at an exercise price of \$5.97; this conversion price does not fluctuate with the market price of the common stock but is subject to adjustment because of anti-dilution provisions; and
- two warrants to purchase 100,000 shares each of common stock at exercise prices of \$5.15 and \$6.25.

Holders of Infonautics common stock could experience a reduction of their percentage interest in Infonautics upon the exercise of the warrants.

Infonautics could suffer uninsured losses.

Although Infonautics maintains general liability insurance, claims could exceed the coverage obtained or might not be covered by Infonautics' insurance. While Infonautics typically obtains representations from its technology and content providers and contractual partners concerning the ownership of licensed technology and informational content and obtains indemnification to cover any breach of these representations, Infonautics still may not receive accurate representations or adequate compensation for any breach of these representations. Infonautics may have to pay a substantial amount of money for claims which are not covered by insurance or indemnification or for claims where the existing scope or adequacy of insurance or indemnification is disputed or insufficient.

Risk Factors Relating to Tucows

Tucows has a limited history as a domain name registrar and because it operates in a new industry for private label Internet applications and services, it is exposed to risks that affect its ability to conduct its business.

The introduction of competition in the domain name registration industry is less than 20 months old. Tucows entered the domain name registration business in January 2000 by providing a wholesale service to customers with primary operations that involve direct dealings with consumers. Tucows' primary customers, which Tucows refers to as managed service providers or MSPs, have been Internet service providers, web hosting, cable and telecommunications companies. Tucows has a limited operating history as a domain name registrar upon which its current business and prospects can be evaluated, and its operating results since January 2000 are not comparable to results for prior periods. As a company operating in a newly competitive and rapidly evolving industry, Tucows faces risks and uncertainties relating to its ability to implement its business plan successfully. Tucows cannot assure you that it will adequately address these risks and uncertainties or that its business plans will be successful.

If Tucows cannot obtain or develop additional applications and services that meet the evolving business needs of its MSPs, the market for its services will not grow and may decline.

Part of Tucows' strategy is to expand its services by offering its MSP base additional applications and services that address their evolving business needs. Tucows cannot be sure that it will be able to license these applications and services at a commercially viable cost or at all or that it will be able to cost-effectively develop the applications in-house. If Tucows cannot obtain or develop these applications on a cost-effective basis and cannot expand the range of its service offerings, the market for its services will not grow and may decline, and sales of its services may suffer as MSPs turn to alternate providers that are able to more fully supply their business needs. Tucows may not produce sufficient revenues to offset the related costs and will remain dependent on domain name registrations as a primary source of revenue, and revenue may fall below anticipated levels.

Governmental and regulatory policies or claims concerning the domain name registration system, and industry reactions to those policies or claims, may cause instability in the industry and disrupt Tucows' domain name registration business.

Before 1999, Network Solutions managed the domain name registration system for the .com, .net and .org domains on an exclusive basis under a cooperative agreement with the U.S. government. In November 1998, the Department of Commerce authorized ICANN, the Internet Corporation for Assigned Names and Numbers, to oversee key aspects of the domain name registration system. ICANN has been subject to strict scrutiny by the public and by the government. For example, Congress recently held hearings to evaluate ICANN's selection process for new top-level domains.

Tucows faces the risks that:

- the U.S. or any other government may reassess its decision to introduce competition into, or ICANN's role in overseeing, the domain name registration market; and
- the Internet community or the Department of Commerce or U.S. Congress may refuse to recognize ICANN's authority or support its policies.

ICANN has established policies and practices for itself and the companies it accredits to act as domain name registries and registrars. Some of ICANN's policies and practices, and the policies and practices adopted by registries and registrars in the domain name business, could be found to conflict with the laws of one or more jurisdictions. On July 23, 2001, a class action lawsuit was filed in Superior Court in California against ICANN, NeuLevel, Inc., which is the registry for the .biz generic top level domain, and over 60 other defendants including Tucows. The lawsuit claims that the defendants are engaged in unfair competition under state laws because they are conducting an illegal lottery enterprise through the pre-registration of .biz generic top level domains. The lawsuit seeks a refund of the fees paid to the defendants, additional damages, costs, attorneys' fees and an injunction to stop the pre-registrations. Tucows intends to defend itself vigorously in the lawsuit and believes that it should not be subject to any liability or an injunction. The California Superior Court or other courts or governmental agencies may disagree.

If any of these risks occur or the class action lawsuit, or others like it, are maintained, they could create instability in the domain name registration system business. These risks and the class action lawsuit, or others like it, could also disrupt or suspend portions of Tucows' domain name registration business, which would result in reduced revenue. Any litigation or claims against Tucows could result in significant costs of defense, liability for damages and diversion of management's time and attention.

Tucows may not be able to maintain or improve its competitive position, and may be forced to reduce its prices, because of strong competition from VeriSign, Inc. and other competitive registrars.

Before the introduction of competition into the domain name registration industry in 1999, Network Solutions was the only entity authorized by the U.S. government to serve as the registrar for domain names in the .com, .net and .org domains. This position allowed Network Solutions to develop a substantial customer base, which gives it advantages in securing customer renewals and in developing and marketing ancillary products and services. On June 9, 2000, VeriSign, Inc., a provider of Internet trust services, acquired Network Solutions. The acquisition of Network Solutions by VeriSign has facilitated cross-marketing between the two companies and has strengthened VeriSign's competitive advantage by enabling it to couple registration services with an expanded range of products and services.

During the three months ended March 31, 2001, VeriSign registered more than three times as many new and transferred domain names as the 572,000 registered by Tucows. As of March 31, 2001, the VeriSign registrar supported approximately 16.1 million of approximately 28.2 million active domain names. This compares to the approximately 2.6 million domain names that Tucows supported as of March 31, 2001. Tucows faces significant competition from VeriSign as it seeks to increase its revenue from domain name registration services.

Tucows also faces competition from the continued introduction of registrars into the domain name registration industry. The growth of competitive registrars who have entered the industry may make it difficult for Tucows to maintain its current market share. As of June 25, 2001, ICANN had accredited 164 competitive registrars, including Tucows, to register domain names in the .com, .net and .org domains, 88 of which were operational. Some of these registrars may have longer operating histories, greater name recognition, particularly in international markets, or greater resources than Tucows.

In response to increasing competition in the domain name registration industry, Tucows may be required to reduce the prices it charges for its core domain name registration business. VeriSign charges users of its shared registration system \$6 for each registration, which most users, including Tucows, pass on to their customers. Some of Tucows' competitors offer registration services at a price level minimally above the \$6 VeriSign registry fee and less than the basic \$10 fee charged by Tucows for each domain name registered in the .com, .net and .org registry. During the year 2000, other competitors, including VeriSign, reduced their pricing for domain name registrations both for short-term promotions and on a permanent basis. Some of Tucows' competitors have also offered domain name registrations free as a value added product, deriving their revenues from other products and services.

If the growth rate of the market for domain names continues to fall, Tucows' net revenue from registrations may fall below anticipated levels.

The domain name market is still in its early stages of development, and Tucows does not expect that this market will continue to experience the same high level of growth it has experienced in the past.

The VeriSign registry has witnessed a decline in the number of registrations in the last three quarters of 2000. In 2000, the registry recorded approximately 5.6 million new registrations during the second quarter, approximately 5.1 million new registrations during the third quarter and approximately 4.3 million new registrations during the fourth quarter, as the market began to absorb the slow-down in the growth and expansion of the Internet. Although Tucows' market share increased from approximately 12% to approximately 13% during this period, its period-to-period total new and transferred registrations declined with the rest of the market. A continuing decline will restrict the growth of Tucows' domain name registration business, and its revenues may decline.

If Tucows' MSPs do not renew their domain name registrations through Tucows, its revenues may decline.

The growth of Tucows' business depends in part on its MSPs' renewal of their domain name registrations through Tucows. The first expirations for .com, .net and .org domain names occurred in January 2001, and Tucows has limited experience with registration renewals for generic top level and country code domain names.

Tucows also anticipates that its renewal rates will be affected by the high number of registrations that occurred during the initial growth stage of the domain name industry in 2000 by speculators who register domain names with the intention of reselling them rather than putting them to use and who may not renew a significant portion of the names they registered.

If MSPs decide, for any reason, not to renew their registrations through Tucows, revenues from domain name registrations will decrease.

If new generic top-level domains are not introduced this year or if Tucows' MSPs turn to other registrars for their registration needs in these newly approved generic top-level domains when they are introduced, Tucows' business may not grow, and its revenue from that business may decline.

In the fourth quarter of 2000, ICANN announced that the introduction of new generic top-level domains was scheduled for the first or second quarter of 2001. It now appears that the new generic top-level domains will not be introduced until the second half of this year. If customers do not respond positively to the new generic top-level domains, Tucows may not be able to develop its domain name registration business as planned.

If Tucows does not become accredited with these new registries, it is likely that its existing customers will turn to other registrars for their new and existing registration needs, which may result in decreased revenue for Tucows.

Tucows' revenue from domain name registration services is likely to decline if the administration and operation of the Internet no longer relies upon the existing domain name system or if VeriSign's shared registration system no longer functions.

Future developments in the domain name registration industry may include changes in the administration or operation of the Internet, including the creation and institution of alternative systems for directing Internet traffic without the use of the existing domain name system. Some of Tucows' competitors have begun registering domain names with extensions that rely on these alternative systems. These competitors are not subject to ICANN accreditation requirements and restrictions. The widespread acceptance of any alternate systems could eliminate the need to register a domain name to establish an on-line presence and reduce Tucows' revenues from domain name registrations.

The success of Tucows' business as a competitive registrar depends upon the continued availability and functionality of the shared registration system, which is maintained by VeriSign. Because the shared registration system has been in general use only since 1999, Tucows cannot assure you that the system will be able to handle the growing traffic caused by the increasing number of registrars or registrations. Tucows' ability to provide domain name registration services in the .com, .net and .org domains would be materially harmed, and its revenue from those services would likely decline, by any failure of the shared registration system.

Tucows relies on its network of MSPs to distribute its applications and services, and if Tucows is unable to maintain these relationships or establish new relationships, its revenue may decline.

Tucows obtains revenues by distributing applications and services through its network of MSPs. Tucows also relies on its MSPs to market, promote and sell its services. Tucows' ability to increase revenues in the future will depend significantly on its ability to increase the number of MSPs forming its customer network. MSPs have no obligations to distribute Tucows' applications and services and may stop doing so at any time. If Tucows is not able to maintain its relationships with MSPs, its ability to distribute its applications and services will be harmed, and its revenue may decline.

A significant portion of Tucows' revenue is obtained from a limited number of MSPs and the loss of any major customers could cause Tucows' revenues to decline.

A limited number of MSPs account for a substantial portion of Tucows' transaction volume and revenues. In particular, one MSP accounted for approximately 18% of Tucows' net revenues in the quarter ended March 31, 2001. If Tucows loses and is unable to replace any major customers, Tucows' revenues will decline.

Tucows is a minority shareholder in the Afiliat consortium that is responsible for the .info top-level domain. The venture may cause Tucows to incur additional capital and operating expenses to establish and develop the products and services.

Afiliat Limited, a consortium of 18 ICANN-accredited registrars, including Tucows, is responsible for the .info domain name. In its early stages, the Afiliat venture may require additional infusions of capital as it competes to establish itself as the registry of a new top-level domain. A lack of funding could impact Afiliat's ability to launch its service or to promote .info in the marketplace.

Afiliat is a new venture with a limited operating history. Its success is not guaranteed. The demand for the new registry is unknown and profits cannot be predicted. If there is no demand, or if actual demand is lower than anticipated, for .info or for any of the new generic top-level domains, or if the

returns on Tucows' capital expenditures are lower than expected or take longer to materialize than expected, Tucows' net revenues may decline.

Tucows will incur costs and may not realize anticipated revenues from the contract of its subsidiary to provide back end registry services for Afiliat.

Tucows has made capital expenses to establish Liberty Registry Management Services, Inc. as the back end service provider for the .info registry. The demand for the new registry is unknown and profits cannot be predicted. If there is no demand, or if actual demand for .info is lower than anticipated or if the returns on Tucows' capital expenditures are lower than expected or take longer to materialize than expected, Tucows' net revenues may decline.

A delay caused by Liberty in the launch of the registry or a failure by Liberty to satisfy its contractual obligations to Afiliat may also give rise to a claim for damages by Afiliat or cause Liberty to lose its exclusive contract with Afiliat.

Liberty has entered into an agreement with IBM for IBM to provide services and technical support, including web hosting, necessary for the operation of the .info registry. If IBM defaults in its obligations to Liberty, Liberty will likely find itself in breach of its obligations to Afiliat. Similarly, any breach by Afiliat in its obligations to Liberty may cause a corresponding breach in Liberty's obligations to IBM. If Liberty does breach either of these agreements, its co-contracting party may have legal claims and it may be subject to penalties.

VeriSign's multilingual domain name registration service has only recently begun to allow registrants to use the domain names they have applied to register. If this service does not become fully functional, Tucows will not benefit from the additional revenue it anticipates from this opportunity and may expose itself to liability from parties who have filed applications.

In November 2000, VeriSign introduced multilingual domain names on a test basis. This service is designed to allow consumers to register domain names in a number of scripts including Chinese, Japanese and Korean. The purpose of the test was to gather operational data concerning the technology created to provide the multilingual domain name registration service. Although there was no guarantee that the test would result in operational domain name registrations, Tucows decided to offer the service to remain competitive with other registrars. On June 20, 2001, VeriSign announced that the names registered through the test would become operational. There is no guarantee that these names will ever work. If multilingual domain names do not become fully functional, Tucows expects that demand will decrease, names that have been registered will not be renewed, and Tucows' credibility and revenues may suffer. If some of the domain names do not become operational, Tucows may be exposed to liability from participants in the program.

Failure by Tucows to secure agreements with country code registries or a subsequent failure by Tucows to comply with the regulations of the country code registries could cause customers to seek a registrar that offers these services.

The country code registries require registrars to comply with specific regulations. Many of these regulations vary from country code to country code. If Tucows fails to comply with the regulations imposed by country code registries, these registries will likely prohibit Tucows from registering or continuing to register names in their country codes. Any failure on Tucows' part to offer domain name registrations in a significant number of country codes, or in a popular country code would cause Tucows to lose a competitive advantage and could cause MSPs to elect to take their business to a registrar that offers these services.

Tucows operates on a global basis and clients around the world are required to execute its standard form agreements. Tucows' standard registration agreement may not be enforceable, which could subject Tucows to liability.

All of Tucows' MSPs must execute Tucows' standard registration agreement as part of the process of registering a domain name. This agreement contains provisions intended to limit Tucows' potential liability arising from its registration of domain names on behalf of its MSPs and their customers, including liability resulting from its failure to register or maintain domain names. If a court were to find that the registration agreement is unenforceable, Tucows could be subject to liability.

Risk Factors Relating to Infonautics and Tucows

Infonautics and Tucows have incurred losses and expect losses to continue.

Infonautics incurred net losses of approximately \$14.3 million for the year ended December 31, 2000 and approximately \$1.2 million for the quarter ended March 31, 2001. Tucows incurred net losses of approximately \$37.7 million for the year ended December 31, 2000, including approximately \$22.9 million of amortization and writedown of intangible assets. Tucows also incurred net losses of approximately \$3.3 million for the quarter ended March 31, 2001.

The combined company is likely to incur additional losses, and it may never become profitable. If the combined company should become profitable, it may not be able to sustain or increase its profitability.

Infonautics and Tucows may be unable to respond to the rapid technological changes in the industry, and their attempts to respond may require significant capital expenditures.

The Internet and electronic commerce are characterized by rapid technological change. Sudden changes in user and customer requirements and preferences, the frequent introduction of new applications and services embodying new technologies and the emergence of new industry standards and practices could make obsolete the applications, services and systems offered by Infonautics and Tucows and the websites offered by Infonautics. The emerging nature of applications and services in the e-business industry and their rapid evolution will require that Infonautics, Tucows and the combined company continually improve the performance, features and reliability of their applications and services. The success of Infonautics, Tucows and the combined company will depend, in part, on their ability:

- to develop and license new applications, services and technologies that address the increasingly sophisticated and varied needs of their current and prospective customers; and
- to respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis.

The development of applications and services and other proprietary technology involves significant technological and business risks and requires substantial expenditures and lead-time. Infonautics, Tucows and the combined company may be unable to use new technologies effectively or adapt their internally developed technology and transaction-processing systems to customer requirements or emerging industry standards. Updating technology internally and licensing new technology from third parties may require Infonautics, Tucows and the combined company to incur significant additional capital expenditures.

Claims of infringement of intellectual property or other rights of third parties by Infonautics or Tucows could result in substantial costs.

Third parties may assert claims of infringement of patents or other intellectual property rights against Infonautics, Tucows or the combined company concerning past, current or future technologies.

Content obtained from third parties and distributed over the Internet by Tucows, Infonautics or the combined company may result in liability for defamation, negligence, intellectual property infringement, product or service liability and dissemination of computer viruses or other disruptive problems.

Tucows may also be subject to claims from third parties asserting trademark infringement, unfair competition and violation of publicity and privacy rights relating specifically to domain names. These claims may include claims under the Anticybersquatting Consumer Protection Act, which was enacted to curtail the registration of a domain name that is identical or similar to another party's trademark or the name of a living person with the bad faith intent to profit from use of the domain name.

These claims and any resultant litigation could result in significant costs of defense, liability for damages and diversion of management's time and attention. Any claims from third parties may also result in limitations on the ability of Tucows, Infonautics or the combined company to use the intellectual property subject to these claims unless it is able to enter into agreements with the third parties making these claims. If a successful claim of infringement is brought against Infonautics, Tucows or the combined company and it fails to develop non-infringing technology or to license the infringed or similar technology on a timely basis, it may have to limit or discontinue the business operations which used the infringing technology.

Infonautics and Tucows rely on technologies licensed from other parties. These third-party technology licenses may infringe on the proprietary rights of others and may not continue to be available on commercially reasonable terms, if at all. The loss of this technology could require Infonautics, Tucows or the combined company to obtain substitute technology of lower quality or performance standards or at greater cost, which could make its products and services less attractive to customers or increase its costs.

If Tucows and Infonautics fail to protect their proprietary rights, the value of those rights could be diminished.

Both Infonautics and Tucows rely upon copyright, trade secret and trademark law, confidentiality and nondisclosure agreements, invention assignment agreements and work for hire agreements to protect their proprietary technology. Infonautics owns seven United States patents and has two pending United States patent applications. Tucows does not have patents on any of its technologies or processes. Infonautics and Tucows cannot ensure that their efforts to protect their proprietary information will be adequate to protect against infringement and misappropriation by third parties, particularly in foreign countries where laws or law enforcement practices may not protect proprietary rights as fully as in the United States.

Infonautics has licensed, and may in the future license, some of its trademarks and other proprietary rights to others. Tucows also expects to license proprietary rights such as trademarks or copyrighted material to strategic partners in the course of planned national and international expansion. Third parties may also reproduce or use intellectual property rights of Infonautics, Tucows or the combined company without seeking a license and thus benefit from the technology of Infonautics, Tucows or the combined company without paying for it. Third parties could also independently develop technology, processes or other intellectual property that are similar to or superior to those used by Infonautics, Tucows or the combined company. Actions by licensees, misappropriation of the intellectual property rights or independent development by others of similar or superior technology might diminish the value of the proprietary rights of Infonautics, Tucows or the combined company or damage the reputation of Infonautics, Tucows or the combined company.

Once any infringement is detected, disputes concerning the ownership or rights to use intellectual property could be costly and time-consuming to litigate, may distract management from operating the business and may result in Infonautics, Tucows or the combined company losing significant rights and their ability to operate all or a portion of their business.

Infonautics and Tucows could experience system failures and capacity constraints which would cause interruptions in their services and ultimately cause them to lose customers.

The ability of Infonautics and Tucows to maintain their computer hardware and software and telecommunications equipment in working order and to reasonably protect them from error and interruption is critical to the success of Infonautics, Tucows and the combined company. Failures and interruptions of, and the slowing of response times on, these systems could be caused by:

- an increase in the traffic on the websites of Infonautics, Tucows or the combined company without any necessary increase in system capacity;
- natural disasters, power losses, telecommunications failures, break-ins and similar events;
- computer viruses and electronic break-ins;
- errors, defects and bugs in software; and
- failure or inability to upgrade technical infrastructure to handle unexpected surges in customer levels and increases in customers' usage of bandwidth.

Tucows' website has experienced slower response times because of increased traffic, and Infonautics has occasionally suffered failures of the computer hardware and software and telecommunications systems that it uses to deliver its sites to customers. Substantial or persistent system failures could result in:

- loss of customers;
- loss of or delay in revenue; and
- failure to attract new customers or achieve market acceptance.

The systems of Infonautics and Tucows face security risks, and any compromise of the security of these systems could result in liability for damages and in lost customers.

The security systems of Infonautics and Tucows may be vulnerable to unauthorized access by hackers or others, computer viruses and other disruptive problems. Someone who is able to circumvent security measures could misappropriate customer or proprietary information or cause interruptions in Internet operations. Internet and online service providers have in the past experienced, and may in the future experience, interruptions in service because of the accidental or intentional actions of Internet users, current and former employees or others. Infonautics, Tucows and the combined company may need to expend significant capital or other resources to protect against the threat of security breaches or alleviate problems caused by breaches. Unauthorized persons may be able to circumvent the measures that are implemented in the future. Eliminating computer viruses and alleviating other security problems may require interruptions, delays or cessation of service to users accessing Infonautics' web sites and the web pages that deliver Tucows' content services. Repeated or substantial interruptions could result in the loss of customers and reduced revenues.

Many users of online commerce services are highly concerned about the security of transmissions over public networks. Concerns over security and the privacy of users may inhibit the growth of the Internet and other online services generally, and the web in particular, especially as a means of conducting commercial transactions. Users might circumvent the measures Infonautics, Tucows and the combined company take to protect customers' private and confidential information, such as credit card numbers. Security breaches could damage the reputation of Infonautics, Tucows or the combined company and expose them to litigation and possible liability, including claims for unauthorized purchases with credit card information, impersonation or other similar fraud claims and for other misuses of personal information, including for unauthorized marketing purposes. Infonautics, Tucows and the combined company may also incur significant costs to protect against security breaches or to alleviate problems caused by these breaches.

THE INFONAUTICS ANNUAL MEETING

Joint Proxy Statement/Prospectus

This joint proxy statement/prospectus is being furnished to Infonautics shareholders concerning the solicitation of proxies by the board of directors of Infonautics.

This joint proxy statement/prospectus is first being furnished to Infonautics shareholders on or about _____, 2001.

Date, Time and Place of the Annual Meeting

The Infonautics annual meeting is scheduled to be held at 9:30 a.m. on August 17, 2001 at the Philadelphia Marriott West, Matsonford Road at Front Street, 111 Crawford Avenue, West Conshohocken, Pennsylvania.

Purpose of the Annual Meeting

At the Infonautics annual meeting or any adjournment or postponement of the meeting, Infonautics shareholders will be asked:

- To consider and vote upon a proposal to approve the issuance of shares of Infonautics common stock as provided in the merger agreement.
- To consider and vote upon a proposal to adopt an amendment and restatement of Infonautics articles of incorporation.
- To elect five directors, each for a one-year term and until the election and qualification of his successor.
- To consider and vote upon a proposal to amend Infonautics' 1996 equity compensation plan to increase the number of shares of common stock reserved for grant under the plan to 10,000,000.
- To transact any other business as may properly come before the annual meeting.

Record Date for the Annual Meeting

The Infonautics board of directors has fixed the close of business on July 20, 2001 as the record date for determination of Infonautics shareholders entitled to notice of and to vote at the Infonautics annual meeting. On the record date, there were 12,940,996 shares of Infonautics common stock outstanding, held by approximately 189 holders of record.

Vote Required for Adoption of Proposals

Quorum

A majority of the outstanding shares of Infonautics common stock must be represented, either in person or by proxy, to constitute a quorum for each proposal presented at the Infonautics annual meeting. Each share of Infonautics common stock is entitled to one vote on all matters properly submitted to the Infonautics shareholders. As of April 2, 2001, Infonautics directors and executive officers and their affiliates owned approximately 8% of the outstanding shares of Infonautics common stock.

Election of Directors

Directors are to be elected at the annual meeting by a plurality of the votes cast by holders of common stock present in person or represented by proxy at the annual meeting. Votes may be cast in

favor of directors or withheld. Votes that are withheld will be excluded entirely from the vote and will have no effect other than for purposes of determining the presence of a quorum.

Other Proposals

The affirmative vote of the holders of a majority of the votes cast by holders of Infonautics common stock at a meeting at which a quorum is present is required to approve the amendment and restatement of the articles of incorporation, the amendment of the 1996 equity compensation plan and the issuance of Infonautics shares of common stock in the merger.

Proxies

All shares of Infonautics common stock represented by properly executed proxies received before or at the Infonautics annual meeting will, unless the proxies are revoked, be voted according to the instructions indicated on those proxies. If no instructions are indicated on a properly executed proxy card, the shares will be voted FOR

- approval of the issuance of shares of Infonautics common stock in the merger;
- adoption of the amended and restated articles of incorporation;
- election of the directors nominated by the Infonautics board of directors; and
- approval of the amendment to Infonautics' 1996 equity compensation plan.

We urge you to mark the box on the proxy card to indicate how to vote your shares.

If a properly executed proxy card is returned and the shareholder has abstained from voting on any proposal, the Infonautics common stock represented by the proxy will be considered present at the annual meeting for purposes of determining a quorum, but will not be considered to have been voted in favor of the proposal on which the shareholder abstained. If your Infonautics shares are held in an account at a brokerage firm or bank, you must instruct them on how to vote your shares. If an executed proxy card is returned by a broker or bank holding shares which indicates that the broker or bank does not have discretionary authority to vote on a proposal, the shares will be considered present at the meeting for purposes of determining the presence of a quorum, but will not be considered to have been voted in favor of the proposal. Infonautics believes that your broker or bank does not have discretionary authority to vote shares on which they have not received instructions on the issuance of Infonautics shares in the merger. Your broker or bank will vote your shares on that proposal only if you provide instructions on how to vote by following the information provided to you by your broker.

Abstentions and broker non-votes by or on behalf of Infonautics shareholders will have no effect on the outcome of the vote of Infonautics shareholders, while failures to vote by Infonautics shareholders will affect whether a quorum is present at the Infonautics annual meeting.

The Infonautics annual meeting may be adjourned or postponed to permit further solicitation of proxies. No proxy voted against a proposal that is submitted to the Infonautics shareholders for a vote will be voted to adjourn or postpone the annual meeting to permit further solicitation of proxies on that proposal.

Infonautics does not expect that any matter other than the issuance of Infonautics shares in the merger, the amendment and restatement of the Infonautics articles of incorporation, the election of directors and the amendment of the Infonautics 1996 equity compensation plan will be brought before the annual meeting. If other matters are properly presented, the persons named as proxies will vote using their judgment on those matters.

An Infonautics shareholder may revoke his proxy at any time before it is voted by:

- notifying in writing the secretary of Infonautics at 590 North Gulph Road, King of Prussia, PA 19406-2800, U.S.A.;
- granting a subsequently dated proxy; or
- appearing in person and voting at the annual meeting.

Attendance at the annual meeting will not in and of itself constitute revocation of a proxy.

Solicitation of Proxies

Infonautics has retained Georgeson Shareholder Communications Inc., at an estimated cost of \$15,000, to assist in the solicitation of proxies. Infonautics and its proxy solicitor will request banks, brokers and other intermediaries holding shares of Infonautics common stock beneficially owned by others to send this joint proxy statement/prospectus to, and obtain proxies from, the beneficial owners and will reimburse the holders for their reasonable expenses in so doing. Solicitation of proxies by mail may be supplemented by telephone, telegram and other electronic means, advertisements and personal solicitation by the directors, officers or employees of Infonautics. No additional compensation will be paid to directors, officers or employees for solicitation of proxies.

Stock Certificates

You should not send in any stock certificates with your proxy card. Infonautics shareholders will not receive any new shares in the merger.

THE TUCOWS SPECIAL MEETING

Joint Proxy Statement/Prospectus

This joint proxy statement/prospectus is being furnished to Tucows stockholders concerning the solicitation of proxies by the board of directors of Tucows.

This joint proxy statement/prospectus is first being furnished to Tucows stockholders on or about , 2001.

Date, Time and Place of the Special Meeting

The Tucows special meeting is scheduled to be held 10:00 a. m. on August 17, 2001 at 96 Mowat Avenue, Toronto, Ontario M6K 3M1, Canada.

Purpose of the Special Meeting

At the Tucows special meeting or any adjournment or postponement of the meeting, Tucows stockholders will be asked:

- To consider and vote upon a proposal to approve the merger agreement and the merger.
- To transact any other business as may properly come before the special meeting.

Record Date for the Special Meeting

The Tucows board of directors has fixed the close of business on June 26, 2001 as the record date for determination of Tucows stockholders entitled to notice of and to vote at the special meeting. On the record date, there were 3,500,012 shares of Tucows common stock and 32,631,011 shares of Tucows preferred stock outstanding, held by approximately 54 holders of record.

Vote Required

Quorum

A majority of the outstanding shares of Tucows common stock and Tucows preferred stock, together as a single class, must be represented, either in person or by proxy, to constitute a quorum at the Tucows special meeting. At the Tucows special meeting, each share of Tucows common stock and each share of Tucows preferred stock is entitled to one vote on all matters properly submitted to the Tucows stockholders. As of June 26, 2001, Tucows directors and executive officers and their affiliates owned approximately 28% of the outstanding shares of Tucows common stock and approximately 19% of the outstanding shares of Tucows preferred stock.

Adoption of Merger Agreement

The affirmative vote of the holders of a majority of the outstanding shares of Tucows common stock and Tucows preferred stock outstanding as of the record date, voting together as a single class, is required to adopt the merger agreement.

Proxies

All shares of Tucows common stock and Tucows preferred stock represented by properly executed proxies received before or at the Tucows special meeting will, unless the proxies are revoked, be voted according to the instructions indicated on those proxies. If no instructions are indicated on a properly executed proxy card, the shares will be voted FOR adoption of the merger agreement. We urge you to mark the box on the proxy card to indicate how to vote your shares.

If a properly executed proxy card is returned and the stockholder has abstained from voting on any proposal, the Tucows common stock or Tucows preferred stock represented by the proxy will be considered present at the special meeting for purposes of determining a quorum, but will not be considered to have been voted in favor of the proposal on which the stockholder abstained.

The Tucows special meeting may be adjourned or postponed to permit further solicitation of proxies. No proxy voted against the proposal to adopt the merger agreement will be voted on any proposal to adjourn or postpone the special meeting that is submitted to the Tucows stockholders for a vote.

Tucows does not believe that any matter other than adoption of the merger agreement will be brought before its special meeting. If other matters are properly presented, the persons named as proxies will vote using their judgment on those matters.

A Tucows stockholder may revoke his proxy at any time before it is voted by:

- notifying in writing the secretary of Tucows at 96 Mowat Avenue, Toronto, Ontario, M6K 3M1, Canada;
- granting a subsequently dated proxy; or
- appearing in person and voting at the special meeting.

Attendance at the special meeting will not in and of itself constitute revocation of a proxy.

Solicitation of Proxies

Solicitation of proxies by mail may be supplemented by telephone, telegram and other electronic means, advertisements and personal solicitation by the directors, officers or employees of Tucows. No additional compensation will be paid to directors, officers or employees for solicitation of proxies.

Stock Certificates

You should not send in any stock certificates with your proxy card. A transmittal letter with instructions for the surrender of Tucows stock certificates will be mailed to you as soon as practicable after completion of the merger.

THE MERGER

This section of the joint proxy statement/prospectus describes material aspects of the proposed merger, including the merger agreement. While the description covers the material terms of the merger, this summary may not contain all of the information that is important to you. You should read this entire joint proxy statement/prospectus and the other documents referred to carefully for a more complete understanding of the merger.

Background of the Merger

On November 10, 2000, Infonautics, IBS Interactive, Inc. and First Avenue Ventures, Inc. announced that they had agreed to terminate the reorganization agreement they had entered into on July 30, 2000. Under that agreement, Infonautics, IBS Interactive and First Avenue Ventures would have combined their businesses to form a new holding company, Digital Fusion, Inc., whose business objective would have been to create, acquire, fund, develop, operate and integrate a network of Internet focused technology companies.

In agreeing to terminate the Digital Fusion transaction, the Infonautics board of directors met on November 7, 2000 and reviewed the transaction as a whole in light of deteriorating market conditions in general and for so-called incubators using a similar business model to the proposed model for Digital Fusion in particular. The Infonautics board of directors then decided, at a meeting held on November 8, 2000, that, because of those market conditions, the Digital Fusion transaction no longer provided the benefits for Infonautics shareholders that Infonautics had anticipated and that it was in the best interest of Infonautics shareholders to terminate the transaction. At both meetings the Infonautics board of directors noted its intention to continue to seek strategic alternatives in an effort to provide value for Infonautics shareholders.

During 2000, Tucows pursued various means of obtaining sufficient resources to fund the operational and capital expenditures that Tucows may require to pursue growth opportunities it believes to be available to it. During mid and late 2000, Tucows considered various financing alternatives but found valuations to be unattractive. Stanley Stern, a member of the Tucows board of directors, began to analyze possible opportunities for a combination with a public company. Mr. Stern used as criteria companies that:

- had an appropriate amount of capital;
- had operating businesses and assets complementary to Tucows business; and
- were potentially undervalued.

On December 5, 2000, Mr. Stern sent Howard Morgan, a member of the Infonautics board of directors with whom he was previously acquainted, an e-mail suggesting that Tucows was interested in pursuing a merger with a public company that had significant amounts of available cash. Mr. Stern's initial communication with Mr. Morgan focused on a target other than Infonautics. Mr. Morgan, thinking that Infonautics might be an appropriate candidate for a merger with Tucows, discussed the suggestion with Van Morris, Infonautics' president and chief executive officer.

During December, Mr. Morgan suggested that Mr. Morris contact Mr. Stern, and Mr. Morris and Mr. Stern spoke on the telephone on several occasions and discussed in general the possibility of a combination between Infonautics and Tucows.

On January 2, 2001, Mr. Morris sent an e-mail to Mr. Stern expressing continued interest in a possible transaction with Tucows. On January 3, 2001, Infonautics and Tucows entered into a confidentiality and non-disclosure agreement.

During January 2001, Tucows provided Infonautics with a business plan and other limited information about Tucows and its business.

In the third week in January 2001, Mr. Stern facilitated a phone conversation between Elliot Noss, president and chief executive officer of Tucows, and Mr. Morris. During this conversation Mr. Noss and Mr. Morris reviewed in general the goals of their businesses. Mr. Morris indicated that Infonautics had recently terminated the Digital Fusion transaction and was seeking strategic alternatives. They discussed the possibility of a meeting of their management teams to explore further the potential fit between the two companies.

On January 24, 2001, Mr. Morris and Ram Mohan, Infonautics' vice president and chief technology officer, met in Toronto, Canada, with Mr. Noss, Michael Cooperman, Tucows' chief financial officer, Graham Morris, Tucows' chief operating officer, and Mr. Stern and discussed in a preliminary fashion the possible advantages of a transaction between Tucows and Infonautics and possible structures for a transaction.

On January 29, 2001, representatives of Tucows met with representatives of Infonautics and conducted preliminary due diligence about Infonautics at Infonautics' offices in King of Prussia, Pennsylvania. During the meetings, the parties discussed the businesses, products, markets, sales channels and financial results of the two companies. At the conclusion of the meeting, the parties determined that more extensive discussions between the management teams of the two companies should be organized, and that they would exchange relevant operational data.

During early and mid-February 2001, Mr. Morris and members of Infonautics senior management and Mr. Noss and members of Tucows senior management continued to discuss in general the economic terms of a possible transaction between Infonautics and Tucows.

On February 16, 2001, the Infonautics board of directors met by conference telephone. Mr. Morris discussed a number of strategic alternatives being considered by management, including a possible transaction between Infonautics and Tucows. The board of directors and management of Infonautics discussed appropriate methods for valuing Tucows.

On February 17, 2001, the Infonautics board of directors met by conference telephone. Mr. Morris presented a summary of the results of management's preliminary due diligence investigation and of advantages and risks relating to Tucows' business. The Infonautics board of directors discussed in detail the financial information Tucows had provided to Infonautics, ways to structure a proposed transaction with Tucows and considered what the likely plans would be for a combined company. The Infonautics board of directors authorized management to continue negotiations for a transaction with Tucows.

On February 21 and 22, 2001, representatives of Infonautics met with representatives of Tucows and conducted further due diligence about Tucows at Tucows' offices in Toronto, Canada.

On February 26, 2001, the Tucows board of directors held a special meeting to discuss the proposed transaction with Infonautics. The board of directors authorized management to continue its discussions with Infonautics' management and financial and legal due diligence.

In late February 2001, Mr. Morris and Mr. Noss continued their discussions about the structure and economic terms of a possible transaction.

During early March 2001, representatives of Infonautics and representatives of Tucows continued their due diligence review. Mr. Noss, Mr. Stern, Mr. Morris and their management teams and legal and accounting advisors discussed the structure of the proposed transaction, and representatives of Infonautics and Tucows began to prepare documentation for the proposed transaction. During March 2001, Infonautics engaged Janney Montgomery Scott LLC as its financial advisor concerning Infonautics' pursuit of strategic alternatives.

Infonautics delivered a proposed draft of a merger agreement to Tucows on March 10, 2001, and representatives of Infonautics and representatives of Tucows met in New York, New York on March 12 and 13, 2001 to discuss the draft agreement. During the afternoon of March 13, 2001, the parties halted negotiations because of a disagreement over the terms of the proposed transaction. On the evening of March 13, 2001, Mr. Stern contacted Mr. Morris and proposed that negotiations be

resumed, and on March 14, 2001 Mr. Morris agreed to resume negotiations. During the weekend of March 17 and March 18, 2001, Mr. Morris and Mr. Noss tentatively agreed on the principal economic terms of the proposed transaction. During the period from March 17 to March 27, 2001, the parties continued their due diligence activities and negotiation of the merger agreement and related agreements.

On March 18, 2001, the Infonautics board of directors met by conference telephone. Mr. Morris presented a summary of negotiations with Tucows and the status of other potential transactions. Federica O'Brien, Infonautics' chief financial officer, reported on Tucows' financial condition. Janney Montgomery Scott presented its preliminary views about the valuation of Tucows, including a discussion of comparable companies and valuation ranges. Janney Montgomery Scott provided the Infonautics board with a draft of its final report. The final report is summarized under "Opinion of Infonautics' Financial Advisor" beginning on page 43 of this joint proxy statement/prospectus. Janney Montgomery Scott noted that its review was incomplete and the draft report was intended only to assist the Infonautics board to evaluate the proposed transaction on a preliminary basis. After extensive discussion of various due diligence and structural issues that were being discussed by the parties, the board of directors authorized management to continue discussions with Tucows in an effort to finalize a merger agreement.

On March 19, 2001, the Tucows board of directors met with senior management and Tucows' legal advisors to discuss the status of the proposed merger. The management team reviewed for the board of directors the business of Infonautics, the strategic rationale for the merger, preliminary plans for integration of the operations and products of the two companies, Infonautics' financial condition and results of operations and the approximate exchange ratio for the merger. Skadden, Arps, Slate, Meagher & Flom LLP, outside counsel to Tucows, reviewed with the Tucows board of directors its legal responsibilities in considering the merger, the status of the negotiations, the results of legal due diligence, the principal terms of the transaction and drafts of the merger agreement and related agreements. After extensive discussion, the Tucows board of directors preliminarily approved the acquisition, the merger agreement and the related agreements, but identified specific remaining issues.

On March 22, 2001, the Tucows board of directors met and unanimously approved the merger agreement and related agreements.

On March 25, 2001, the Infonautics board of directors met by conference telephone. Mr. Morris and Gerard J. Lewis, Jr., Infonautics vice president and general counsel, made a detailed presentation of the terms of the merger agreement and related agreements. Mr. Morris discussed the strategic and financial terms of the proposed merger. Mr. Lewis discussed the board's fiduciary duties in considering a business combination. Janney Montgomery Scott presented detailed financial analyses concerning the proposed transaction and delivered its oral opinion that the merger consideration to be received under the merger agreement is fair from a financial point of view to Infonautics shareholders. The analyses presented by Janney Montgomery Scott to the Infonautics board are summarized under "Opinion of Infonautics' Financial Advisor" beginning on page 43 of this joint proxy statement/prospectus. The board of directors discussed in detail the advantages and risks of proceeding with the Tucows transaction.

On March 26, 2001, the Infonautics board of directors met by conference telephone. Mr. Morris summarized the terms of the proposed merger agreement and the advantages and risks discussed in the previous meeting of the Infonautics board of directors. Janney Montgomery Scott confirmed in writing the oral opinion it had delivered at the March 25, 2001 meeting of the Infonautics board of directors. After further discussion concerning the terms and the benefits and risks to Infonautics shareholders of the merger, the Infonautics board of directors voted unanimously to approve the merger agreement and related agreements and the issuance of shares of Infonautics common stock and options under the merger agreement and to recommend to Infonautics shareholders that they vote to approve the issuance of Infonautics common stock in the merger.

On March 27, 2001, representatives of Infonautics and representatives of Tucows finalized the merger agreement and related agreements, the terms of which were the same in all significant respects as those reviewed and approved by the Infonautics board of directors on March 26, 2001. On the evening of March 27, 2001, the parties executed the merger agreement, and the principal stockholders of each company executed voting agreements.

Before the opening of business on March 28, 2001, the parties publicly announced the agreement to merge.

Infonautics Reasons for the Merger

The Infonautics board of directors decided to approve the merger agreement and to recommend that Infonautics shareholders approve the issuance of Infonautics common stock in the merger after a careful consideration of a number of strategic alternatives, including potential business combinations with companies other than Tucows and the continuation and development of Infonautics' business as an independent public company. The Infonautics board of directors, with the assistance of Infonautics' management and its legal and financial advisors, considered a number of factors, including the following, that the board of directors believes make the merger with Tucows attractive to Infonautics shareholders and which could contribute to success of the combined companies:

- Tucows' principal business, providing Internet based applications and services such as domain name registration and the related services and digital content distribution, has experienced significant growth and is expected to continue to grow.
- The business of wholesale registration of domain names has low incremental costs.
- Tucows has acquired a significant share of the domain name registration business.
- The Infonautics board of directors believes that Tucows' domain name registration and digital content distribution businesses provide significant opportunities to market complementary products and services to established customers.
- The tools Infonautics has developed to handle, manage and manipulate content in the development of its Sleuth sites provide synergies with Tucows' software and downloadable content distribution business.
- The merger permits Infonautics shareholders to participate in the growth of the business of the combined companies after the merger and to benefit from the potential appreciation of Infonautics common stock.

Infonautics board of directors reviewed a number of factors in evaluating the merger. Among the factors considered by the board of directors were:

- Historical and prospective information concerning the business, financial condition, operations, technology and competitive position of Infonautics and Tucows;
- The view of Infonautics' management about the businesses, financial condition and results of operations of the combined company after the merger based on management's due diligence on Tucows;
- Market conditions and historical market prices of Infonautics' common stock;
- The view of the board of directors that Infonautics' valuation, which recently has been lower than the value of its liquid assets, is too low to provide shareholders with sufficient value in a cash transaction;
- Lack of growth and declining revenues in Infonautics' Electric Library business and flat advertising revenues in its Sleuth sites, resulting in uncertain prospects for Infonautics to expand its business to support a larger capitalization public company;

- The belief of the Infonautics board of directors that the terms of the merger agreement are reasonable;
- The financial analyses and opinion of Janney Montgomery Scott dated March 26, 2001 to the Infonautics board of directors that, as of that date and based on and subject to the matters described in the opinion, the merger consideration was fair, from a financial point of view, to Infonautics shareholders; and
- Reports from management and legal and financial advisors about the results of their due diligence investigation of Tucows.

The Infonautics board of directors also considered a number of potentially negative factors concerning the merger. These potentially negative factors included:

- The risk that the potential benefits of the merger might not be realized;
- The risk that Infonautics would be obligated to pay a significant termination fee if Infonautics shareholders do not approve the issuance of Infonautics common stock in the merger or if Infonautics is presented with and decides to accept a superior proposal;
- The risk that it may be impossible to continue all of Infonautics' then current operations because of the need to manage its use of its cash so that its representation that it will have \$7.5 million of cash, cash equivalents, and marketable securities at the completion of the merger will be correct;
- The risk that events between execution of the merger agreement and completion of the merger, such as a significant adverse change in overall market conditions, could affect whether the merger will be completed on a timely basis or at all;
- The significant reduction in the percentage interests of Infonautics shareholders in the combined company because of the merger; and
- The risks relating to Tucows' business and how those risks would affect the combined company.

The Infonautics board of directors concluded that on balance the potential benefits of the merger outweighed the potential risks. This discussion of the information and factors considered by the Infonautics board of directors is not meant to be exhaustive. Given the complexity of the issue and the number of factors considered, the Infonautics board of directors did not attempt to quantify or assign relative weight to specific factors.

Recommendation of the Infonautics Board of Directors

The Infonautics board of directors believes that the merger is fair to Infonautics shareholders and in their best interest, and recommends that Infonautics shareholders approve the issuance of shares of Infonautics common stock in the merger.

In considering the recommendation of the Infonautics board of directors about the merger, you should be aware that the directors and executive officers of Infonautics have interests in the merger that are different from the interests of Infonautics shareholders. Please see "Interests of Infonautics Directors and Executive Officers in the Merger" that begins on page 50 of this joint proxy statement/prospectus.

Opinion of Infonautics' Financial Advisor

By an engagement letter dated March 17, 2001, Infonautics formally retained Janney Montgomery Scott LLC to act as its financial advisor concerning a potential merger with Tucows. Infonautics selected Janney Montgomery Scott as its financial advisor on the basis of Janney Montgomery Scott's

experience and expertise in the technology industry in general and in transactions similar to the merger. As described above in “Infonautics’ Reasons for the Merger” beginning on page 42 of this joint proxy statement/prospectus, Janney Montgomery Scott’s opinion, dated March 26, 2001, was only one of the many factors considered by the Infonautics board of directors in making its determination to approve the merger.

On March 25, 2001, Janney Montgomery Scott delivered its oral opinion to the Infonautics board of directors that, as of that date, and based upon and subject to the matters stated in its opinion, the merger consideration was fair, from a financial point of view, to Infonautics shareholders. On March 26, 2001, Janney Montgomery Scott delivered its written opinion to Infonautics board.

The full text of Janney Montgomery Scott’s written opinion dated March 26, 2001, which describes the assumptions made, matters considered and limitation on review undertaken, is attached to this joint proxy statement/prospectus as annex 5 and is incorporated by reference. Janney Montgomery Scott has no obligation to update its opinion.

Janney Montgomery Scott’s opinion is directed to the board of directors of Infonautics and addresses the fairness of the consideration given in the merger to the holders of Infonautics common stock from a financial point of view. Janney Montgomery Scott’s opinion does not address the underlying decision of the board of directors to engage in the merger and does not constitute a recommendation to any shareholder about how the shareholder should vote or about any other action the shareholder should take concerning the merger. The summary of the opinion of Janney Montgomery Scott included in this joint proxy statement/prospectus is qualified in its entirety by reference to the full text of the opinion.

In reaching its opinion, Janney Montgomery Scott reviewed:

- selected historical and projected financial information relating to Infonautics and Tucows;
- selected financial information for other publicly traded companies;
- the financial terms of selected recent business combinations;
- the terms of the merger agreement and related documents in draft form; and
- spreadsheets provided to Janney Montgomery Scott by Infonautics about a recent round of financing for bigchalk.com.

Janney Montgomery Scott also held discussions with the management of Infonautics and Tucows about both companies’ businesses, operating results, financial conditions and prospects.

Janney Montgomery Scott assumed and relied upon the accuracy and completeness of all information supplied, discussed or publicly available. Janney Montgomery Scott did not assume any responsibility for independently verifying this information. Janney Montgomery Scott did not undertake any independent evaluation or appraisal of any of the assets or liabilities of Infonautics or Tucows and was not furnished with any evaluations or appraisals. Janney Montgomery Scott did not assume any obligation to conduct any physical inspection of the properties or facilities of Infonautics or Tucows.

Janney Montgomery Scott assumed that the financial forecast information furnished to or discussed with it by Infonautics and Tucows, has been reasonably prepared and reflects the best currently available estimates and judgments of Infonautics and Tucows management about the expected future financial performance of Infonautics and Tucows. Janney Montgomery Scott’s opinion expresses no view about whether these projections can be achieved or the assumptions on which they were based. Janney Montgomery Scott has relied upon the assurances of management of Infonautics and Tucows that they are not aware of any facts or circumstances that would make information provided to Janney Montgomery Scott inaccurate or misleading. Janney Montgomery Scott’s opinion is necessarily based

upon market and economic conditions as they existed on the date of its opinion and can be evaluated only as of that date.

In arriving at its opinion as described below, Janney Montgomery Scott ascribed a general range of values to Infonautics and Tucows, and made its determination about the fairness, from a financial point of view, of the consideration received in the merger to the holders of Infonautics common stock based on documents reviewed and financial and comparative analysis discussed below. The following descriptions summarize the material financial analyses performed by Janney Montgomery Scott for the Infonautics board of directors, but are not a complete description of all the analyses underlying Janney Montgomery Scott's opinion.

The presentation of a fairness opinion is a complex analytical process involving various determinations about the most appropriate and relevant methods of financial analyses and the application of those methods to the particular circumstances, and a fairness opinion is not readily susceptible to partial or summary description.

No company or business used in Janney Montgomery Scott's analyses as a comparison is identical to Infonautics or Tucows, nor is an evaluation of the results of these analyses entirely mathematical. Rather, it involves complex considerations and judgments concerning financial and operating characteristics that could affect the merger, public trading or valuation of the companies or business combinations being analyzed. The estimates contained in Janney Montgomery Scott's analyses and the ranges of valuations resulting from any particular analysis are not necessarily indicative of actual values or predictive of future results or values, which may be significantly more or less favorable than those suggested by these analyses. Analyses relating to the value of the business or securities are not appraisals, and do not reflect the prices at which businesses, companies or securities actually may be sold and are inherently subject to substantial uncertainty.

In arriving at its opinion, Janney Montgomery Scott made qualitative judgments about the significance and relevance of each analysis and factor considered by it. Janney Montgomery Scott believes that its analyses must be considered as a whole and that selecting portions of its analyses and factors, without considering all analyses and factors, could create an incomplete view of the processes underlying its analyses and its opinion.

The following is a summary of the material analyses performed by Janney Montgomery Scott and presented to the Infonautics' board of directors on March 25, 2001.

Infonautics Analyses

Infonautics business is comprised of three lines of business. The first line of business, which Janney Montgomery Scott refers to as the operating entities of Infonautics, consists of:

- Electric Library
- Sleuth businesses; and
- Encyclopedia.com.

The second line of business consists of Infonautics' ownership interest in bigchalk.com. The third line of business consists of Infonautics' ownership interest in eBay, Inc. Janney Montgomery Scott calculated a range of values for the operating entities, bigchalk.com and eBay separately, then calculated a value for the entire business based on the sum of these valuations plus the cash Janney Montgomery Scott considered to be excess. The cash Janney Montgomery Scott considered to be excess consisted of:

- cash;

- cash equivalents; and
- marketable securities,

less estimated cash required to support Infonautics operations until it realizes profitability.

Historical and Projected Operating Results and Financial Condition

In arriving at its opinion, Janney Montgomery Scott reviewed and analyzed the historical and projected operating results and financial condition of the operating entities. Janney Montgomery Scott's review included an assessment of financial condition and an analysis of growth in revenue and profits and of trends in profitability.

Janney Montgomery Scott analyzed Infonautics' projections of the operating entities in support of its fairness opinion. The projections were based on numerous estimates and assumptions by the management of Infonautics and are inherently subject to significant uncertainties and contingencies. The management of Infonautics believes that the projections were prepared, in all material respects, according to generally accepted accounting principles. The projections were not reviewed by independent auditors. The projections may not be achieved, and the inclusion of estimates on which the projections were based in this joint proxy statement/prospectus should not be regarded as an indication that Infonautics or any other person considers these estimates to be an accurate prediction of future events.

Analyses of Selected Comparable Public Companies

Janney Montgomery Scott reviewed publicly available information relating to companies that Janney Montgomery Scott considered comparable to Infonautics' operating entities. Janney Montgomery Scott examined actual financial results, financial condition and available stock analysts' revenue and earnings estimates of these companies for 2000 and 2001. When comparing the companies, Janney Montgomery Scott considered revenue, profitability, financial condition and several key operating metrics, including revenue per subscriber. The sources for the financial projections included the Investext Group's Research Bank and Institutional Brokers Estimate Service. Janney Montgomery Scott specifically focused on forward revenue projections and the corresponding growth rates of these companies.

Janney Montgomery Scott identified seven comparable companies for the operating entities. These companies were:

Ask Jeeves, Inc.	Factset Research Systems, Inc.
Earthweb, Inc.	Hoovers, Inc.
Looksmart, Ltd.	Student Advantage, Inc.
GOTO.com, Inc.	

Based on the comparable companies identified for the operating entities, the appropriate range of total capitalization divided by 2001 forward projected revenues was .40x-.65x. When this range was applied to the operating entities' 2001 projected revenues of \$10.3 million, assuming Infonautics conserves its cash, and \$13.5 million, assuming Infonautics pursues growth, Janney Montgomery Scott determined a valuation range of \$4.1 to \$8.8 million.

Analyses of Selected Comparable Business Combinations

Janney Montgomery Scott reviewed 37 business combinations of companies in industries related to the operating entities. Janney Montgomery Scott examined actual purchase price and actual financial results for the most recently available year or interim period when this information was publicly available for the target companies in these combinations.

Janney Montgomery Scott did not consider the range of values determined from this analysis to be relevant given:

- recent changes in market conditions;
- the limited availability of data points;
- the relatively larger size of the target companies in these combinations; and
- the distinctiveness of Infonautics' products and services.

Infonautics Summary

Based on its analyses, Janney Montgomery Scott developed a range of enterprise values of \$4.1 million to \$8.8 million for the operating entities. Janney Montgomery Scott separately valued Infonautics' investments in bigchalk.com and eBay.

Infonautics owns 4,633,333 shares of bigchalk.com common stock, or approximately 11% of the aggregate issued and outstanding shares of bigchalk.com common and preferred stock. In valuing Infonautics' 11% stake in bigchalk.com, Janney Montgomery Scott considered implied values from bigchalk.com's March 2001 private placement financing and \$150 million in liquidation preferences attached to other bigchalk.com shares. Since the most recent round of financing for bigchalk.com had a post money valuation of approximately \$130 million, or \$3.03 per share, and there was a \$150 million liquidation preference before the common shares, or \$3.50 per share, Janney Montgomery Scott used the Black Scholes option valuation analysis to value the common shares of bigchalk.com. The analysis resulted in a range of option values for the common shares of bigchalk.com of between \$0.72 and \$0.95 per share. Applying this valuation to Infonautics' ownership of 4,633,333 shares resulted in a valuation range of \$3.3 to \$4.4 million.

Infonautics owns 43,887 shares of eBay common stock. eBay shares are publicly traded on the Nasdaq National Market. As of the date of the opinion, the trailing 30 day average trading volume of eBay stock was approximately 5.25 million shares. Of the 43,887 shares owned by Infonautics, 26,453 are unrestricted. In valuing these shares, Janney Montgomery Scott considered the eBay closing stock price on March 23, 2001 and the collar on the shares. The collar entitles Infonautics to sell its eBay shares for a minimum price of \$50.00 per share and a maximum price of \$75.00 per share. Since the last trade on the day before the opinion presentation was at \$37.00, Janney Montgomery Scott used the lower end of the collar, or \$50.00, to measure the value of these shares. Because no data was available for Janney Montgomery Scott to predict whether or not the 17,434 restricted shares would be released from escrow, Janney Montgomery Scott used \$0.00 as the lower end of the range in determining value for the restricted shares. Janney Montgomery Scott used the March 23rd eBay stock price of \$37.00 for the upper end of the value range. Janney Montgomery Scott's analyses resulted in a total valuation for eBay shares owned by Infonautics of \$1.3 to \$1.9 million.

Janney Montgomery Scott used Infonautics unaudited balance sheet as of February 2001 to project cash and equivalents on hand at closing. Infonautics had approximately \$11.1 million in cash on hand. Based on Infonautics cash needs of \$2.0 million, assuming Infonautics conserves cash, to \$3.5 million, assuming Infonautics pursues growth, to become cash flow positive, Janney Montgomery Scott applied an additional \$7.5 million to the high end of the valuation range and \$9.0 million to the low end of the valuation range.

Summing the value of the Infonautics operating entities plus excess cash, Janney Montgomery Scott assigned a total range of values for Infonautics of \$17.8 million to \$22.7 million. Janney Montgomery Scott added proceeds from any in the money options or warrants at both ends of the valuation range and added to the share count the number of in the money options or warrants to calculate a fully diluted value for Infonautics shares. The Janney Montgomery Scott range of values for Infonautics on a per share basis was \$1.41 to \$1.80.

Tucows Analyses

Tucows is a global provider of Internet based applications, services and content to Internet service providers, web hosting companies, telecommunications companies, and cable companies. Janney Montgomery Scott calculated an enterprise value for Tucows based on the following analyses.

Tucows Historical and Projected Operating Results and Financial Condition

In arriving at its opinion, Janney Montgomery Scott reviewed and analyzed the historical and projected operating results and financial condition of Tucows. Janney Montgomery Scott's review included an assessment of Tucows' financial condition, an analysis of growth in revenue and profits, and a review of trends in profitability.

Janney Montgomery Scott analyzed Tucows projections in support of its fairness opinion. The projections were based on numerous estimates and assumptions by the management of Tucows, and are inherently subject to significant uncertainties and contingencies. The management of Tucows believes that the projections were prepared, in all material respects, according to generally accepted accounting principles. The projections were not reviewed by independent auditors. Janney Montgomery Scott used its judgment in analyzing these projections and made adjustments to Tucows' projections based on its knowledge of the domain name registration market and its discussions with Tucows' auditors concerning the recognition of revenue of a Tucows subsidiary. The net effect of these changes was an increase to management's original revenue projections. The projections may not be achieved, and the inclusion of estimates on which the projections were based in this joint proxy statement/prospectus should not be regarded as an indication that Tucows or any other person considers these estimates to be an accurate prediction of future events.

Analyses of Selected Comparable Companies for Tucows

Janney Montgomery Scott reviewed publicly available information relating to selected comparable companies in related industries to Tucows. Janney Montgomery Scott examined actual financial results, the financial condition and financial projections for the years ending 2001 and 2002 for the companies. When comparing the companies, Janney Montgomery Scott considered revenue, profitability, financial condition and several key operating metrics, including revenue per subscriber. The sources for the financial projections included the Investext Group's Research Bank and Institutional Brokers Estimate Service. Janney Montgomery Scott specifically focused on forward revenue projections and the corresponding growth rates of these companies.

Janney Montgomery Scott identified 15 comparable companies for Tucows. These companies were:

Domain Registrars

Register.com

Providers of Content & Web Sites

Akamai Technologies

Critical Path

InfoSpace

VeriSign

Factset

Digital Distribution

CNET Networks, Inc.

Internet.com

Stamps.com

ECommerce Enablers & Infrastructure

Digital River

Network Commerce, Inc.

Openwave

Preview Systems, Inc.

Digital Certificate/Internet Security

Baltimore Technologies

Entrust

Based on the comparable companies identified, Janney Montgomery Scott used a range of total capitalization divided by 2001 forward projected revenues of 1.5x-2.0x to value Tucows. When this range was applied to the adjusted Tucows' 2001 projected revenues, Janney Montgomery Scott determined a valuation range of \$76.6 to \$102.1 million.

Analyses of Selected Comparable Combinations for Tucows

Janney Montgomery Scott screened 93 business combinations of companies with business descriptions similar to Tucows. For these transactions, Janney Montgomery Scott examined actual purchase price, actual financial results for the most recently available year or interim period, and the financial condition, financial projections, historic growth rates and margins when this information was publicly available for the target companies in these combinations. Of these combinations, Janney Montgomery Scott selected the seven target companies most comparable to Tucows.

The comparable combinations selected were:

<u>Acquiror</u>	<u>Target</u>
Network Commerce, Inc.	Internet Domain Registrar, Inc.
VeriSign, Inc.	GreatDomains.com
CNET Networks	Ziff-Davis
Register.com	Afternic.com
Internet.com	ClickZ
Infospace, Inc.	Go2Net
Verisign, Inc.	Network Solutions, Inc.

When available, Janney Montgomery Scott examined the purchase price as a multiple of revenue, earnings before interest, taxes, depreciation and amortization, earnings before interest and taxes and net income. Janney Montgomery Scott was not able to apply earnings before interest, taxes, depreciation and amortization, earnings before interest and taxes, or net income multiples since Tucows was not profitable on a historical basis. The appropriate revenue multiple range was 3.0x-5.0x. These multiples were applied to the Tucows December 2000 through January 2001 annualized revenue to yield an enterprise valuation range of \$75.5 million to \$125.9 million.

Tucows Summary

Based on its analyses, Janney Montgomery Scott developed a range of enterprise values of \$76.6 million to \$102.1 million. Janney Montgomery Scott added proceeds from any in the money options or warrants at both ends of the valuation range and added to the share count the number of in the money options or warrants to calculate a fully diluted value for Tucows shares. The Janney Montgomery Scott range of values for Tucows on a per share basis was \$1.47 to \$1.93.

Summary

Under the merger agreement, Tucows stockholders are to receive approximately four times the outstanding shares outstanding of Infonautics. Based on this ratio, Infonautics shareholders will own approximately 20% of the outstanding shares of Infonautics after completion of the merger.

Based on its analyses, Janney Montgomery Scott was of the opinion, as of the date of its opinion that the consideration received in the merger is fair, from a financial point of view, to Infonautics shareholders.

Janney Montgomery Scott, Inc. is a nationally recognized investment banking firm and, as part of its investment banking activities, is regularly engaged in the valuation of businesses and securities

relating to business combinations, negotiated underwriting, secondary distributions of securities, private placements and valuations for corporate and other purposes.

In the ordinary course of business Janney Montgomery Scott makes a market in the common stock of Infonautics and may trade the common stock of Infonautics for its own account and the accounts of its customers. Janney Montgomery Scott may hold a long or short position in the common stock of Infonautics.

Under the terms of Janney Montgomery Scott's engagement, Infonautics paid Janney Montgomery Scott a fee of \$125,000 for its financial advisory services relating to the merger. Upon completion of the merger, Infonautics will pay Janney Montgomery Scott an additional \$50,000 for its financial advisory services related to the merger. Infonautics has also agreed to reimburse Janney Montgomery Scott for its out-of-pocket expenses, and to indemnify Janney Montgomery Scott against liabilities referred to in the engagement letter or to contribute to payments Janney Montgomery Scott may be required to make relating to those liabilities.

Interests of Infonautics Directors and Executive Officers in the Merger

In considering the recommendation of the board of directors of Infonautics to vote to approve the merger agreement and to recommend to Infonautics shareholders that they approve issuance of shares of common stock in the merger, Infonautics shareholders should be aware that members of the Infonautics board of directors and members of Infonautics' management team have agreements or arrangements that provide them with interests in the merger that differ from those of Infonautics shareholders.

Directors and officers of Infonautics have the following interests that differ from the interests of shareholders of Infonautics:

- David Van Riper Morris, a director of Infonautics and its president and chief executive officer, holds 193,040 restricted shares of Infonautics common stock that will vest on completion of the merger, with a market value of \$158,293 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Mr. Morris also holds options to purchase 100,000 shares of Infonautics common stock with exercise prices that are higher than the market price of the stock. Mr. Morris also has the right to receive up to \$250,000 in severance pay when he leaves the employ of Infonautics, of which \$83,000 is payable only if he remains with Infonautics until completion of the merger.
- Federica F. O'Brien, Infonautics' vice president, chief financial officer and treasurer, holds 18,900 restricted shares of Infonautics common stock that will vest on completion of the merger, with a market value of \$15,498 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Ms. O'Brien also has the right to receive up to \$200,000 in severance pay when she leaves the employ of Infonautics, of which \$67,000 is payable only if she remains with Infonautics until completion of the merger.
- Gerard J. Lewis, Jr., Infonautics' vice president, general counsel and secretary, holds 10,000 restricted shares of Infonautics common stock that will vest on completion of the merger, with a market value of \$8,200 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Mr. Lewis also holds options to purchase 90,000 shares of Infonautics common stock with exercise prices that are higher than the market price of the stock. Mr. Lewis also has the right to receive up to \$200,000 in severance pay when he leaves the employ of Infonautics, of which \$67,000 is payable only if he remains with Infonautics until completion of the merger.
- Cedarampattu S. Mohan, Infonautics' vice president and chief technical officer, holds 49,300 restricted shares of Infonautics common stock that will vest on completion of the merger, with a

market value of \$40,426 based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001. Mr. Mohan also has the right to receive up to \$200,000 in severance pay when he leaves the employ of Infonautics, of which \$67,000 is payable only if he remains with Infonautics until completion of the merger.

- David Van Riper Morris and Lloyd Morrisett will continue as directors of the combined company after the merger.
- Under the merger agreement, all Infonautics directors have the right to continuation of their existing indemnification arrangements.

The Infonautics board of directors was aware of these agreements and arrangements during its deliberations of the merits of the merger and in determining to recommend to the shareholders of Infonautics that they vote for the proposal to approve the issuance shares of Infonautics common stock in the merger.

Tucows' Reasons for the Merger

The board of directors of Tucows believes that the merger of Tucows and Infonautics will result in a combined company with unified values, complementary assets and operational efficiency. The Tucows board of directors believes that the combined company will be able to use Infonautics' liquid capital assets in an effort to build a business that can become a leading on-line provider of digital applications and services.

The Tucows board of directors noted that the combined company will have approximately:

- 4,000,000 page views per day;
- 1.5 million subscriptions to different e-mail lists;
- 80,000 subscribers to content archive; and
- 30,000 reviews of software and digital offerings.

The combined company will also offer an extensive collection of news and information feeds that are updated daily and may be customized by customers and integrated into their websites on a subscription basis. The Tucows board of directors believes that the combination of the companies will result in increased opportunities in the content business because integrating the complementary products and services of the two companies may open up new markets, such as the enterprise portal market.

Each company has other strengths from which the combined company will be able to benefit, including:

- Tucows' network of global resellers;
- Infonautics' e-mail management and subscription content services capabilities; and
- the fact that both companies' subscription Internet services are relevant to each company's audience, which should provide a new opportunity for cross selling.

Because the products of the two companies are complementary, but are not over-lapping, there should be limited customer confusion and additional opportunity to increase loyalty to the Tucows brand name, which the Tucows board of directors believes to be known and trusted for providing technology content.

The Tucows board of directors also believes that the combined company should be able to create operational efficiencies in areas such as content creation, advertising delivery, content delivery and data center management, advertising sales and executive and administrative management.

In reaching the conclusion that the merger of Tucows and Infonautics is in the best interest of Tucows and its stockholders, the board of directors of Tucows consulted with senior members of Tucows management team about the advantages of the merger, operational aspects of the transaction and the result of management's due diligence review. The Tucows board also consulted with Tucows general counsel and with representatives of Skadden, Arps, Slate, Meagher & Flom LLP, outside counsel to Tucows, about the duties of the members of the board of directors, legal due diligence matters and the terms of the merger agreement and related agreements. In considering its recommendation to Tucows stockholders, the board of directors of Tucows considered the following principal factors:

- historical information concerning the business, financial performance and condition, market opportunity and position, technology and management of the two companies;
- Tucows' management's views of the benefits of the merger and of the impact of the merger on the combined business and operations of the two companies;
- estimates of future financial results of the two companies illustrating the potential financial results of the combined company;
- current and historical information concerning the trading prices and volatility of Infonautics' shares;
- current and historical information concerning the non-public valuation of Tucows' shares;
- the belief that the terms of the merger agreement and the related voting agreements are reasonable; and
- reports from Tucows' management and financial and legal advisors about the results of their due diligence investigation of Infonautics.

Potential risks or other negative factors identified by the Tucows board of directors include:

- the risk that the potential benefits of the merger may not be realized;
- the risk that the listing of the combined company on the Nasdaq SmallCap market may be discontinued;
- the challenges of integrating the management teams, strategies, cultures and organizations of the two companies;
- the challenges of adding another substantial geographic center in King of Prussia, Pennsylvania, to Tucows' established centers in Toronto, Canada, and Flint, Michigan;
- the risk of loss of key talent;
- the potential tax treatment of the transaction and the possibility that at closing some losses would not be available to the combined entity due to an absence of built-in gains;
- the significant additional burden for Tucows of operating as a public company, including reporting requirements and significantly greater public disclosure of operational plans and strategies and financial results;
- the risk of contingent liabilities with the businesses of Infonautics;
- the risk that the merger might not be completed despite the parties' efforts, even if approved by stockholders; and
- other applicable risks described in this joint prospectus/proxy statement in "Risk Factors."

The Tucows board of directors concluded that on balance the potential benefits of the merger outweighed the potential risks. This discussion of the information and factors considered by the Tucows

board of directors is not meant to be exhaustive. Given the complexity of the issue and the number of factors considered, the Tucows board of directors did not attempt to quantify or assign relative weight to specific factors.

Recommendation of the Tucows Board of Directors

The Tucows board recommends that the Tucows stockholders approve the merger agreement.

Interests of Tucows Directors and Executive Officers in the Merger

In considering the recommendation of Tucows' board of directors to vote for the proposal to adopt the merger agreement, Tucows stockholders should be aware that members of Tucows' board of directors and management team have arrangements providing them with interests in the merger that differ from those of Tucows stockholders.

Directors and officers of Tucows have the following interests that differ from the interests of stockholders of Tucows:

- Elliot Noss, a director of Tucows and its president and chief executive officer, will continue in those roles in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of Cdn\$150,000 per year.
- Scott Swedorski, Tucows' founder and editor-in-chief, will continue in those roles in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of US\$100,000 per year.
- Michael Cooperman, Tucows' chief financial officer, will continue in that role in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of Cdn\$150,000 per year.
- Graham Morris, Tucows' chief operating officer will serve as chief operating officer of the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of Cdn\$150,000 per year.
- Supriyo Sen, Tucows' chief technology officer, will continue in that role in the combined company after the merger. He has an employment agreement with Tucows that will continue after the merger. It provides for a salary of US\$125,000 per year.
- Dennis Bennie, Erez Gissin, Stanley Stern and Robert F. Young, who are directors of Tucows, will serve as directors of the combined company after the merger.

Under the Tucows employment agreements, the salary of the executive is subject to periodic increases by the board of directors at its discretion, and the executive is eligible for an annual bonus and other benefits.

The Tucows board of directors was aware of these arrangements during its deliberations of the merits of the merger, and in determining to recommend to the Tucows stockholders that they vote for the proposal to adopt the merger agreement.

Completion and Effectiveness of the Merger

The merger will be completed when all of the conditions to completion are satisfied or waived, including:

- the approval by Infonautics shareholders of the increase in the number of authorized shares of Infonautics common stock included in the proposed amended and restated articles of incorporation of Infonautics;

- the issuance of shares of Infonautics common stock in the merger; and
- the adoption by Tucows stockholders of the merger agreement.

The merger will become effective upon the filing of a certificate of merger with the secretary of state of Delaware.

We are working toward completing the merger as quickly as possible. We expect to complete the merger during the third quarter of 2001.

Structure of the Merger and Conversion of Tucows Common Stock

Structure

At the time the merger is completed, a newly formed wholly owned subsidiary of Infonautics will be merged into Tucows, and Tucows will be the surviving corporation and a wholly owned subsidiary of Infonautics. After the merger the name Infonautics will be changed to Tucows Inc.

Conversion of Tucows Capital Stock

In the merger, Infonautics will issue approximately 60,054,100 shares of Infonautics common stock and options to purchase Infonautics common stock in exchange for all outstanding shares of Tucows capital stock and options.

The total merger consideration to be issued to Tucows stockholders will be equal to four times the sum of:

- 12,574,406, which is the number of issued and outstanding shares of Infonautics common stock on March 27, 2001, the date of the merger agreement, plus
- any restricted shares of Infonautics common stock issued or to be issued to employees of Infonautics in exchange for cancellation of previously granted stock options,

less 80,000.

The exchange ratio that determines the number of shares of Infonautics common stock to be issued in exchange for each share of Tucows common stock or Tucows preferred stock is:

- the total merger consideration, divided by
- the number of shares of Tucows common stock and preferred stock outstanding immediately before the effective time of the merger, excluding any shares issuable on exercise or conversion of any Tucows employee stock option, estimated to be approximately 36,131,000.

For example, assume that 371,100 shares of restricted stock will be issued to Infonautics shareholders in exchange for previously granted options and no additional shares of Tucows capital stock are issued before the effective time of the merger. On that basis, the total number of shares of Infonautics common stock to be issued to Tucows stockholders will be 51,702,024, and each issued and outstanding share of Tucows common stock or Tucows preferred stock will be converted into 1.4309 shares of Infonautics common stock.

The number of shares of Infonautics common stock issuable in the merger will be proportionately adjusted if there is any stock split of, or stock dividend on, the Infonautics common stock or Tucows capital stock, or any similar event occurs, between the date of the merger agreement and the date of completion of the merger.

Infonautics shareholders will not receive any additional shares in the merger.

After the merger former Tucows stockholders will own approximately 80% of Infonautics.

Exchange of Tucows Stock Certificates for Infonautics Stock Certificates

If you are a Tucows stockholder, when the merger is completed, the exchange agent will mail to you a letter of transmittal and instructions for use in surrendering your Tucows stock certificates in exchange for Infonautics stock certificates. When you deliver to the exchange agent your stock certificates, a properly executed letter of transmittal and any other required documents, your Tucows stock certificates will be canceled, and you will receive a stock certificate representing the number of full shares of Infonautics common stock to which you are entitled under the merger agreement.

You should not submit your Tucows stock certificates for exchange until you receive the transmittal instructions and a form of letter of transmittal from the exchange agent.

Tucows stockholders are not entitled to receive any dividends or other distributions on Infonautics common stock until the merger is completed and they have surrendered their Tucows stock certificates in exchange for Infonautics stock certificates.

If there is any dividend or other distribution on Infonautics stock with a record date after the merger is completed and a payment date before you surrender your Tucows stock certificates in exchange for Infonautics stock certificates, you will receive the dividend or distribution on the whole shares of Infonautics stock issued to you promptly after they are issued. If there is any dividend or other distribution on Infonautics stock with a record date after the merger is completed and a payment date after you surrender your Tucows stock certificates in exchange for Infonautics stock certificates, you will receive the dividend or distribution for the whole shares of Infonautics stock issued to you promptly after the payment date.

Infonautics will only issue a stock certificate or a check instead of a fractional share in a name other than the name in which a surrendered Tucows stock certificate is registered if you present the exchange agent with all documents required to complete the unrecorded transfer of ownership and show that you paid any applicable stock transfer taxes.

Treatment of Tucows Stock Options and Other Stock Rights

When the merger is completed, each outstanding stock option granted under the Tucows Inc. amended and restated 1999 stock option plan will be converted into an option to purchase the number of shares of Infonautics common stock into which the Tucows option would have been converted if it had been exercised immediately before the effective time of the merger. The exercise price per share for each Tucows stock option after the merger will be the exercise price of the Tucows stock option divided by the exchange ratio for exchanging Tucows capital stock for Infonautics common stock in the merger. The other terms of each Tucows option to purchase common stock will continue to apply. It is estimated that approximately 5,836,700 Tucows stock options will be converted to options to purchase Infonautics common stock.

It is a condition to Infonautics' obligation to complete the merger that all options to purchase Tucows preferred stock be amended or canceled so that at or after the effective time of the merger any exercise of these options will not require the issuance of any additional shares of Infonautics common stock or cause an increase in the total merger consideration to be issued to Tucows stockholders. It is anticipated that options to purchase Tucows preferred stock will be cancelled before completion of the merger.

Material U.S. Federal Income Tax Consequences of the Merger

The following discussion summarizes the material anticipated U.S. federal income tax consequences of the merger to U.S. holders of shares of Tucows common stock. This discussion assumes that all Tucows preferred stock is converted into Tucows common stock before the merger. This discussion assumes that Tucows stockholders hold their shares as capital assets and does not

address all of the U.S. federal income tax consequences that may be relevant to particular stockholders in light of their individual circumstances or to stockholders that are subject to special rules, such as:

- financial institutions,
- mutual funds,
- tax-exempt organizations,
- insurance companies,
- dealers in securities or foreign currencies,
- persons, including traders in securities, using a mark-to-market method of accounting,
- stockholders who hold their shares as a hedge against currency risk or as part of a straddle, constructive sale or conversion transaction,
- stockholders who exercise appraisal rights,
- an investor in a pass-through entity, or
- stockholders who acquired their shares upon the exercise of employee stock options or as compensation.

As used in this section, U.S. holder means a holder of Tucows common stock that is, for U.S. federal income tax purposes:

- a citizen or resident of the U.S. for U.S. federal income tax purposes,
- a corporation, partnership or other entity, other than a trust, created or organized in or under the laws of the U.S. or any political subdivision in the U.S.,
- an estate whose income is subject to U.S. federal income tax regardless of its source, or
- a trust if, in general, a court within the U.S. is able to exercise primary supervision over its administration and one or more U.S. persons have authority to control all of its substantial decisions.

The following discussion is based upon the Internal Revenue Code, laws, regulations, rulings and decisions in effect as of the date of this joint proxy statement/prospectus, all of which are subject to change, possibly with retroactive effect. Tax consequences under state, local and foreign laws are not addressed in this discussion. No ruling has been or will be sought from the Internal Revenue Service concerning the U.S. federal income tax consequences of the merger and the following discussion is not binding on the Internal Revenue Service. **You are strongly urged to consult your tax advisor concerning the specific tax consequences to you of the merger, including the application of federal, state, local and foreign income and other tax laws based on your particular facts and circumstances.**

Tucows has received an opinion from its tax counsel, Skadden, Arps, Slate, Meagher & Flom LLP, subject to the qualifications discussed below, that the merger will qualify as a reorganization within the meaning of section 368(a) of the Internal Revenue Code. It is a condition to Tucows' obligation to complete the merger that the opinion of its tax counsel be confirmed immediately before the merger.

If the merger were to fail to qualify as a reorganization, each U.S. holder of Tucows common stock would be taxable on the full amount of the cash and the fair market value of Infonautics common stock received in the merger offset by the amount of the stockholder's basis, if any, in the Tucows common stock.

Assuming that the merger will qualify as a reorganization, the U.S. federal income tax consequences can be summarized as follows:

- No gain or loss will be recognized by Tucows, Infonautics or TAC Merger Sub Corporation because of the merger;
- No gain or loss will be recognized by the U.S. holders of Tucows common stock who exchange their shares of Tucows common stock for Infonautics common stock in the merger, except for cash received instead of fractional shares of Infonautics common stock;
- The aggregate tax basis of the Infonautics common stock received by holders of Tucows common stock who exchange all of their shares in the merger will be the same as the aggregate tax basis of the Tucows common stock surrendered in exchange for the Infonautics common stock, reduced by any amount of tax basis allocable to a fractional share interest in Infonautics common stock for which cash is received;
- The holding period of a share of Infonautics common stock received in the merger will include the holder's holding period for the Tucows common stock surrendered for the Infonautics common stock.

The tax opinion of Skadden, Arps, Slate, Meagher & Flom LLP is based on facts, representations and assumptions described or referred to in the opinion which are consistent with the state of facts existing as of the date of the opinion. In giving its tax opinion, Skadden, Arps, Slate, Meagher & Flom LLP has relied upon representations and covenants, including those contained in certificates of officers of Infonautics and Tucows. The representations and covenants must be reaffirmed before completion of the merger. If any of the representations or covenants were incorrect or untrue, the opinion of Skadden, Arps may no longer be correct, and no reliance could be placed on it. The tax opinion is not binding on the Internal Revenue Service or the courts, and the parties do not intend to request a ruling from the Internal Revenue Service concerning the merger. There can be no assurance that the Internal Revenue Service will not challenge the conclusion about the tax consequences of the merger or that a court will not sustain any challenge.

U.S. holders of Tucows common stock that receive cash instead of fractional shares of Infonautics stock in the merger will be treated as having received the fractional shares in the merger and then as having sold the fractional shares for cash. The amount of any capital gain or loss attributable to the sale will be equal to the difference between the cash received instead of the fractional shares and the ratable portion of the stockholder's tax basis of the Tucows common stock surrendered in the merger that is allocated to the fractional shares. Any capital gain or loss attributable to the sale will be long-term capital gain or loss if the stockholder's holding period for its Tucows common stock exceeded 12 months upon completion of the merger.

The preceding discussion is general in nature and does not consider any particular stockholder's individual facts and circumstances. The tax consequences of the merger to any particular stockholder will depend on the stockholder's particular facts and circumstances. You are strongly urged to consult your tax advisor concerning the tax consequences to you of the merger.

Material Canadian Federal Income Tax Considerations

The following is a summary of the principal Canadian federal income tax considerations generally applicable to a holder of Tucows common stock or options to purchase Tucows common stock who, for purposes of the Income Tax Act (Canada) and at all relevant times:

- is resident in Canada,
- holds the Tucows common stock or options as capital property,
- deals at arm's length with and is not affiliated with Tucows or Infonautics and
- acquires shares or options of Infonautics in the merger.

This summary assumes that all Tucows preferred stock is converted into Tucows common stock before the merger.

This summary does not address considerations applicable to holders of employee stock options, who should consult their own tax advisors about the tax consequences of the merger. Financial institutions are generally considered not to hold shares or options as capital property under the mark-to-market rules in the Income Tax Act (Canada). Shares or options held by other persons will generally be considered to be held as capital property unless they are held as part of a business of buying and selling securities or have been acquired in a transaction considered to be an adventure in the nature of trade.

This summary is based on the current provisions of the Income Tax Act (Canada) and the regulations under the act, the administrative and assessing policies and practices published by the Canada Customs and Revenue Agency before the date of this joint proxy statement/prospectus and all specific proposals to amend the Income Tax Act (Canada) and regulations under the act publicly announced by or on behalf of the Canadian Minister of Finance before the date of this joint proxy statement/prospectus. These tax proposals may not be enacted in the form proposed or at all. This summary assumes that the merger will be completed under the terms of the merger agreement.

This summary does not take into account or anticipate any changes in law or administrative policy or practice, other than the specific proposals to amend the Income Tax Act (Canada) and related regulations publicly announced by or on behalf of the Canadian Minister of Finance before the date of this joint proxy statement/prospectus, nor does it take into account any provincial or territorial taxes or any taxes of countries other than Canada. This summary is of a general nature only and is not intended to be, nor should it be interpreted to be, legal or tax advice to any particular holder of Tucows common stock or options. You should consult your tax advisor about the particular consequences to you of the merger.

For purposes of the Income Tax Act (Canada), all amounts denominated in U.S. dollars must be converted into Canadian dollars based on the U.S. dollar exchange rate generally prevailing at the time the amounts arise.

The Merger

Unless a holder otherwise elects in his return of income for the taxation year in which the merger takes place, a holder of Tucows common stock or options to purchase Tucows common stock will not realize any capital gain or loss because he will be considered, at the effective time of the merger, to:

- have disposed of those shares or options for proceeds equal to the adjusted cost base to the holder of those shares or options immediately before the merger; and
- have acquired the Infonautics common stock or options to purchase Infonautics common stock at a cost equal to those proceeds.

A holder of Tucows common stock who receives a cash payment instead of a fractional share will have the option of:

- recognizing the capital gain or loss arising on the partial disposition in the merger, or
- reducing the cost of the Infonautics common stock received in the merger by the cash payment.

A holder who elects not to have the treatment described above apply will be considered to have disposed of the Tucows common stock or options to purchase Tucows common stock for proceeds of disposition equal to the fair market value of the Infonautics common stock or options to purchase Infonautics common stock received by the holder. Infonautics common stock or options to purchase Infonautics common stock so acquired will be considered to be acquired at a cost equal to those proceeds of disposition. The holder will generally realize a capital gain or capital loss in the amount that the proceeds of disposition exceed or are less than the holder's adjusted cost base of the shares or options immediately before the merger.

A holder of Tucows common stock who dissents from the merger will generally realize a capital gain or capital loss in the amount that the cash proceeds received exceed or are less than the holder's adjusted cost base of the Tucows common stock immediately before the merger.

One-half of any capital gain realized will be included in computing a holder's income as a taxable capital gain. One-half of any capital loss realized may be deducted by a holder against taxable capital gains realized by the holder in the year of the merger or against net taxable capital gains for the three preceding or any subsequent years, under the rules contained in the Income Tax Act (Canada). When an individual other than specified trusts realizes a capital gain, alternative minimum tax may arise, depending on the individual's particular circumstances. A Canadian-controlled private corporation may be liable to pay an additional refundable tax of 6⅓% on taxable capital gains. The amount of any capital loss realized by a corporation on a disposition of a share may be reduced by the amount of dividends received or treated as having been received on the share. Similar rules may apply where a corporation is a member of a partnership or a beneficiary of a trust that owns shares, directly or indirectly through a partnership or trust.

Foreign Property Matters

The Infonautics common stock or options to purchase Infonautics common stock will be foreign property for purposes of Part XI of the Income Tax Act (Canada), which imposes a special tax on a deferred income plan or other tax-exempt entity, including most registered pension plans, generally where the aggregate cost amount of its foreign property exceeds 30% of the aggregate cost amount of all of its property. Holders of Infonautics common stock or options to purchase Infonautics common stock whose total cost amount of foreign property, including those shares or options, in a taxation year exceeds Canadian \$100,000 will be required to file an information return.

New rules have been proposed to apply to persons owning shares, or rights to acquire shares, in non-resident corporations which are foreign investment entities, subject to specific exemptions. If the foreign investment entity rules were applicable to the Infonautics common stock and options to purchase Infonautics common stock, the tax consequences of holding the shares or options would differ significantly from those currently applicable under the Income Tax Act (Canada). Given that these rules are subject to further consultation and will undoubtedly be changed and modified and that the implementation date has been delayed to taxation years beginning after 2001, holders of shares or options are urged to consult their tax advisors concerning the potential tax consequences of the rules applying in their particular circumstances.

Accounting Treatment of the Merger

The merger will be accounted for as a purchase by Tucows of Infonautics based on Accounting Principles Board Opinion No. 16. The fair value of the accounting consideration paid has been determined based on the market value of the outstanding shares of Infonautics on the date of the announcement of the merger. The assets and liabilities of Infonautics will be recorded at their fair values as of the completion of the merger and the assets and liabilities of Tucows will remain at their historical carrying amounts. The financial statements of Infonautics will reflect the historical operations of Tucows and the operations of Infonautics after completion of the merger.

Restrictions on Sales of Shares by Affiliates of Tucows; Registration Rights

The shares of Infonautics common stock to be issued upon conversion of shares of Tucows in the merger will be registered under the Securities Act of 1933 and will be freely transferable under the Securities Act, except for shares of Infonautics common stock issued to any person who is considered to be an affiliate of Tucows at the time of the Tucows' special meeting.

Persons who may be considered to be affiliates include individuals or entities that control, are controlled by, or are under the common control of Tucows and may include executive officers, directors and significant stockholders. Affiliates may not sell their shares of Infonautics common stock acquired in the merger except under:

- an effective registration statement under the Securities Act covering the resale of those shares;
- an exemption under Rule 145(d) under the Securities Act; or
- any other applicable exemption under the Securities Act.

Infonautics' registration statement on Form S-4, of which this joint proxy statement/prospectus forms a part, does not cover the resale of shares of Infonautics common stock to be received by Tucows' affiliates in the merger.

Infonautics will enter into a registration rights agreement with former stockholders of Tucows holding shares of Tucows convertible in the merger into approximately 45,396,700 shares of Infonautics common stock. Under the registration rights agreement the former stockholders of Tucows will have the following registration rights:

- an unlimited number of demand registration rights that the holders may exercise not more than twice during any twelve-month period, provided that the holders must request registration of shares having a value of at least \$10 million;
- an unlimited number of demand registration rights for registration on Form S-3 that the holders may exercise not more than twice during any twelve-month period, provided that the holders must request registration of shares having a minimum aggregate offering price of \$250,000; and
- an unlimited number of piggyback registration rights that require Infonautics to register sales of a holder's shares when Infonautics undertakes a public offering, subject to the discretion of the managing underwriter of the offering to decrease the amount that holders may register.

Infonautics must bear all registration expenses if these registration rights are exercised, other than underwriting discounts and commissions.

Appraisal Rights

The following discussion summarizes the material provisions of section 262 of the Delaware General Corporation Law. You are strongly urged to read the full text of section 262, a copy of which

is attached to this joint proxy statement/prospectus as annex 6 and is incorporated into this summary by reference.

Under Delaware law, holders of Tucows common stock and preferred stock are entitled to appraisal rights. If the merger is completed, each holder of Tucows common stock or preferred stock who:

- files written notice with Tucows before the Tucows special meeting of an intention to exercise rights to appraisal of his shares,
- does not vote in favor of the merger, and
- follows the procedures under section 262 of the Delaware General Corporation Law that are summarized below,

will be entitled to be paid the fair value in cash of the shares of Tucows common stock or preferred stock by the surviving corporation in the merger.

The fair value of shares of Tucows common stock or preferred stock will be determined by the Delaware Court of Chancery, exclusive of any element of value arising from the merger. The shares of Tucows common stock or preferred stock for which holders have perfected their appraisal rights under section 262 of the Delaware General Corporation Law and have not effectively withdrawn or lost their appraisal rights are referred to in this joint proxy statement/prospectus as the Tucows dissenting shares.

Within ten days after the effective date of the merger, Tucows, as the surviving corporation in the merger, must mail a notice to all stockholders who have filed a written notice with Tucows before the special meeting of the stockholders of Tucows of an intention to exercise appraisal rights and who did not vote in favor of the merger. This notice must inform these stockholders of the effective date of the merger. Holders of Tucows dissenting shares may:

- within 60 days after the effective date of the merger, withdraw their demand for appraisal.
- within 120 days after the effective date of the merger upon written request, receive from Tucows a statement providing the aggregate number of shares for which demands for appraisals have been received.
- within 120 days after the effective date of the merger, file a petition in the Delaware Court of Chancery for the appraisal of their shares.

Appraisal rights are available only to the record holder of shares. If you wish to exercise appraisal rights but have a beneficial interest in shares that are held of record by or in the name of another person, such as a broker or nominee, you should act promptly to cause the record holder to follow the procedures in section 262 of the Delaware General Corporation Law to perfect your appraisal rights.

The following requirements apply to a demand for appraisal:

- The demand should be signed by or on behalf of the stockholder exactly as the stockholder's name appears on the stockholder's stock certificates.
- If the shares are owned of record in a fiduciary capacity, such as by a trustee, guardian or custodian, the demand should be executed in that capacity.
- If the shares are owned of record by more than one person, as in a joint tenancy or tenancy in common, the demand should be executed by or on behalf of all joint owners.
- An authorized agent, including one or more joint owners, may execute a demand for appraisal on behalf of a record holder. However, in the demand the agent must identify the record owner or owners and expressly disclose that the agent is executing the demand as an agent for the record owner or owners.

- A record holder such as a broker who holds shares as nominee for several beneficial owners may exercise appraisal rights for the shares held for one or more beneficial owners and not exercise rights for the shares held for other beneficial owners. The written demand should state the number of shares for which appraisal rights are being demanded. When no number of shares is stated, the demand will be presumed to cover all shares held of record by the broker or nominee.

If any holder of Tucows common stock who demands appraisal of his shares under section 262 of the Delaware General Corporation Law fails to perfect, or effectively withdraws or loses the right to appraisal, his shares will be converted into a right to receive Infonautics common stock under the terms of the merger agreement. Tucows dissenting shares lose their status as dissenting shares if:

- the merger is abandoned;
- the dissenting stockholder fails to make a timely written demand for appraisal;
- the Tucows dissenting shares are voted in favor of the merger;
- neither Tucows nor the stockholder files a complaint or intervenes in a pending action within 120 days after the effective date of the merger; or
- the stockholder delivers to Tucows, as the surviving corporation, within 60 days of the effective time of the merger, or after that time with Tucows' approval, a written withdrawal of the stockholder's demand for appraisal of the Tucows dissenting shares. However, if the stockholder is a party to an appraisal proceeding in the Delaware Court of Chancery, that proceeding may not be dismissed without the approval of the court.

Failure to follow the steps required by section 262 of the Delaware General Corporation Law for perfecting appraisal rights may result in the loss of appraisal rights.

In view of the complexity of the provisions of section 262 of the Delaware General Corporation Law, Tucows stockholders who are considering objecting to the merger should consult their own legal advisors.

It is a condition to Infonautics' obligation to complete the merger that holders of no more than 150,000 shares of Tucows capital stock have exercised and not withdrawn their rights of appraisal.

Infonautics shareholders have no dissenters' rights of appraisal in the merger.

The Merger Agreement

The following discussion summarizes the material terms of the merger agreement. The complete text of the merger agreement is incorporated by reference and attached as annex 1 to this joint proxy statement/prospectus. You are urged to read the full text of the merger agreement.

Conditions to the Completion of the Merger

The obligation of Tucows and Infonautics to complete the merger is subject to the satisfaction or waiver of the conditions listed below.

Conditions to Obligations of Tucows and Infonautics

- The Infonautics shareholders must approve the amendment and restatement of Infonautics articles of incorporation and the issuance of shares of Infonautics common stock in the merger.
- The merger agreement must be adopted by the Tucows stockholders.

- The registration statement of which this joint proxy statement/prospectus forms a part must be declared and remain effective.
- No law, injunction or order preventing the completion of the merger may be in effect.
- Tucows and Infonautics must have obtained all consents of third parties required to complete the merger except for those consents which, if not obtained, would not have a material adverse effect.

Conditions to Obligations of Infonautics

- There must not have occurred any event that has had a material adverse effect on the business, financial condition or results of operations of Tucows and its subsidiaries taken as a whole or on the ability of Tucows to complete the merger.
- Holders of no more than 150,000 shares of Tucows capital stock must have exercised and not withdrawn their rights of appraisal.
- All of Tucows outstanding preferred stock must have been converted into common stock.
- All outstanding options to purchase Tucows capital stock other than employee stock options must have been amended or canceled so that any exercise of these options will not require the issuance of any additional shares of Infonautics common stock or cause an increase in the total merger consideration.
- The representations and warranties of Tucows must be true in all material respects.
- Tucows must have complied with its covenants in all material respects.

Conditions to Obligations of Tucows

- There must not have occurred any event that has had a material adverse effect on the business, financial condition or results of operations of Infonautics and its subsidiaries taken as a whole or on the ability of Infonautics to complete the merger.
- Tucows must have received an opinion of tax counsel that the merger will qualify as a tax-free reorganization for U.S. federal income tax purposes.
- The representations and warranties of Infonautics must be correct in all material respects, including the representation that Infonautics will have at least \$7.5 million in cash, cash equivalents and marketable securities, net of specific short-term liabilities, at the time of completion of the merger.
- Infonautics must have complied with its covenants in all material respects.

No Other Transactions

Agreement not to Engage in Other Transactions

The merger agreement contains provisions prohibiting either Infonautics or Tucows from seeking an alternative transaction. Under these no solicitation provisions, Infonautics and Tucows has each agreed that it will, and will cause its subsidiaries, affiliates, officers, directors, employees, financial advisors, agents and other representatives to, cease any existing discussion or negotiation with any third party conducted before the execution of the merger agreement concerning any Acquisition Proposal, as described below, that is proposed, potential or being considered.

Infonautics and Tucows each also agreed that, subject to the exceptions described below under “Exceptions for a Superior Proposal for Infonautics”, neither of the parties nor any of their subsidiaries, affiliates or other representatives will, directly or indirectly:

- solicit, initiate or encourage any inquiries or proposals that constitute or could reasonably be expected to lead to an Acquisition Proposal;
- engage in negotiations or discussions with any third party concerning, or provide any non-public information to any third party relating to, an Acquisition Proposal; or
- enter into any letter of intent, agreement in principle, acquisition agreement or other similar agreement concerning an Acquisition Proposal.

Infonautics also agreed that, subject to the exceptions described below under “Exceptions for a Superior Proposal for Infonautics”, neither it nor any of its subsidiaries, affiliates or other representatives will, directly or indirectly, make or authorize any statement, recommendation or solicitation in support of an Acquisition Proposal other than the merger.

An Acquisition Proposal is any proposal or offer, including any proposal or offer to the Infonautics shareholders or the Tucows stockholders concerning:

- a merger, acquisition, consolidation, recapitalization, reorganization, liquidation, tender offer, exchange offer or other transaction involving an equity interest representing 25% or more of the voting power of Infonautics or Tucows; or
- any purchase or sale of 25% or more of the consolidated assets of Infonautics or Tucows.

Exceptions for a Superior Proposal for Infonautics

The merger agreement does not prevent Infonautics or its board of directors from furnishing non-public information to, or entering into discussions or negotiations with, any third party who makes an unsolicited Acquisition Proposal, if:

- the third party has made a written proposal to the board of directors of Infonautics for an Acquisition Proposal;
- the Infonautics board of directors determines in good faith, based on the advice of a financial advisor of nationally recognized reputation, that the Acquisition Proposal constitutes a Superior Proposal, as described below;
- the failure to furnish non-public information or enter into discussions or negotiations concerning the Superior Proposal would, in the reasonable good faith judgment of the Infonautics board of directors, based on advice of outside counsel, be a violation of the board of director’s fiduciary duties to Infonautics shareholders; and
- before furnishing non-public information or entering into discussions or negotiations concerning a Superior Proposal, Infonautics provides written notice to Tucows of its decision to take that action and enters into a confidentiality agreement with the third party making the proposal.

The merger agreement prohibits the board of directors of Infonautics from withdrawing or modifying or proposing to withdraw or modify the board of directors’ approval or recommendation of the merger unless:

- the Infonautics shareholders meeting has not occurred;
- the Infonautics board of directors has received a Superior Proposal, as described below, and, in the reasonable good faith judgment of the board of directors, based on the advice of outside

legal counsel, the failure to do so would violate the board of directors' fiduciary duty to Infonautics shareholders under applicable law;

- the Acquisition Proposal was not solicited by Infonautics and did not result from a breach of the no solicitation provisions of the merger agreement by Infonautics;
- at least three business days before terminating the merger agreement or changing its recommendation, the Infonautics board of directors has notified Tucows that the Infonautics board of directors is prepared to conclude that it has received a Superior Proposal; and
- during that three business day period Infonautics has negotiated in good faith with Tucows to make adjustments to the merger agreement so that the Acquisition Proposal by a third party is no longer a Superior Proposal, and the Infonautics board of directors concludes in good faith following the negotiations that the third party Acquisition Proposal remains a Superior Proposal.

A Superior Proposal is a proposal made by a third party to acquire, directly or indirectly, 100% of the shares of Infonautics' capital stock or 100% of the net revenues, net income or assets of Infonautics and its subsidiaries, taken as a whole, and which the board of directors of Infonautics has determined in good faith, based on the advice of a financial advisor of nationally recognized reputation and outside counsel:

- if completed would result in a transaction that is more favorable to Infonautics shareholders from a financial point of view than the merger and the other transactions under the merger agreement; and
- is reasonably capable of being completed, including, if required, committed financing or financing which, in the good faith judgment of the Infonautics board of directors, is reasonably capable of being obtained.

Termination of the Merger Agreement

Infonautics and Tucows can jointly agree to terminate the merger agreement at any time. Either Infonautics or Tucows may also terminate the merger agreement if:

- The merger is not completed on or before August 31, 2001, unless the failure to complete the merger is the result of:
 - action or failure to act by the company seeking to terminate the merger agreement;
 - delays in effectiveness of the registration statement of which this joint proxy statement/prospectus forms a part on account of delays in review by the Securities and Exchange Commission or delays in obtaining other regulatory approvals; or
 - in the case of Infonautics, delays in filing the registration statement which are not caused by a failure of Tucows to provide necessary information;
- The Infonautics shareholders do not approve the amendment and restatement of Infonautics articles of incorporation to increase the number of authorized shares of Infonautics common stock and the issuance of shares of Infonautics common stock in the merger at Infonautics annual meeting;
- A condition to the obligations of that party to complete the merger cannot be satisfied by August 31, 2001 because of a law, injunction or order; or
- The other company breaches its representations, warranties or covenants in the merger agreement in a material way.

Tucows can terminate the merger agreement if:

- the Infonautics board of directors changes its recommendation that the Infonautics shareholders approve the merger or breaches its obligation to call the Infonautics shareholders' meeting; or
- Infonautics delivers audited financial statements that differ in any material respect from draft financial statements delivered to Tucows.

Infonautics can terminate the merger agreement if:

- the Infonautics board of directors receives a Superior Proposal and complies with the requirements described under "Exceptions for a Superior Proposal for Infonautics" beginning on page 64; or
- Tucows delivers audited financial statements that differ in any material respect from draft financial statements delivered to Infonautics.

Termination Fees

The merger agreement provides that Infonautics must pay to Tucows a termination fee of:

- \$1.0 million if the Infonautics shareholders fail to approve the amendment and restatement of Infonautics articles of incorporation to increase the number of authorized shares of Infonautics common stock and the issuance of shares of Infonautics common stock in the merger at Infonautics annual meeting; or
- \$1.3 million if the Infonautics board of directors receives and accepts a Superior Proposal. If the merger agreement is terminated under these circumstances, Tucows must refund any amount by which its fees and expenses incurred relating to the merger agreement and the transactions called for by the merger agreement are less than \$300,000; or
- the lesser of \$1.0 million plus Tucows' fees and expenses incurred relating to the merger agreement and the transactions called for by the merger agreement, or \$1.3 million, if
 - Infonautics receives an acquisition proposal from a third party after the date of the merger agreement, and
 - either Tucows or Infonautics terminates the merger agreement, and
 - within nine months after the termination, Infonautics enters into an acquisition agreement relating to the third party acquisition proposal.

If a termination fee is payable, payment of the termination fee is the exclusive remedy. In all other cases, all rights and obligations of the parties terminate without liability except for any liability of any party that is in breach of the merger agreement at the time of termination.

Conduct of Business Until the Merger

Under the merger agreement, Tucows and Infonautics have each agreed that, during the period before completion of the merger, except as expressly provided by the merger agreement, they will not, without the written consent of the other, take any action or enter into any transaction other than in the ordinary course of business consistent with past practice. Tucows and Infonautics have each also agreed to specific restrictions relating to:

- changing their charter or bylaws;
- granting rights to purchase capital stock;
- issuing, authorizing or disposing of capital stock;

- disposing of assets;
- declaring or paying dividends or distributions on capital stock;
- splitting, combining or reclassifying capital stock;
- redeeming, repurchasing or acquiring capital stock;
- acquiring other entities or substantial assets;
- committing to or incurring capital expenditures;
- making loans, advances, capital contributions or investments;
- paying or satisfying claims, liabilities or obligations;
- incurring or guaranteeing debt;
- changing employment terms of officers, directors and employees;
- changing accounting methods;
- making tax elections;
- taking any action or failing to take any action that would result in any of its representations and warranties failing to be true and correct; or
- resolving or committing to do any of the restricted items listed above.

Infonautics also agreed that neither it nor any of its subsidiaries will defer expenses.

Additional Agreements

Each party to the merger agreement has agreed to use all reasonable efforts to take all actions and do all things necessary to complete the merger, including satisfaction, but not waiver, of the conditions to closing the merger. Each has agreed to:

- give any notices to third parties and use all reasonable efforts to obtain any third party consents that may be necessary for it to complete the merger, except that no party is required to make any material payment to a third party to obtain its consent; and
- promptly give any notices to, making any filings with, and use all reasonable efforts to obtain any consents and approvals of any governmental entity necessary to complete the merger.

The parties also agreed to use reasonable efforts to:

- cause the merger to qualify as a tax-free reorganization under section 368(a) of the Internal Revenue Code and not to constitute a taxable event or have adverse tax consequences under Canadian, Dutch or Israeli law, which are relevant to Tucows stockholders who reside in those countries, and
- cause the Infonautics shares to be issued in the merger to be approved for listing on the Nasdaq SmallCap market.

The merger agreement also contains covenants that:

- Infonautics and Tucows will cooperate in the preparation of this joint proxy statement/prospectus;
- Infonautics will assume the Tucows' employee stock option plan;
- the Infonautics board of directors following the merger will consist of two persons who were directors of Infonautics immediately before the merger and seven persons designated by Tucows;

- Infonautics will enter into a registration rights agreement granting registration rights that are no less favorable to the holders of Tucows' capital stock than the registration rights they have for Tucows capital stock;
- the parties will use their best efforts to solicit proxies in favor of the transactions called for by the merger agreement;
- that the capitalization of Tucows at closing will consist of a total of 36,131,023 shares of common stock outstanding or issuable plus shares issuable on exercise of stock options granted under the Tucows employee stock option plan;
- each party will provide the other with access to information concerning employee benefits; and
- each party will provide the other notice of specified matters and will not make public announcements without the other's approval unless required by applicable law.

Loan by Infonautics to Tucows

As required under the merger agreement, on April 26, 2001, Infonautics loaned Tucows \$1.3 million. The loan is due and payable on August 31, 2001 and bears interest at a rate of 8% per year. The loan is secured by a security interest in substantially all of the assets of Tucows.

Amendment and Waiver

The merger agreement may be amended by the parties, by action taken or authorized by the boards of directors of Infonautics and Tucows, at any time before the completion of the merger. All amendments to the merger agreement must be in writing signed by each party.

At any time before the completion of the merger, the parties may, by action taken or authorized by their boards of directors, to the extent legally allowed, waive compliance with any of the agreements or conditions contained in the merger agreement.

Expenses

Whether or not the merger is completed, all expenses and fees incurred relating to the merger agreement and the merger will be paid by the party incurring the expenses or fees, except that, if the merger is not completed, Infonautics and Tucows have agreed to split the filing fees for, and the costs of the printing and distribution of, the registration statement of which this joint proxy statement prospectus forms a part.

Representations and Warranties

The merger agreement contains customary representations and warranties of the parties relating to:

- corporate organization and similar corporate matters;
- capital structure;
- subsidiaries;
- arrangements concerning the voting or registration of capital stock;
- authorization of the transaction;
- absence of conflicts;
- conduct of business between January 1, 2001 and the signing of the merger agreement;

- compliance with applicable laws;
- brokers' and other fees;
- litigation and undisclosed liabilities;
- taxes;
- employee benefits;
- environmental matters;
- intellectual property;
- insurance;
- material contracts; and
- status under the Investment Company Act of 1940.

The merger agreement also contains customary representations and warranties by Infonautics about documents filed by Infonautics with the Securities and Exchange Commission and financial statements included in those documents and by Tucows about financial statements delivered by Tucows to Infonautics. Infonautics also represented to Tucows that Pennsylvania anti-takeover laws and Pennsylvania dissenters' rights of appraisal do not apply to the merger.

Infonautics also represented to Tucows that Infonautics' Cash on Hand, as described below, was at least \$10 million on February 28, 2001 and will be at least \$7.5 million at closing. Cash on Hand means the sum of:

- cash that is not subject to any restrictions on its use or disposition and bank account balances, excluding cash necessary to pay outstanding unpaid checks;
- marketable securities;
- accounts receivable collectible in the ordinary course of business, including \$85,600 billable to a particular customer before June 30, 2001; and
- the principal amount of, and accrued interest on, the promissory note representing Infonautics' \$1.3 million loan to Tucows;

less accounts payable, accrued expenses and other short term liabilities. Accrued expenses and other short term liabilities exclude deferred revenues and leases but include transaction costs of Infonautics relating to the merger.

Regulatory Approvals

Neither Infonautics nor Tucows is aware of any regulatory approvals required to complete the merger except that the registration statement of which this joint proxy statement/prospectus forms a part must be declared effective by the Securities and Exchange Commission and a certificate of merger must be filed with the secretary of state of Delaware.

Stockholder Agreements

Infonautics

On March 28, 2001, Marvin Weinberger and Fran Solow Weinberger, who as of that date held approximately 1,155,000 shares of Infonautics common stock, entered into a shareholder agreement with Infonautics. Under the shareholder agreement, the Weinbergers agreed that they would not:

- sell, transfer or dispose in any other way of any of their shares of Infonautics common stock or enter into a contract to do so;
- deposit any of their shares of Infonautics common stock into escrow or into a voting trust or voting agreement or grant a proxy for their shares of Infonautics except the proxy included in the shareholder agreement; or
- acquire any additional shares of Infonautics common stock without the prior written consent of Infonautics,

except that the Weinbergers may dispose of up to 50% of the number of shares they would be entitled to sell under Rule 144 under the Securities Act during the three months following announcement of the merger agreement and up to 75% of that number during the following three months.

In the shareholder agreement, the Weinbergers also agreed to vote their shares of Infonautics in favor of the issuance of Infonautics shares in the merger and against any action or agreement that would result in a breach of the merger agreement by Infonautics or which would frustrate the purposes of the merger. The Weinbergers also granted to Infonautics an irrevocable proxy to vote their shares of Infonautics in favor of the merger.

Tucows

As of March 27, 2001, Tucows stockholders holding approximately 54% of the outstanding capital stock of Tucows have entered into a stockholders' agreement with Tucows. All Tucows stockholders who are parties to this stockholders' agreement have agreed that they will not:

- sell, transfer or dispose in any other way of any of their shares of Tucows stock or enter into a contract to do so;
- grant any power of attorney or proxy or enter into a voting trust or agreement for their shares of Tucows;
- initiate, negotiate or cooperate in any attempt to make, implement or accept a proposal to enter into a merger or similar transaction involving substantially all of the assets of Tucows.

All Tucows stockholders who are parties to the stockholders' agreement have also agreed to vote in favor of the merger with Infonautics. All holders of Tucows' preferred stock who are parties to the stockholders' agreement have also agreed to convert their shares of preferred stock into Tucows common stock before the merger.

UNAUDITED COMPARATIVE PER SHARE INFORMATION

We present below per common share data about the net income (loss) and book value of Infonautics on both historical and unaudited pro forma consolidated bases. We have obtained the unaudited pro forma combined per share information from the unaudited pro forma consolidated condensed financial statements beginning on page 72 of this joint proxy statement/prospectus. You should read the information below with:

- the consolidated financial statements and accompanying notes of Infonautics that are included in Infonautics' annual report on Form 10-K for the year ended December 31, 2000 and quarterly report on Form 10-Q for the quarter ended March 31, 2001 that accompanies this joint proxy statement/prospectus;
- the consolidated financial statements and accompanying notes of Tucows that are included elsewhere in this joint proxy statement/prospectus; and
- the unaudited pro forma consolidated information included under "Pro Forma Consolidated Condensed Financial Statements" beginning on page 72 of this joint proxy statement/prospectus.

The unaudited pro forma combined per share information does not necessarily indicate the operating results that would have been achieved had the combination of Infonautics and Tucows actually occurred at the beginning of the period presented nor does it indicate future results of operations or financial condition.

	<u>Year ended December 31, 2000</u>	<u>Quarter Ended March 31, 2001</u> (Unaudited)
Infonautics historical:		
Net income (loss) from continuing operations per common share:		
Basic	\$ (1.16)	\$(0.09)
Diluted	(1.16)	(0.09)
Book value per common share(1)	0.98	0.82
Tucows historical:		
Net income (loss) per common share:		
Basic	\$(12.58)	\$(1.01)
Diluted	(12.58)	(1.01)
Book value per common share(1)	(0.57)	(0.60)
Infonautics pro forma combined:		
Net income (loss) per common share:		
Basic	\$ (0.82)	\$(0.07)
Diluted	(0.82)	(0.07)
Book value per common share(2)	0.11	(0.10)

(1) The historical book value per share is computed by dividing total stockholders' equity by the number of common shares outstanding as of December 31, 2000 or March 31, 2001, as appropriate.

(2) The pro forma book value per share is computed by dividing pro forma stockholders' equity by the pro forma number of shares outstanding as of December 31, 2000 or March 31, 2001, as appropriate.

Neither Infonautics nor Tucows has ever paid dividends on its common stock, and Infonautics does not intend to pay dividends on its common stock following the merger.

PRO FORMA CONSOLIDATED CONDENSED FINANCIAL STATEMENTS
Infonautics, Inc. and Tucows Inc.

Introduction to pro forma consolidated condensed financial statements (unaudited)

On March 27, 2001, Infonautics entered into a merger agreement with Tucows. In the merger, TAC Merger Sub Corporation, a wholly-owned subsidiary of Infonautics, will merge with and into Tucows, with Tucows being the surviving corporation. In the merger, Infonautics will issue approximately 50 million shares of Infonautics common stock to the former Tucows stockholders. Because the former Tucows stockholders will own approximately 80% of the merged company after completion of the merger, Tucows is considered to be the accounting acquirer in the transaction.

The following pro forma consolidated financial statements are presented to illustrate the effects of the merger on the historical financial position and operating results of Infonautics and Tucows. The unaudited pro forma consolidated balance sheet as of March 31, 2001 has been prepared to reflect the merger of Infonautics and Tucows as if it had occurred as of March 31, 2001. The unaudited pro forma consolidated statement of operations for the year ended December 31, 2000 has been prepared as if the merger had taken place on January 1, 2000. The unaudited pro forma consolidated statement of operations for the three month period ended March 31, 2001 has been prepared as if the merger had taken place on January 1, 2001.

The pro forma consolidated financial statements have been obtained from, and should be read with, the historical consolidated financial statements and accompanying notes of Infonautics included in Infonautics' annual report on Form 10-K for the year ended December 31, 2000 and quarterly report on Form 10-Q for the quarter ended March 31, 2001, which accompany this joint proxy statement/prospectus and the historical consolidated financial statements and accompanying notes of Tucows which are included in this joint proxy statement/prospectus beginning on page F-1.

The unaudited pro forma consolidated financial statements are presented for informational purposes only and, while they are based on assumptions that we believe are reasonable, they are not necessarily indicative of the financial position or results of operations of Infonautics that would have occurred had the merger been completed as of the dates indicated. The unaudited pro forma consolidated financial statements are not meant to project Infonautics' financial position or results of operations for any period or as of any date, nor do they give effect to any matters other than those described above or in the notes beginning on page 76. The merger has been accounted for under the purchase method of accounting.

As the merger has not yet been completed, the allocation of the purchase price reflected in the unaudited pro forma consolidated financial statements is preliminary. The actual purchase price allocation to reflect the fair values of assets acquired and liabilities assumed will be based upon management's evaluation of these assets and liabilities upon completion of the merger. The adjustments included in the unaudited pro forma consolidated financial statements will change based upon the final allocation of the total purchase price. That allocation may differ significantly from the preliminary allocation included in the unaudited pro forma consolidated financial statements.

Infonautics, Inc.
Pro Forma Consolidated Balance Sheet
March 31, 2001
(Unaudited)

	<u>Tucows Inc.</u>	<u>Infonautics, Inc.</u>	<u>Pro forma adjustments</u>		<u>Pro forma</u>
Assets					
Current assets:					
Cash and cash equivalents	\$ 1,081,058	\$ 9,550,993	\$ —		\$ 10,632,051
Short-term investments	—	1,326,534	—		1,326,534
Accounts receivable	624,000	473,336	—		1,097,336
Other receivables	—	80,590	—		80,590
Prepaid digital certificates	995,071	—	—		995,071
Prepaid expenses, deposits and other	1,426,664	145,974	—		1,572,638
Prepaid domain name registration fees	8,959,084	—	—		8,959,084
	<u>13,085,877</u>	<u>11,577,427</u>	<u>—</u>		<u>24,663,304</u>
Prepaid domain name registration fees, net of current portion	1,748,837	—	—		1,748,837
Property and equipment	4,132,168	2,048,397	(1,707,930)	2(a)	4,472,635
Intangible assets	4,591,684	—	(313,098)	2(a)	4,278,586
Investment in Afiliis Limited	100,000	—	—		100,000
Investment bigchalk.com	—	—	548,283	2(a)	548,283
Other assets	—	190,318	(158,877)	2(a)	31,441
	<u>\$ 23,658,566</u>	<u>\$ 13,816,142</u>	<u>\$(1,631,622)</u>		<u>\$ 35,843,086</u>
Liabilities and Stockholders' Equity (Deficiency)					
Current liabilities:					
Accounts payable	\$ 1,772,170	\$ 249,815	\$ —		\$ 2,021,985
Accrued liabilities	4,065,546	1,476,667	290,000	2(b)	5,832,213
Due to affiliate	—	658,879	—		658,879
Customer deposits	2,038,022	—	—		2,038,022
Deferred revenue	14,796,982	921,477	—		15,718,459
Current portion of obligation under capital lease	—	74,304	—		74,304
	<u>22,672,720</u>	<u>3,381,142</u>	<u>290,000</u>		<u>26,343,862</u>
Deferred revenue, net of current portion	2,949,772	—	—		2,949,772
Obligation under capital lease	—	91,383	—		91,383
Stockholders' equity (deficiency):					
Capital stock					
Series A convertible preferred stock	28,677	—	(28,677)	2(d)	—
Preferred stock	—	—	—		—
Common stock	3,000	—	(3,000)	2(d)	—
Class A common stock	—	—	8,284,800	2(a)	8,316,477
			28,677	2(d)	
			3,000	2(d)	
Class B common stock	—	—	—		—
Additional paid in capital	44,358,580	61,573,472	(61,573,472)	2(c)	44,495,775
			137,195	2(a)	
Common stock to be issued	4,537,147	—	—		4,537,147
Option	1,072,412	—	—		1,072,412
Deferred stock based compensation	(468,586)	—	—		(468,586)
Treasury stock, at cost	—	(483,906)	483,906	2(c)	—
Other comprehensive income	—	166,588	(166,588)	2(c)	—
Deficit	(51,495,156)	(50,912,537)	50,912,537	2(c)	(51,495,156)
Total stockholders' equity (deficiency)	<u>(1,963,926)</u>	<u>10,343,617</u>	<u>(1,921,622)</u>		<u>6,458,069</u>
Total liabilities and stockholders' equity (deficiency)	<u>\$ 23,658,566</u>	<u>\$ 13,816,142</u>	<u>\$(1,631,622)</u>		<u>\$ 35,843,086</u>

The accompanying notes are an integral part of these pro forma consolidated financial statements.

Infonautics, Inc.
Pro Forma Consolidated Statement of Operations
For the three months ended March 31, 2001
(Unaudited)

	<u>Tucows Inc.</u>	<u>Infonautics, Inc.</u>	<u>Pro forma adjustments</u>		<u>Pro forma</u>
Net revenues	\$ 6,391,647	\$ 1,839,026	\$ —		\$ 8,230,673
Cost of sales	4,091,582	539,429	—		4,631,011
Gross profit	<u>2,300,065</u>	<u>1,299,597</u>	<u>—</u>		<u>3,599,662</u>
Operating expenses:					
Sales and marketing	1,951,076	739,840	(66,056)	3(a)	2,624,860
Technical operations and development expenses	1,246,084	814,462	(60,978)	3(a)	1,999,568
General and administrative	844,360	1,697,783	(57,481)	3(a)	2,484,662
Customer support expenses	—	103,158	(15,899)	3(a)	87,259
Amortization of property and equipment	690,673	—	—		690,673
Amortization of intangible assets	925,860	—	—		925,860
	<u>5,658,053</u>	<u>3,355,243</u>	<u>(200,414)</u>		<u>8,812,882</u>
Loss from operations	(3,357,988)	(2,055,646)	200,414		(5,213,220)
Other income (expenses):					
Interest income, net	26,438	43,169	—		69,607
Other income	—	821,824	—		821,824
Loss before provision for income taxes . .	(3,331,550)	(1,190,653)	200,414		(4,321,789)
Provision for income taxes	—	—	—		—
Loss for the period	<u>\$(3,331,550)</u>	<u>\$ (1,190,653)</u>	<u>\$ 200,414</u>		<u>\$(4,321,789)</u>
Loss per common share—basic		\$ (0.09)			\$ (0.07)
Weighted average shares outstanding— basic		12,629,269			62,629,269
Loss per common share—diluted		\$ (0.09)			\$ (0.07)
Weighted average shares outstanding— diluted		12,629,269			62,629,269

The accompanying notes are an integral part of these pro forma consolidated financial statements.

Infonautics, Inc.
Pro Forma Consolidated Statement of Operations
Year ended December 31, 2000
(Unaudited)

	<u>Tucows Inc.</u>	<u>Infonautics, Inc.</u>	<u>Pro forma adjustments</u>		<u>Pro forma</u>
Net revenues	\$ 14,439,829	\$ 11,161,054	\$ —		\$ 25,600,883
Cost of sales	7,785,105	3,078,503	—		10,863,608
Gross profit	<u>6,654,724</u>	<u>8,082,551</u>	<u>—</u>		<u>14,737,275</u>
Operating expenses:					
Sales and marketing	11,121,051	8,179,398	(222,238)	3(a)	19,078,211
Technical operations and development expenses	4,132,301	6,175,453	(284,151)	3(a)	10,023,603
General and administrative	4,704,213	3,813,718	(156,902)	3(a)	8,361,029
Customer support expenses	—	425,817	(24,158)	3(a)	401,659
Amortization of property and equipment	1,700,944	—	—		1,700,944
Amortization of intangible assets . . .	11,616,414	—	—		11,616,414
Write-down of intangible assets	11,324,731	—	—		11,324,731
	<u>44,599,654</u>	<u>18,594,386</u>	<u>(687,449)</u>		<u>62,506,591</u>
Loss from operations	(37,944,930)	(10,511,835)	687,449		(47,769,316)
Other income (expenses):					
Interest income, net	215,154	180,633	—		395,787
Equity in net losses of unconsolidated affiliate	—	(10,605,773)	—		(10,605,773)
Other income	—	6,616,122	—		6,616,122
Loss before provision for income taxes .	<u>(37,729,776)</u>	<u>(14,320,853)</u>	<u>687,449</u>		<u>(51,363,180)</u>
Provision for income taxes	—	—	—		—
Loss for the period	<u><u>\$(37,729,776)</u></u>	<u><u>\$(14,320,853)</u></u>	<u><u>\$ 687,449</u></u>		<u><u>\$(51,363,180)</u></u>
Loss per common share—basic		\$ (1.16)			\$ (0.82)
Weighted average shares outstanding— basic		12,348,100			62,348,100
Loss per common share—diluted		\$ (1.16)			\$ (0.82)
Weighted average shares outstanding— diluted		12,348,100			62,348,100

The accompanying notes are an integral part of these pro forma consolidated financial statements.

NOTES TO THE PRO FORMA CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

1. Basis of presentation:

The accompanying unaudited pro forma consolidated financial statements have been prepared for the purposes of inclusion in the registration statement of which this joint proxy statement/prospectus forms a part. These unaudited pro forma consolidated financial statements give effect to the merger between Infonautics and Tucows. The pro forma consolidated financial statements do not include any non-recurring charges or credits directly attributable to the merger.

The merger between Infonautics by Tucows has been accounted for in the unaudited pro forma consolidated financial statements by the purchase method of accounting as a reverse takeover with Tucows being identified as the acquirer. Total consideration being issued by Infonautics is approximately 50 million shares of Infonautics common stock valued at approximately \$8.3 million, based on Infonautics' share price on March 28, 2001, the date of the merger agreement and announcement of the merger, and approximately \$0.1 million of value assigned to the outstanding Infonautics options on March 28, 2001.

The unaudited pro forma consolidated financial statements have been prepared by the management of Tucows from the audited consolidated financial statements of Tucows for the year ended December 31, 2000 and the unaudited consolidated financial statements of Tucows for the three month period ended March 31, 2001. The information concerning Infonautics has been obtained from the audited consolidated financial statements of Infonautics for the year ended December 31, 2000 and the unaudited consolidated financial statements of Infonautics for the three month period ended March 31, 2001.

2. Significant assumptions and adjustments:

In the preparation of the unaudited pro forma consolidated financial statements, the following significant assumptions and adjustments have been made:

(a) Acquisition of Infonautics by Tucows:

Tucows acquired Infonautics for an aggregate consideration valued at approximately \$8.4 million, comprised of:

- \$8.3 million based on Infonautics' share price on March 28, 2001 and consisting of approximately 50 million shares of common stock of Infonautics. The 50 million shares of common stock of Infonautics were based on the exchange ratio under the merger agreement and the number of shares of common stock of Infonautics outstanding on March 28, 2001, and
- \$0.1 million of value assigned to the Infonautics options outstanding on March 28, 2001.

The fair value of the shares of Infonautics common stock was determined by treating the market value of the Infonautics stock at the date of the announcement of the merger as having been effectively received by former Infonautics shareholders. The fair value of the stock options was determined by reference to an option pricing model and the number of Infonautics options was treated as having been granted by Tucows under reverse takeover accounting rules. To determine the fair value of these options, the following assumptions were used:

- dividend yield of 0.0%,

NOTES TO THE PRO FORMA CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(unaudited)

2. Significant assumptions and adjustments: (Continued)

- 75% volatility,
- weighted average risk free interest rate of 6.41%, and
- average expected life of 3.47 years.

As all of these options have vested, no adjustment was required to be made for deferred compensation.

The pro forma financial statements have been prepared as if there will not be a substantive change in the number of shares of Infonautics common stock treated as having been issued in the merger. If there is a substantive change in the number of shares of Infonautics common stock to be issued in the merger, a new measurement date will occur and the value of the Infonautics common stock treated as having been issued will be revalued based on the average market price of Infonautics common stock at the new measurement date, and the purchase price allocation will be adjusted.

The details of the pro forma acquisition equation based on the consolidated balance sheet of Infonautics as at March 31, 2001 are as follows:

Fair value of net assets of Infonautics acquired:

Current assets	\$11,577,427
Property and equipment	340,467
Investment in bigchalk.com	548,283
Other assets	31,441
Current liabilities and obligation under capital lease	<u>(3,762,525)</u>
Total consideration	<u>\$ 8,735,093</u>

Total consideration is comprised of:

Value assigned to Infonautics' common stock	\$ 8,284,800
Value assigned to Infonautics' outstanding options	137,195
Tucow's estimated transaction costs	<u>313,098</u>
Total consideration	<u>\$ 8,735,093</u>

For pro forma purposes, the fair value of the net assets acquired exceeded the total consideration by \$4,618,524. This excess has been used to reduce the amount allocated to the investment in bigchalk.com by \$2,751,717, property and equipment by \$1,707,930 and other assets by \$158,877 from their fair values. The table above reflects the purchase price allocation after these adjustments.

Estimated transaction costs arising from the merger include all costs directly incurred because of the merger including accounting and legal fees and other related costs.

(b) To record the estimated severance payments to executive officers of Infonautics at the time the merger is completed.

(c) To eliminate the historical deficit, capital stock, deferred stock-based compensation, treasury stock and accumulated other comprehensive income of Infonautics because of the merger.

NOTES TO THE PRO FORMA CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(unaudited)

2. Significant assumptions and adjustments: (Continued)

(d) To record the conversion of Tucow's series A convertible preferred stock to common stock and to record the exchange of Tucow's common stock to Infonautics class A common stock.

3. Unaudited pro forma consolidated statement of operations:

The adjustment was applied to the historical statements of operations for Infonautics and Tucows to adjust the amortization of Infonautics' property and equipment and intangible asset included within Infonautics' consolidated statement of operations to that calculated based on the values assigned in the purchase price allocation.

4. Unaudited pro forma net loss per share:

Shares used in the pro forma per share calculations reflect the addition of approximately 50 million shares of Infonautics voting common stock estimated to be issued to stockholders of Tucows as if they were outstanding from January 1, 2000 for the year ended December 31, 2000, and from January 1, 2001 for the three month period ended March 31, 2001. Pro forma basic and diluted weighted average shares exclude employee stock options and warrants outstanding because they are anti-dilutive.

TUCOWS MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read with Tucows' historical consolidated financial statements and the related notes beginning on page F-1 of this joint proxy statement/prospectus. This description contains forward-looking statements that involve risks and uncertainties. Tucows' actual results could differ significantly from the results discussed in the forward-looking statements because of various factors, including those discussed under "Risk Factors—Risk Factors Relating to Tucows" beginning on page 26 of this joint proxy statement/prospectus and "Risk Factors—Risk Factors Relating to Infonautics and Tucows" beginning on page 31 of this joint proxy statement/prospectus.

Overview And Recent Developments

Tucows is a provider of private label applications, services and content for Internet service providers and web hosting, telecommunications and cable companies, which Tucows refers to as managed service providers or MSPs. Tucows' services are designed to allow MSPs to provide a higher level of customer service and performance, to enhance revenue per customer through offering additional applications and services, to avoid costs and complexities and to focus on their customer acquisition and retention strategies by outsourcing applications that are not critical to their core businesses.

On March 28, 2001, Tucows announced that it signed a merger agreement with Infonautics. Infonautics is a provider of personalized information agents and web sites. In the merger, Infonautics will issue approximately 50 million shares of common stock to Tucows stockholders who will own approximately 80% of the merged company on completion of the merger. Upon completion of the merger, which is subject to the approval of the stockholders of Tucows and the shareholders of Infonautics, regulatory approvals and other closing conditions, Infonautics will remain a public company and is expected to adopt the Tucows name. The transaction is expected to close during the third quarter of 2001.

ICANN, the Internet Corporation for Assigned Names and Numbers, is introducing new generic top level domains. On November 16, 2000, ICANN announced its selections for registry operators for seven new top level domains. Liberty Registry Management Services Inc, a wholly-owned subsidiary of Tucows, was selected by one of the successful applicants, Afilias Limited, to provide technical registry management services for the registry operations. Afilias, a consortium of 18 registrars, has been selected by ICANN to establish a registry for the new generic top level domain .info. Tucows owns a small equity interest in Afilias. Concurrent with the final registry agreement negotiations with ICANN, Afilias is negotiating a two-year exclusive supply agreement with Liberty. Tucows expects the new registries to launch in the second half of 2001, although their launch is dependent on finalizing contract negotiations with ICANN and is not assured.

Tucows' founder and editor-in-chief, Scott Swedorski, founded the Tucows.com website in 1994. Tucows.com was primarily in the business of aggregating and offering software for download. The Tucows website was acquired in 1995 by ComputerLink Online, which was subsequently re-named Tucows Interactive Limited. Tucows Interactive was primarily in the business of providing Internet access and related services and carried on its business of aggregating and offering software for download through its Tucows division. On April 26, 1999, Tucows Inc. was incorporated to purchase substantially all of the assets of the content business of the Tucows division from Tucows Interactive Limited. On May 4, 1999, Tucows acquired those assets for a total consideration of \$30 million in cash and three million shares of Tucows common stock valued at an aggregate of \$3,444,444.

Net Revenues

Before January 2000, Tucows produced the majority of its net revenues from advertising. Since January 2000, Tucows has produced the majority of net revenues from domain name registration fees.

Tucows began providing retail domain name registration services in November 1997 and wholesale, or private label, domain name registrations in January 2000.

Domain Name Registration and Ancillary Services

Tucows offers domain name registration services on both a wholesale and retail basis. These services are purchased for a term of one to ten years. Payments for the full term of all registrations are received at the time of registration but recorded as a deferred revenue and recognized ratably on a monthly basis over the term of the registration.

On a wholesale basis, Tucows offers domain name registration services to MSPs who provide these services to their end-users. Tucows receives revenues for each domain name registration passed through its system by customers. Tucows' registration fee for wholesale domain name registrations of each .com, .net and .org domain name registration is typically \$10 per year of registration, although some additional rebates are offered based upon volume or participation in other programs Tucows offers. Tucows receives \$19 for each .ca domain name registration. The .ca registrations are subject to some additional rebates, based upon volume or participation in other programs Tucows offers. Tucows offers additional country code domain names, including .uk, .tv and .vc, and digital certificates to its MSPs. Tucows receives between \$13 and \$100 for each country code domain name registration and \$99 for each digital certificate sold. The average term for wholesale domain name registration services is 14 months and if registrations are renewed, Tucows would expect to produce ongoing subscription revenues.

On a retail basis, Tucows offers domain registration services through domaindirect.com directly to end-users. Tucows receives revenues for the retail registration of domain names and the managing of other services relating to a domain name such as domain forwarding and e-mail forwarding. Tucows' registration fee for these services typically is \$35 per year. The average term for retail domain name registration services is 19 months and if registrations are renewed, Tucows would expect to produce ongoing subscription revenues.

Digital Content Distribution Services

Tucows aggregates software and other downloadable content, which it distributes to MSPs through an integrated network. Through these services Tucows creates revenues from online advertising and sales of its digital content. Tucows creates advertising revenues through ads placed on its website and through ads placed on the websites of its MSP network. Advertising revenues are primarily received from short-term advertising agreements in which advertising banners are delivered at an agreed upon rate per thousand of impressions delivered. Advertising revenues are recognized ratably over the period in which the advertisement is presented. Tucows also enters into barter transactions, which are a component of advertising revenues. Barter transactions are the exchange of advertising space on Tucows' website for reciprocal space or traffic on other websites. Revenues and expenses are recognized from advertising barter transactions when the value of the advertising surrendered is determinable based on Tucows' historical practice of receiving cash for similar advertising.

Net revenues from Tucows' online software distribution services are recorded upon completion of the purchase and delivery of the product to the customer. With all software distribution for a fee, Tucows recognizes only gross margin, which is the selling price less the amount remitted to the publisher, as revenue. This is because Tucows carries no inventory in its digital software products and only distributes software digitally.

Cost of Revenues

Domain Name Registration Services

Cost of revenues of domain name registration services consists primarily of registry fees, which, while paid in full at the time that the domain name is registered, are recorded as prepaid domain name

registry fees and are recognized ratably over the term of the registration. Through January 14, 2000, Tucows paid a \$9 per year registry fee for each .com, .net and .org domain name registration. This fee was reduced to \$6 per year beginning on January 15, 2000. From October 2000 Tucows paid a Cdn\$20.00 per year registry fee for each.ca domain name registration.

Digital Content Distribution Services

Cost of revenues of Tucows' digital content distribution services includes the costs of its network operations. Tucows expects communication costs to increase as its network expands geographically and network activity increases. The cost of its network operations is comprised primarily of communication costs, equipment maintenance, employee and related costs of the management and maintenance of the network. Tucows has no direct cost of revenues relating to its advertising revenues.

Operating Expenses

Sales and Marketing

Sales and marketing expenses consist primarily of personnel costs. These costs include commissions and related expenses of Tucows' sales, product management, public relations, call center, support and marketing personnel. Tucows incurs advertising, including barter advertising, trade show and other promotional costs.

Technical Operations and Development Expenses

Technical operations and development expenses consist primarily of personnel costs and related expenses required to support the development of new or enhanced service offerings. This includes expenses incurred in the research, design and development of technology that Tucows uses to register domain names and to distribute its digital content services. Editorial costs relating to the rating and review of the software content libraries are included in the costs of product development. Under the American Institute of Certified Public Accountants Statement of Position 98-1, Accounting for the Costs of Computer Software Developed or Obtained for Internal Use, costs incurred during the application development stage are capitalized and primarily include personnel costs for employees directly related to the development project.

General and Administrative

General and administrative expenses consist primarily of compensation and related costs for managerial and administrative personnel, fees for professional services, rent and other general corporate expenses.

Amortization of property and equipment

Depreciation consists of amounts relating to Tucows' property and equipment. Property and equipment is amortized on a straight line basis over the estimated useful life of the assets.

Amortization of intangible assets

Amortization consists of amounts relating to Tucows' intangible assets. Intangible assets consist of goodwill and amounts relating to the non-competition agreements and are amortized on a straight-line basis over three years.

Stock-Based Compensation

Tucows has elected to follow Accounting Principles Board Opinion No. 25 Accounting for Stock Issued to Employees. Because of the application of this opinion, deferred stock-based compensation of \$650,814 was recorded for the year ended December 31, 2000 in relation to options issued to employees where the exercise price was less than the fair market value of the share of common stock. The amount of \$40,118 was included in operating expenses for the three months ended March 31, 2001 and \$22,363 for the three months ended March 31, 2000.

Results Of Operations

Because Tucows only began operating as a wholesale domain name registrar in January 2000 and produced only limited revenues from domain name registration services before this time, Tucows believes that comparisons of 1999 against 2000 are not meaningful and that you should not rely upon this comparison as an indication of its future performance. Given the rapidly evolving nature of Tucows' business and its limited operating history as a competitive registrar, its operating results are difficult to forecast, and period-to-period comparisons of its prior operating results will not be meaningful and should not be relied upon as an indication of future performance. Factors that are outside Tucows' control, including the early stage of the domain name registration market and events in the market such as the introduction of new generic top level domains, may cause Tucows' operating results to fluctuate significantly in the future.

Tucows anticipates that in future periods, net revenues from domain name registrations will continue to be the largest component of its net revenues, and cost of domain name registrations will continue to be the largest component of its cost of revenues.

The following table presents for the periods indicated, various items in the statement of operations, as a percentage of net revenues:

	Year ended December 31,			Three months ended March 31,	
	1998	1999(1)	2000	2000	2001
Statements of operations data:					
Net revenues	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	4.3	9.5	53.9	39.6	64.0
Gross profit	95.7	90.5	46.1	60.4	36.0
Operating expenses:					
Sales and marketing	30.6	69.8	77.0	116.9	30.5
Technical operations and development expenses	21.8	38.7	28.6	33.4	19.5
General and administrative	30.4	76.8	32.6	48.6	13.2
Amortization of property and equipment	7.5	7.8	11.8	25.5	10.8
Amortization of intangible assets	—	307.2	80.5	177.5	14.5
Writedown of intangible assets	—	—	78.4	—	—
Total operating expenses	90.3	500.3	308.9	401.9	88.5
Income (loss) from operations	5.4	(409.8)	(262.8)	(341.5)	(52.5)
Interest income/(expense), net	(0.2)	0.8	1.5	1.3	0.4
Income (loss) before provision for income taxes	5.2	(409.0)	(261.3)	(340.2)	(52.1)
Recovery (provision) for income taxes	(2.4)	1.8	—	—	—
Net income/(loss), for the period	2.8	(407.2)	(261.3)	(340.2)	(52.1)

Note: Figures may not add due to rounding.

- (1) The financial data for the year ended December 31, 1999, is prepared as though Tucow's acquisition of the assets of the Tucows division had occurred on January 1, 1999.

Three Months Ended March 31, 2001 And March 31, 2000

Net Revenues

Net revenues increased \$4.8 million, or 313%, to approximately \$6.4 million for the three months ended March 31, 2001 from approximately \$1.5 million for the three months ended March 31, 2000. During the quarter ended March 31, 2001 Tucows registered approximately 572,000 domain names,

bringing its number of registered domain names to over 2.6 million, up significantly from the approximately 200,000 domain names registered at March 31, 2000. This revenue increase in domain name registration resulted in Tucows' deferred revenue from domain name registrations increasing to \$17.7 million at March 31, 2001 from \$2.7 million at March 31, 2000.

Tucows believes that the introduction of new generic top level domains, or gTLDs, will be an important factor in the growth of the domain name registration market. Tucows believes that there is a natural absorption of the new gTLDs and that anything in excess of this absorption will result primarily from marketing efforts. Tucows anticipates that as each new gTLD is introduced, there will be an initial increase in new registrations, which will level off over time. Tucows anticipates that registration renewals will contribute to its revenues from domain name registrations as its customers' initial registrations reach the end of their terms and a portion of these customers renew their registrations.

Tucows also believes that a large number of the names registered in 1999 and 2000 were registered by domain name speculators who register names with the intention of reselling them rather than putting them to use. For this reason Tucows expects that a significant percentage of existing domain name registrations will not be renewed and will be allowed to lapse. Over time, as the percentage of names held by speculators decreases, Tucows expects to see an increase in the renewal rates across the industry. Taking into account all of these market dynamics, Tucows anticipates that revenues from domain name registrations will continue to increase.

Intercosmos Media Group, Inc. accounted for approximately 18% of net revenues in the three months ending March 31, 2001.

The increase because of domain name registration services was offset by a decline in advertising and related services revenues, from approximately \$1.2 million for the three months ended March 31, 2000 to approximately \$624,000 for the three months ended March 31, 2001. This decline is primarily the result of the significant slowdown in online advertising revenue from emerging new economy companies as they re-assess their online strategies.

Cost of Revenues

Cost of revenues increased \$3.5 million, to approximately \$4.1 million for the three months ended March 31, 2001 from \$613,000 for the three months ended March 31, 2000. This increase was due primarily to Tucows' recognizing the appropriate ratable portion of the cost of registry services from its increased domain name activity.

Sales and Marketing

Sales and marketing expenses increased approximately \$141,000, or 8%, to approximately \$2.0 million for the three months ended March 31, 2001 from \$1.8 million for the three months ended March 31, 2000. This increase was primarily due to an increase in employees hired to accommodate the growth of Tucows' domain name registration services business. This resulted in the number of Tucows' sales and marketing personnel increasing from 63 at March 31, 2000 to 86 at March 31, 2001. Tucows reassessed its marketing strategies and reduced marketing expenses from \$1.1 million for the three months ended March 31, 2000 to \$830,000 for the three months ended March 31, 2001. Tucows anticipates that sales and marketing expenses will increase in absolute dollars as it develops its marketing programs, increases its in-house sales force and expands internationally.

Technical Operations and Development Expenses

Technical operations and development expenses increased approximately \$728,000, or 140%, to \$1.2 million for the three months ended March 31, 2001 from \$518,000 for the three months ended March 31, 2000. This increase was due to Tucows' efforts to develop, expand and upgrade its technology, transaction processing systems and network infrastructure as the volume of traffic on its website and transactional volume through its delivery platform, OpenSRS, increases. Tucows expects

product development expenses to increase in absolute dollars as its business continues to grow and as it further develops its applications and services.

General and Administrative

General and administrative expenses increased \$91,000, or 12%, to \$844,000 for the three months ended March 31, 2001 from \$753,000 for the three months ended March 31, 2000. This increase was primarily due to additional facility costs to accommodate Tucows' adding 80 employees. Tucows expects general and administrative expenses to increase in absolute dollars as it increases its administrative and executive staff, adds infrastructure and expands facilities as its business continues to grow.

Amortization

Amortization of property and equipment increased \$296,000, or 75%, to \$691,000 for the three months ended March 31, 2001 from \$395,000 for the three months ended March 31, 2000. This increase was primarily due to the additions to property and equipment, such as computers, furniture and software because of the additional 80 employees.

Amortization of intangible assets decreased \$1.8 million, or 66%, to \$926,000 for the three months ended March 31, 2001 from \$2.7 million for the three months ended March 31, 2000. This decrease resulted from Tucows' determination that goodwill relating to its content properties was impaired at December 31, 2000 and booking a goodwill impairment charge of \$11.3 million at December 31, 2000.

Interest Income (Expense), net

Net interest income amounted to \$26,000 for the three months ended March 31, 2001, compared to \$20,000 for the three months ended March 31, 2000.

Provision for income taxes

No provision for income taxes has been recorded for the three months ended March 31, 2001 or March 31, 2000 because Tucows had operating losses for both of these periods.

Years Ended December 31, 2000 And December 31, 1999

For the year ended December 31, 1999, Tucows has used pro forma financial information which is based on the individual statement of operations of the Tucows division of Tucows Interactive Limited for the period from January 1, 1999 to May 3, 1999 and the consolidated statement of operations of Tucows Inc. for the period from May 4, 1999 (commencement of operations) to December 31, 1999.

Net Revenues

Net revenues increased \$10.9 million, or 303%, to approximately \$14.4 million in 2000 from approximately \$3.6 million in 1999. Approximately \$9.5 million of this increase was due to Tucows' beginning wholesale domain name registration services during 2000. This revenue increase in wholesale domain name registrations resulted in Tucows deferred revenue from domain name registrations increasing to \$15.8 million at December 31, 2000 from \$0.7 million at December 31, 1999.

Tucows believes that the growth rate experienced in the domain name registration market in late 1999 and 2000 is not an indication of anticipated future growth rates. During that period, substantial numbers of domain name registrations were driven by factors including:

- the recognition by businesses that they needed to establish an online presence;
- significant registration activity by domain name speculators, who register names with the intention of reselling them rather than putting them to use; and
- extremely strong growth in new business start-ups in the Internet sector.

In late 2000, the domain name registration market's growth rate began to decrease; however, Tucows expects it to normalize in the future.

Intercosmos Media Group, Inc. accounted for 12% of net revenues in 2000.

Net revenue from advertising increased approximately \$1.3 million, or approximately 38%, to approximately \$4.7 million in 2000 from approximately \$3.4 million in 1999 as emerging new economy companies increased their online advertising commitments. This increase is not expected to continue as the industry began to experience a decline in online advertising revenues primarily because of the significant economic downturn affecting emerging new economy companies.

Barter transactions for the year ended December 31, 2000 represented approximately 7% of Tucows' total net revenues. The barter transactions during this period were a result of an increase in promotional campaigns for Tucows' domain name registration services business.

Net revenues from digital software distribution increased to approximately \$118,000 from approximately \$23,000 in 1999.

Cost of Revenues

Cost of revenues increased \$7.4 million, to approximately \$7.8 million in 2000 from \$341,000 in 1999. This increase was due primarily to the cost of recognizing the appropriate ratable portion of the cost registry services due to registering more domain names, especially wholesale registrations.

Sales and Marketing

Sales and marketing expenses increased approximately \$8.6 million, or 345%, to approximately \$11.1 million in 2000 from \$2.5 million in 1999. This increase was caused by the expansion of Tucows' sales force and marketing team by 52 employees during 2000. Tucows incurred additional advertising expenses primarily to promote its wholesale domain name registration services business. Advertising expense for the year ended December 31, 2000 amounted to \$4.3 million, inclusive of barter advertising in the amount of \$989,000 during the year ended December 31, 2000 compared to \$343,000 for the year ended December 31, 1999. Tucows also incurred trade show costs in the amount of \$1.4 million during the year ended December 31, 2000.

Technical Operations and Development Expenses

Technical operations and development expenses increased approximately \$2.7 million, or 198%, to \$4.1 million in 2000 from \$1.4 million in 1999. This increase relates to the addition of approximately 60 employees involved in the development that Tucows undertook during 2000 to enhance its technology, transaction-processing systems and network infrastructure relating to its wholesale domain name registration and digital content services.

General and Administrative

General and administrative expenses increased approximately \$2.0 million, or 71%, to \$4.7 million in 2000 from \$2.7 million in 1999. This increase was due in part to the addition of approximately 10 employees to accommodate growth. Tucows moved its Toronto, Canada office to a newer, larger facility.

In 2000, Tucows undertook various financing initiatives including beginning the process to file a registration statement for an initial public offering. All financing initiatives undertaken during 2000 have been withdrawn due to market conditions. As these financing initiatives have been postponed or abandoned, related costs amounting to approximately \$505,000 were expensed during 2000. There were no corresponding costs during 1999.

Amortization

Amortization of property and equipment increased \$1.4 million, or 507%, to \$1.7 million in 2000 from \$280,000 in 1999. This increase was primarily due to the additions to property and equipment, such as computers, furniture and software and leasehold improvements relating to the new facility in Toronto, Canada.

Amortization of intangible assets increased \$622,000, or 6%, to \$11.6 million in 2000 from \$11.0 million in 1999 because of the full year's amortization on the purchase of substantially all of the assets of the content business of the Tucows division on May 4, 1999 and the purchase of Eklektix Inc. in April 2000. During the fourth quarter of fiscal year 2000, management determined that the value of the goodwill related to its acquisition of the Tucows division of Tucows Interactive Limited and Eklektix Inc. was impaired and recorded a write-down of \$11.3 million. The impairment is the result of the significant downturn in the emerging new economy and the overall decline in the on-line advertising industry.

Interest Income (Expense), net

Net interest income amounted to \$215,000 in 2000, compared to \$30,000 in 1999, reflecting the interest earned on the cash and cash equivalents balance arising from the issuance of Tucows' series A convertible preferred shares in March, 2000.

Provision for income taxes

No provision for income taxes has been recorded for 2000 as Tucows had operating losses for this year. For the year ended December 31, 1999, Tucows recorded an income tax recovery of \$63,000.

Years Ended December 31, 1999 And December 31, 1998

For the year ended December 31, 1999, Tucows has used pro forma financial information which is based on the individual statement of operations of the Tucows division of Tucows Interactive Limited for the period from January 1, 1999 to May 3, 1999 and the consolidated statement of operations of Tucows Inc. for the period from May 4, 1999 (commencement of operations) to December 31, 1999.

Net Revenues

Net revenues increased approximately \$1.3 million, or 58%, to approximately \$3.6 million in 1999 from approximately \$2.3 million in 1998. This increase in net revenues was primarily due to increased volume of advertising sales. As the Tucows name became more well known, Tucows' website received more page views, making it more attractive for businesses to advertise on. Two customers accounted for 10% of net revenues in 1999 and 1998. Advertising revenues from barter transactions for the period ended December 31, 1999 represented approximately 12% of net revenues.

Cost of Revenues

Cost of revenues increased \$243,000, or 248%, to \$341,000 in 1999 from approximately \$98,000 in 1998. This increase was primarily due to additional communication costs resulting from increase network activity required to support and deliver Tucows' services.

Sales and Marketing

Sales and marketing expenses increased approximately \$1.8 million, or 259%, to \$2.5 million in 1999 from \$696,000 in 1998. This increase was primarily due to increased costs incurred to hire additional employees to accommodate increased advertising sales volumes and to build a call center and technical support department. Tucows incurred additional spending for advertising and trade shows to promote its digital content services.

Technical Operations and Development Expenses

Technical operations and development expenses increased \$891,000, or 180%, to approximately \$1.4 million in 1999 from \$494,000 in 1998. This increase was primarily due to costs incurred as Tucows hired additional employees to accommodate the increased demand on its development group as it prepared to launch its wholesale domain name registration services business.

General and Administrative

General and administrative expenses increased approximately \$2.1 million, or 298%, to approximately \$2.8 million in 1999 from \$691,000 in 1998. This increase was primarily due to costs incurred as Tucows hired additional employees in response to the increased demand on its finance, human resources and business development groups as it prepared to launch its wholesale domain name registration services business.

Depreciation and amortization

Depreciation of property and equipment increased approximately \$111,000, or 66%, to \$280,000 in 1999 from \$169,000 in 1998. This increase was primarily due to additional computer equipment that was purchased in response to the hiring of more employees.

Amortization of intangible assets increased to approximately \$11.0 million because of the purchase of substantially all of the assets of the content business of the Tucows division on May 4, 1999. There was no amortization of intangible assets for the year ended December 31, 1998.

Interest Income (Expense), Net

Net interest income amounted to \$30,000 in 1999, reflecting the interest earned on the cash and cash equivalents balance arising from the issuance of Tucows' series A convertible preferred stock on May 4, 1999. Interest expense for 1998 was \$5,000.

Provision for income taxes

Income taxes recoverable of approximately \$63,000 were recorded in 1999, while an income tax provision of \$55,000 was provided for in 1998.

Liquidity And Capital Resources

Tucows has financed its operations primarily through private placements of series A convertible preferred shares, which totaled approximately \$40.3 million in aggregate net proceeds through March 31, 2001.

On May 4, 1999, Tucows sold and issued 27 million shares of series A convertible preferred stock for gross proceeds of \$31 million. During September 1999, Tucows issued a working capital call amounting to \$4 million to the holders of its series A convertible preferred stock, as provided for in the stockholders agreement dated May 4, 1999. No additional series A convertible preferred shares were issued relating to this working capital call. On March 21, 2000, Tucows issued and sold approximately 1.7 million additional shares of series A convertible preferred stock for proceeds of \$5.3 million.

In January 2001 substantially all of Tucows' stockholders subscribed for the right to acquire shares of series A convertible preferred stock for total proceeds of \$3.0 million. Under the agreement under which these rights were acquired, the number of shares to be issued was to be determined by the valuation used by Tucows in its next equity financing less a discount of 25%. It is anticipated that immediately before completion of the merger these rights will be exercised for approximately 4 million shares of Tucows common stock.

As of March 31, 2001, Tucows had net cash and net cash equivalents of approximately \$1.1 million.

Tucows' operating activities used net cash of approximately \$454,000 during the year ended December 31, 2000, and approximately \$1.1 million during the period beginning May 4, 1999 and ending December 31, 1999. Net cash used in operating activities for the year ended December 31, 2000 resulted primarily from the net losses for the period and increases in prepaid domain name registry fees. This was partially offset by increases in accounts payable, accrued liabilities, customer deposits and deferred revenues. The increases in prepaid expenses, customer deposits and deferred revenues were primarily due to Tucows' beginning registration of wholesale domain names. Net cash used in operations for the period ended December 31, 1999 resulted primarily from the net losses for the

period and increases in accounts receivable and prepaid expenses. This was partially offset by increases in accounts payable, accrued liabilities and deferred revenues.

Tucows' operating activities used approximately \$2.6 million during the three months ended March 31, 2001, and approximately \$122,000 for the three months ended March 31, 2000. Net cash used in operating activities for the three months ended March 31, 2001 resulted primarily from net losses for the period, increases in prepaid digital certificates and domain name registry fees and a decrease in accounts payable. This was partially offset by increases in deferred revenue and accrued liabilities. Net cash used in operating activities for the three months ended March 31, 2000 resulted primarily from net losses for the period and increases in prepaid domain name registry fees. This was partially offset by the amortization of intangible assets and increases in deferred revenue.

Tucows' investing activities for the year ended December 31, 2000 used net cash of approximately \$4.4 million, and for the period ended December 31, 1999 used net cash of approximately \$32.3 million. Tucows' investing activities for the three months ended March 31, 2001 used cash of approximately \$1.5 million, and for the three months ended March 31, 2000 used cash of approximately \$706,000. The primary use of cash during the period ended December 31, 1999 was \$30 million paid as partial consideration for Tucows' purchase of the assets of the Tucows division of Tucows Interactive Limited on May 4, 1999. Other investing activities in the periods reflect the purchase of computer equipment, software, furniture and equipment to support Tucows' growing number of employees.

Tucows' capital requirements depend on numerous factors, including

- its ability to produce revenues,
- product development needs,
- hiring requirements,
- ability to form alliances with strategic partners,
- market acceptance of its services, and
- the amount of resources it invests in content and site development and sales and marketing promotions.

Tucows expects to devote substantial resources to

- continue its product development efforts,
- expand its sales, support, marketing and product development organizations,
- expand internationally and
- build the infrastructure necessary to support its growth.

On April 26, 2001, as required under the merger agreement between Tucows and Infonautics, Infonautics loaned Tucows \$1.3 million. The loan is due and payable on August 31, 2001. The loan is secured by a security interest in substantially all of the assets of Tucows.

In June 2001 XDL Capital Corporation agreed to provide Tucows with a loan of \$2.5 million. The loan is due and payable on the earlier of four months from the date of the first drawdown or ten business days after completion of the merger with Infonautics. The loan is secured by a security interest in substantially all of the assets of Tucows and is subordinate to Infonautics' security interest. XDL Capital Corporation is the management company for a stockholder of Tucows, XDL U.S. Holdings Inc.

Tucows anticipates that capital expenditures will continue to increase in absolute dollars. Based on Tucows' operations and assuming the completion of the merger, Tucows believes that its cash flow from operations will be adequate to meet its anticipated requirements for working capital and capital expenditures for at least the next 12 months. Tucows may then need to, or before that time it may choose to, raise additional funds or seek other financing arrangements to facilitate more rapid expansion, including significant increases in personnel and office facilities, to develop new or enhance existing products or services, to respond to competitive pressures, or to acquire or invest in complementary businesses, technologies, services or products.

If additional financing is required, Tucows may not be able to raise it on acceptable terms or at all, and additional financing may be dilutive to existing investors. Although there are no understandings, commitments or agreements about any acquisition of other businesses, products or technologies, except for the merger with Infonautics, Tucows may also evaluate potential acquisitions of other businesses, products and technologies. To complete potential acquisitions, Tucows may issue additional securities or need additional equity or debt financing and any additional financing may be dilutive to existing investors.

Qualitative And Quantitative Market Risk

Tucows develops products in Canada and sells these products in North America and Europe. Generally, Tucows' sales are made in local currency, which has been primarily United States dollars. Tucows' financial results could be affected by factors such as changes in foreign currency exchange rates or weak economic conditions in foreign markets. Tucows does not use derivative instruments to hedge its foreign exchange risk. Tucows' interest income is sensitive to changes in the general level of Canadian and U.S. interest rates, particularly since the majority of its investments are in short-term instruments. Based on the nature of its short-term investments, Tucows has concluded that there is no material market risk exposure.

BUSINESS OF INFONAUTICS

The business operated by Infonautics is described in Infonautics' annual report on Form 10-K which accompanies this joint proxy statement/prospectus.

BUSINESS OF TUCOWS

Overview

Tucows distributes business applications, digital services and content to end users through a global Internet-based distribution network of resellers. These resellers are a heterogeneous group of companies including Internet service providers, web hosting providers, telecommunications and cable companies, and numerous others. Tucows refers to its customers as managed service providers, or MSPs and sometimes as resellers. Tucows' services are provided on a wholesale or private label basis, allowing MSPs to deal directly with their own end-user customers. By using Tucows' services, MSPs are able to avoid the costs and complexities of building in-house systems and to focus on their customer acquisition and retention strategies.

Tucows' objective is to use its global sales and distribution channel to become a leading distributor of e-business applications and services on the Internet. Tucows' OpenSRS division provides a technical infrastructure that allows MSPs to register and manage the delivery of domain names and other digital applications and services to end-users. Tucows' accelerated content delivery system, a network of over 1,000 partners located around the world, allows partners to quickly and efficiently deliver software and digital content to their consumers. Through the website, www.tucows.com, and its accelerated content delivery system, Tucows served over 90 million page views and 6 million unique visitors and facilitated 6 million digital content downloads in December 2000.

The Tucows website was founded in 1994. Tucows was primarily in the business of aggregating and offering software for download. The Tucows website was acquired by ComputerLink Online in 1995, which was subsequently re-named Tucows Interactive Limited. Tucows Interactive Limited was primarily in the business of providing Internet access and related services and carried on its business of aggregating and offering software for download through its Tucows division. On April 26, 1999 Tucows Inc. was incorporated to purchase substantially all of the assets of the content business of the Tucows division from Tucows Interactive Limited, and the original owners of ComputerLink Online sold the significant majority of their interest to Tucows' principal stockholders.

Tucows uses the unbiased content provided by its content group to provide a platform for advertisers to create brand awareness and sell products to its large, technologically sophisticated audience. The website creates brand awareness for Tucows, solidifies its reputation for serving the interests of Internet end-users and creates significant opportunities to develop and expand relationships with MSPs.

On April 4, 2000, Tucows acquired Eklektix Inc., publishers of one of the leading sources for information on current happenings in the Linux world, Linux Weekly News. Tucows uses Linux Weekly News to increase its influence in the open source community.

Liberty Registry Management Services Inc, a wholly-owned subsidiary of Tucows, was selected by Afiliis Limited to provide technical registry management services for the registry operations. Afiliis, a consortium of 18 registrars, has been selected by ICANN, the Internet Corporation for Assigned Names and Numbers, to establish a registry for the new generic top level domain, .info. The .info generic top level domain, or gTLD, is the only new gTLD in the current round of additional gTLDs that has no restriction or limitation on the use and purpose of the domain name. Tucows also has a small equity stake in Afiliis. Tucows expects the new registries to launch in the second half of 2001, although their ability to begin technical and other operations and is not assured.

Industry Background

Emergence of the Managed Services Industry

The Internet has emerged as a global medium, enabling millions of people to share information, communicate, and conduct business electronically. The growth in Internet users, combined with the web's reach has created a powerful channel for conducting commerce, marketing and advertising. This growth in Internet usage and e-commerce provides significant opportunities for organizations of all types and sizes to improve operational efficiencies and produce additional revenues through new Internet-only channels. Conversely, the Internet has given rise to additional competitive pressures due to shifting and increasingly diversified supplier and consumer demands. These pressures are leading organizations to adopt new Internet based business models, requiring the use of a wide array of e-business applications and services that perform a variety of vital functions, including:

- access to the Internet;
- domain name registration;
- high performance web hosting and server hosting facilities;
- e-mail and other advanced messaging, or groupware, applications;
- e-commerce enabling applications;
- hosted customer relationship management software and services; and
- hosted billing and administration software and services.

Tucows refers to Internet businesses that provide these applications and services as managed service providers or MSPs. These businesses often operate as:

- Internet service providers, which provide end-users with access to the Internet through dial-up, high speed and dedicated private line hookups;
- telecommunications companies and cable service providers;
- web hosting companies, which offer corporate customers and individual users hosting of their web site on a commercial web server at a unique domain registered to the customer;
- system and network management providers, which offer high end server hosting facilities for web based businesses and corporations;
- domain name MSPs, which facilitate domain name registrations in .com, .net, .org and country code domains;
- value-added MSPs of internal and external networks, which are typically consultants that assist companies with systems management, application procurement, installation, maintenance and training; and
- original equipment manufacturers of network servers and appliances.

MSPs typically provide a critical component of an end-user's Internet presence and have a very high level of interaction with the Internet end-user. End-users can range from individuals to large corporations. MSPs tend to specialize in one particular application or service. Once an MSP has secured an end-user as a customer by providing excellent service in one area of specialty, it has an opportunity to provide this customer with additional applications and services. In most cases, end-users will contact MSPs first when they seek to learn more about, or to purchase, additional applications and services. Providing a range of applications and services to end-users creates stronger relationships between MSPs and end-users, increases the costs of switching to another MSP and leads to increased revenues per end-user. The relationship between MSPs and end-users typically involves the payment of

recurring fees, which results in end-users being more receptive to purchasing additional applications and services.

Trend Towards Outsourcing

While MSPs are capitalizing on the growth in Internet usage and the demand for new e-business applications and services, they also face significant competition from numerous other MSPs offering similar applications and services. This has led to a greater focus on core competencies, as MSPs are increasingly seeking to outsource non-core applications and services that they provide to their end-users. Outsourcing enables these MSPs to better focus on their customer acquisition and retention efforts by eliminating the need to own, develop and support non-core applications in-house.

Domain Name Registration Background

The Internet domain name registration system is composed of two principal functions: registry and registrar. The registry maintains the database that contains the domain names registered in the top level domains and their corresponding Internet protocol addresses. The registrar acts as an intermediary between the registry and individuals and businesses, referred to as registrants, seeking to register domain names.

The domain name system is organized according to industry custom by levels, so that, for example, in the domain name mybrand.com, .com is the top level domain and mybrand is the second level domain. Top level domains are classified as either generic, or gTLDs, or country code, or ccTLDs. The most common gTLDs are .com, .net and .org, and the new gTLDs are expected to be introduced in the second half of 2001.

There are over 350 different country code top level domains, such as .co.uk and .org.uk for the United Kingdom, .de for Germany and .jp for Japan, representing over 240 countries. Each registry for country code domain names is responsible for maintaining and operating its own database of registered domain names. Some country code domains are unrestricted and allow anyone, from anywhere, to register their domain names on a first-come, first-served basis. Others require that prospective registrants have a local presence in the country to be able to register domain names in that country. While there have been movements directed at creating uniform domain name registration rules and registrar administration guidelines, there has been no international uniformity.

From January 1993 until April 1999, Network Solutions, now a part of VeriSign, Inc., was the sole entity authorized by the U.S. government to act as registrar and registry for domain names in the .com, .net and .org top level domains. VeriSign continues to act as sole registry for the .com, .net and .org domains, maintaining the files in the shared registration system for these domains and the directory databases listing these domain names and their numerical addresses.

In October 1998, the Department of Commerce called for the formation of a non-profit corporation to oversee the management of the .com, .net and .org domains and in November 1998, the Internet Corporation for Assigned Names and Numbers, commonly known as ICANN, was recognized as this non-profit corporation. In January 2000, Tucows began operations as an ICANN accredited registrar and began to register domain names in the .com, .net and .org domains. As of June 25, 2001, there were 164 ICANN-accredited registrars of which only 88 are connected to the shared registration system maintained by VeriSign and offering registrations.

In November 2000, ICANN approved bids for the following seven new generic top level domain registries: .info, .biz, .pro, .name, .museum, .coop and .aero. Tucows expects at least four of the new gTLDs, .info, .biz, .name and .pro, to begin selling registrations through registrars in the second half of 2001.

Also in November 2000, the .com, .net and .org registry launched a test through which it began to accept multilingual domain name registrations, domain names using non-Roman characters. Initially, the test accepted registrations in the Japanese and Korean character sets and in two Chinese character sets. In February 2001, the registry expanded the test to accept registrations in additional languages including French, German, Spanish and Russian. Additional character sets including Hebrew, Thai and Tibetan have been added to the test in April 2001. The names began to function in June 2001. There are now more than 350 languages available.

Growth in Domain Name Registrations

Because end-users typically require a domain name to receive, enhance or better personalize their use of new e-business applications and services, it is critical that MSPs provide domain name registration and related support services. Tucows believes that the market for domain name registrations will continue to grow because of the continuing growth and convergence to the Internet and the development of the domain name registration industry, including the introduction of new gTLDs. This growth will be driven primarily by:

- *Individuals.* As more people begin to use the Internet and as online activities become a greater part of family communications and identities, individuals will want to establish their own unique presence on the Internet;
- *Organizations.* Because of the significant growth in electronic commerce and the increasing focus on the global promotion and protection of their identities, organizations will continue to be significant users of domain name registration services;
- *Small offices and home offices.* As small offices and home offices increasingly move their businesses online, the demand for domain name registration and related online applications and services will continue; and
- *International markets.* Although the Internet's historical growth has primarily been driven by the U.S. market, adoption of the Internet is growing internationally. This growth will lead to a greater demand for domain name registrations.

Further, organizations use domain names for a number of distinct purposes including promoting:

- *Products and services.* Registering products and services as domains and establishing Internet identities related to particular products and services which are key components of a promotional, marketing and brand protection strategy;
- *Events.* Events, such as movies, sporting events and political campaigns, which represent additional name registration opportunities as individuals or organizations increasingly turn to the Internet to differentiate and promote their events; and
- *Regional commerce.* Businesses are increasingly localizing their global on-line presence and commerce efforts to accommodate different cultures, currencies, languages and delivery requirements. Tucows believes that this trend will lead to an increased demand for country-code registrations.

The Need for a Dedicated Outsourcing Solution

Offering e-business applications and services such as domain name registration is a complex technological challenge. Historically, MSPs would need to build proprietary, in-house systems or source applications and services from a fragmented array of third party providers. The ability to offer a large number of disparate services requires:

- tracking of administration, billing and usage;

- integrating information and functionality from multiple sources;
- delivering content, applications and services in a robust, scalable and efficient manner; and
- implementing and managing these services with a sufficient level of technical human resources.

Tucows believes that MSPs will seek a reliable, trustworthy and comprehensive source to deliver many of these applications and services.

Tucows' Solution

Tucows manages an Internet-based distribution network through which Tucows delivers business applications and services and digital software content to a network of over 5,000 MSPs in over 100 countries. Tucows' services are designed to allow MSPs to provide a higher level of customer service and performance, to enhance revenue per customer through offering additional products and services, to avoid the costs and complexities of building in-house systems and to focus on their customer acquisition and retention strategies. Tucows believes that its services to MSPs offer the following benefits:

An Attractive Outsourcing Proposition

Applications and services distributed by Tucows allow its MSPs to focus on their customer acquisition and retention while avoiding the costs of developing, implementing and maintaining hardware and software systems extraneous to their core businesses. Tucows' services simplify product integration and administration for its MSPs and provide them with applications at economies of scale. Web certificates and domain name registration services are provided on a generic basis that allows the Tucows customer to interact directly with its clientele, thus strengthening the MSP's relationships and enhancing the MSP's brand. Tucows also acts as the technical and administrative intermediary with domain regulators and provides input on domain policy on behalf of its MSPs.

Ease of Integration and Support

Tucows' OpenSRS software system operates using open source principles. Open source is an industry term used to indicate a permissive software license that allows the recipient to use the software for any purpose, view the operating source code for the software, make modifications to this source code, distribute and retain legal rights to any modifications. The open source methodology provides the following benefits to Tucows and its MSPs:

- *Reliability.* Tucows' software platform is subject to extensive review and validation by third party developers in a public forum. The system has been tested in different operating environments.
- *Scalability.* Tucows enables its clients to offer domain names and other easily integrated additional applications and services to end-users.
- *Flexibility.* Tucows enables its clients to offer a variety of applications and services from multiple sources such as VeriSign, national registries and web certificate providers.
- *Ease of use.* Tucows allows its clients to administer a variety of applications and services from a single, easy to use interface.

Experience in Focusing on Solutions for MSPs

Tucows focuses on the challenges facing its MSPs as they compete to attract and retain their clients. For example, the OpenSRS domain name registration system was developed to provide a cost-efficient, reliable and generic domain name registration system. Its expanded operational capabilities now enable Tucows' clients to attract and retain their customers with the sale of additional

applications and services, such as web certificates. Tucows has also developed a system that avoids bottle-necks and disruptions when downloading information on the Internet by locating software libraries closer to end-users on its MSPs' networks. Members of Tucows' management team have previously held senior level management positions with MSPs and have the experience to understand and manage the competitive challenges facing these companies.

Global Reach

By working directly with a global customer base, Tucows has acquired experience that enables it to manage a number of regional challenges, including language differences, local regulations and process requirements, privacy legislation and local currency exchange and payment regulations. Tucows supports MSPs located in over 100 countries.

Tucows' Strategy

Tucows' objective is to use its global network of MSPs to become a leading distributor of e-business applications and services on the Internet. The key elements of its strategy include:

Continue the Private Label Focus

Tucows plans to continue to offer its e-business applications and services to its MSPs on a wholesale, or private label, basis. Tucows believes that its MSP customers view it as a partner, rather than as a competitor, for providing applications and services to end-users. Tucows focuses on addressing its MSP customers' technical requirements and business objectives and on providing applications and services that MSPs require to grow their businesses. Tucows is dedicated to providing a high degree of flexibility to its MSPs' end-users by offering products and services from a wide variety of third party providers in any given application category. By delivering applications and services on a private label basis, Tucows avoids the high marketing costs typically related to building a brand on the Internet. Tucows uses its MSPs' marketing efforts and allows them to maintain their relationships with and promote their brands to their end-users. Tucows has built its business and its brand, through use and reputation, not marketing and public relations.

Expand its Network of MSPs

Tucows plans to expand its network of MSPs. Tucows believes that it has grown because of the level of trust and credibility it has established with MSPs, its high level of customer service, the ease of use of its platform and its competitive approach to pricing. Since January 2000, Tucows has added over 5,000 MSPs to its network without significant sales efforts. Tucows intends to complement this existing growth through a direct sales campaign. It also intends to market its domain name registration and other services to MSPs that only carry Tucows' software libraries.

Tucows intends to continue to expand its network internationally. The Tucows network has MSPs in more than 100 countries, and Tucows markets its applications and services through sales personnel dedicated to penetrating targeted geographic regions. Tucows markets applications and services in English, Spanish, French, German, Korean, Japanese, Portuguese, Hindi, including numerous South Asian dialects, Mandarin and other languages and dialects. Tucows intends to offer its customers the ability to register domain names in numerous country codes and will expand this number to meet its customers' global needs. Tucows is also involved in negotiations with several foreign governments to act as their exclusive domain name registry.

Continue to Use Network Effects

Tucows believes that the growth of its MSP network and the growth of the range of applications and services it distributes will be interrelated. As the number of MSPs in Tucows' network increases, Tucows believes that it will be able to distribute applications and services to a larger number of end-users, which will make it more attractive for third parties to provide applications and services to Tucows for distribution. In turn, as Tucows acquires more applications and services for distribution, there will be more incentive for MSPs to become part of the Tucows network.

Capitalize on Additional Revenue Opportunities

By increasing the number of applications and services Tucows offers and by promoting them to its MSPs, Tucows believes that it will be able to produce higher revenues from its customers. Tucows provides domain name registration, advertising and co-branding services, software distribution services and web certificates. To create further opportunities for revenue growth, Tucows also intends to offer, generally on an outsourced, private label basis from one integrated interface:

- Domain name registration services for the new gTLDs, including .biz, .info, .name and .pro and additional multilingual domain names when and if they become available in the marketplace. As the domain name market matures, and Tucows' renewal and transfer efforts become increasingly important to increasing the lifetime economic value of its customer base, Tucows is committed to making its automated transfer and renewal services more efficient and easier to use. Finally, Tucows will continue to expand the number of country codes in which its customers can register domains through it so that it can help them meet their global needs;
- Renewal services to encourage Tucows' customers to renew their domain name registrations with it is of great importance as their renewals will allow Tucows to increase profitability by lowering overall marketing costs. Over time, Tucows believes that its focus on customer service and the adoption by its customers of its additional products and services will have a positive impact on renewals;
- Messaging products, including web based and regular e-mail and integration with offline messaging; and
- Payment processing, allowing Tucows' MSPs to receive money from end-users in a much more seamless fashion, especially internationally.

To provide a full range of features and performance capabilities in its product categories, Tucows intends to offer services from numerous third party providers. This allows its MSPs to provide their end-users with the ability to choose the products and services that are best suited to their individual needs.

Build Strategic Alliances

Tucows intends to continue developing strategic alliances to expand its product offerings, extend its platform and increase its sales. For example, Tucows has entered into a strategic relationship with Entrust Technologies to provide digital certificates.

Tucows' Products And Services

Tucows offers its applications and services to its network of MSPs and directly to end-users. Its principal applications and services include domain name registration services, digital certificate delivery and digital content distribution.

Domain Name Registration Services

Tucows offers wholesale and retail domain name registration services in the .com, .net and .org generic top level domains, or gTLD's, and the .uk, .ca, .vc and .tv country code top-level domains, or ccTLDs. Since November 2000, Tucows has participated in the multilingual .com, .net and .org test through which the registry began to accept multilingual domain name registrations, that is, domain names using non-Roman characters. Multilingual domain names are now available in more than 350 languages.

Key components of Tucows' domain name registration services include:

- **OpenSRS:** Tucows' wholesale service is designed to enable MSPs to register domain names for their end-users. Pricing is based on a per name, per year charge. Tucows imposes no restrictions on the prices charged by the Tucows client to its customers;
- **Domain Direct—**www.domaindirect.com: Tucows' retail domain name registration service allows consumers to register, develop, use and manage their web sites. Included in the service is the ability to refer a domain name to a free web site such as Geocities or Tripod to avoid the expense of web hosting; and
- **OpenRG—**open registration gateway: A service that allows ICANN accredited registrars to use Tucows' technical systems to process domain name registrations. OpenRG enables registrars to use a proven system without incurring the costs of building their own technical infrastructure. OpenRG also includes professional service elements, including custom development, data management and systems administration.

Digital Certificate Delivery

Tucows has entered into a partnership with Entrust.net Inc. to provide its MSPs with the ability to purchase digital certificates through the OpenSRS system. Digital certificates authenticate identities over the Internet and secure transactions between buyers and merchants. Tucows offers this service exclusively to MSPs on a private label basis so that they may involve their brand in selling digital certificates to their end-users, which is especially important in a trust-related service such as digital certificates.

Digital Content Distribution

Tucows distributes software and other digital content both through distribution directly to consumers and through its accelerated content delivery network.

Its digital content distribution services include:

- Tucows website, www.tucows.com, is designed to provide consumers with fast access to Tucows' extensive libraries of software and digital content. Primary navigation is designed around users selecting the libraries of interest to them, such as Windows or Linux. There are 11 main libraries containing a total of over 30,000 titles. Each software title in Tucows' library is reviewed, virus-tested and rated on a scale of one to five. Revenue is produced from the Tucows web site through advertising and co-branding agreements.
- The accelerated content delivery network sends Tucows' software and digital content libraries to its MSPs' networks, which are the initial access points where end-users connect to the Internet. Tucows has entered into relationships with approximately 1,000 partners around the world. Each

partner that agrees to use the accelerated content delivery network is expected to download the content libraries it offers at least once a day. Advantages of this service include:

- *Bandwidth savings and faster downloads:* Having Tucows' software libraries on its clients' local networks conserves Internet bandwidth and reduces the client's bandwidth costs. Because traffic from the subscriber base remains local to the client's network, consumers receive a faster download.
- *Flexible and customizable:* Tucows enables content providers to choose from among a broad range of software libraries so that they are able to customize their offerings to best satisfy local interests.
- *Tucows rating system:* Each software title offered by Tucows is reviewed by Tucows' editorial staff, allowing the MSPs end-users to sort through the huge range of alternative software titles available to them in any given category.

Tucows also operates:

- Linux Weekly News, acquired by Tucows in early 2000, to provide users with additional editorial content relating to Linux and the open source community in general.
- Tucows' proprietary Newshub provides technology for a network of over 2,000 web sites. Newshub allows for the mining and aggregating of news headlines and other online informational content from a variety of different sources.

Planned Products And Services

Tucows intends to deliver the following new applications and services through the OpenSRS platform:

- *Liberty XRS.* Through a wholly owned subsidiary, Liberty Registry Management Services Inc., Tucows will begin to offer top-level technical management services to third parties, primarily existing country-code registries and generic top-level domain registries. The service will enable a registry manager to provide world-class domain registration services to its clients.
- *New Generic Top-level Domains.* In November 2000, ICANN approved bids for the following seven new top-level domain registries: .biz, .info, .pro, .name, .museum, .coop and .aero. While there can be no guarantee that they will successfully launch, Tucows expects at least four of the new TLDs, .biz, .info, .name and .pro, to begin selling registrations through registrars in the second half of 2001. Tucows will integrate a number of these registries into the OpenSRS system.
- *Country Code Top Level Domain Registration Services.* Tucows offers MSPs the ability to provide registrations in the .uk for United Kingdom, .ca for Canada, .tv for Tuvalu and .vc for Saint Vincent domains. Tucows is negotiating with various other national registries to offer additional country code registration services.
- *Messaging.* Tucows intends to provide its MSPs with the ability to offer collaborative groupware services to their client base directly through the OpenSRS interface.

Customer Support

Tucows seeks to provide superior customer service by anticipating the technical requirements and business objectives of its MSPs. Tucows also provides its MSPs with technical advice to help them understand how Tucows' applications and services can be customized for their particular needs. MSPs may contact Tucows by e-mail, toll-free telephone service and instant chat facilities. A library of frequently asked questions and answers is made available to all MSPs through Tucows' website.

Tucows' customer service team consists of trained technicians who provide support in many languages. These staff members handle general inquiries, investigate the status of orders and payments and answer technical questions about Tucows' applications and services. Customer inquiries, customer service representatives monitor site and network operations, refer complex problems to technical teams for resolution and make recommendations for future enhancements.

Tucows employs a number of customer service techniques that are specific to its applications and services and to the Internet. For example, Tucows uses the Internet to provide support directly to MSPs by effecting changes on their computers residing on their networks, often behind firewalls.

Tucows also uses its own online discussion forums to communicate with its MSPs. These forums have been used to discuss:

- suggestions or feedback on new features;
- marketing promotions;
- domain policy positions; and
- negotiation of agreements.

These forums are open to the public, which increases the level of scrutiny Tucows faces and the standard to which it is held. This, in turn produces credibility with the MSPs. Problems are raised that are often solved by other customers who have faced similar situations. This greatly increases the speed and breadth of response the customer is able to receive in a cost effective manner.

Technology And Infrastructure

Tucows employs advanced software and hardware, combining internal expertise with industry standard technology to create a proprietary software and platform infrastructure.

Tucows OpenSRS Platform

The OpenSRS platform provides a way for MSPs to access applications and services, without having to make substantial investments in their own software or hardware. The client software is distributed on the MSPs' servers, which provides the OpenSRS platform with a high degree of scalability. It allows Tucows to add customers and services without overburdening its own centralized systems. As the client code is open source, Tucows MSPs can supplement Tucows software so that it better integrates with their own systems.

The key components of Tucows' transactional platform include:

- *Tucows' OpenSRS server*: This system acts as an interface between third party suppliers, including VeriSign's global registry service and Tucows' MSPs. This is the component of the platform through which all MSPs complete transactions. It allows MSPs and their customers to add, delete, change and transfer domain names in an automated fashion.

The OpenSRS server also provides MSPs with a comprehensive set of tools to allow them to easily operate, administer and manage the domain names of their clients, the registrants. These tools are accessible by Tucows' MSPs through the Internet and enable them to monitor domain name registrations as they occur, and perform other administrative functions. The tools also allow Tucows' MSPs to efficiently manage a large number of domains belonging to a single registrant. For example, the administrative contact for a large number of domains can be changed using a single screen.

The OpenSRS server also facilitates country-code top-level domains and multilingual domains, including the ability to process the different communication protocols, price points, taxes and policies of the various top-level domains.

- *Tucows OpenSRS client*: The OpenSRS client usually resides on the servers of channel partners and communicates with the OpenSRS server over the Internet using Tucows' published interface protocol. The OpenSRS client also allows MSPs to seamlessly and transparently integrate their existing web sites with Tucows' OpenSRS server. The OpenSRS client also provides MSPs and their end-users with tools to administer multiple domains. The OpenSRS client was developed as open source software, which allows Tucows' MSPs to make changes to the software as required to meet their particular needs and to ease the integration of the client code into their billing, payment and other administrative systems.

Digital Content Distribution Network Architecture

Tucows manages an extensive network for distributing software and other digital content using proprietary software and standard hardware. The key elements of the accelerated content delivery network include main hubs that Tucows owns and servers that are owned by clients located at their facilities. As of March 31, 2001, the Tucows network reached over 1,000 servers in over 100 countries.

Competition

The market for Internet applications and services including domain name registrations, software and content distribution and other e-business services is rapidly evolving and highly competitive. Tucows' competition may be divided into groups consisting of:

- other domain name registrars who market private label offerings to MSPs;
- domain name registrars who market domain names primarily on a retail basis, such as Network Solutions and Register.com, who compete with Tucows' MSPs for end-users;
- providers of content and services to web sites and MSPs, such as Openwave, and Critical Path;
- providers of software downloads and other open source related content, such as CNET and VA Linux;
- Internet service providers and web hosting providers, such as Concentric Network, DIGEX, Exodus Communications, Genuity and MCI Worldcom;
- major technology providers, such as Cisco Systems, IBM, Intel and Nortel Networks;
- Internet portals, such as AOL, Excite@Home and Yahoo; and
- telecommunications, cable and wireless companies.

Tucows expects to experience significant competition from the companies identified above, and, as its business develops and Tucows competes in an increasingly broad range of e-business services, Tucows expects to encounter competition from other providers of Internet services. Internet service providers, web hosting companies, e-mail hosting companies, outsourced application companies, country code registries and major telecommunication firms may broaden their service offerings to include outsourced domain name registrations and other e-business solutions.

Tucows believes that the primary competitive factors in its domain name registration and digital content distribution businesses are:

- providing cost savings over in-house solutions by relieving customers of expenses of acquiring and maintaining hardware and software and the associated administrative burden;

- providing greater functionality and access to e-business applications and services, which in turn enables customers to choose the application that best suit their end-users' needs;
- enabling MSPs to maintain their relationships with their end-users; and
- facilitating scalability through an infrastructure designed to support millions of transactions across millions of end-users.

While Tucows believes that its products and services compare favorably with these competitive factors, many of Tucows' current and potential competitors have longer operating histories, larger customer bases, greater brand recognition and significantly greater financial, marketing and other resources which may help them to develop domain name registration and digital content distribution services that are superior or achieve greater market recognition. New technologies and the expansion of existing technologies may increase competitive pressures on Tucows.

U.S. Government Regulation Of Domain Names

The Internet domain name registration system is composed of two principal functions: registry and registrar. The registry maintains the database that contains the domain names registered in the top-level domains and their corresponding Internet protocol addresses. The registrar acts as an intermediary between the registry and individuals and businesses, referred to as registrants, seeking to register domain names.

Under a 1993 cooperative agreement with the U.S. Department of Commerce, Network Solutions was authorized to act as the sole registry and sole registrar for domain names in the .com, .net and .org, top-level domains. In October 1998, the Department of Commerce amended the Network Solutions cooperative agreement to call for the formation of a not-for-profit corporation to oversee the management of, and create policies about, domain names in the .com, .net and .org top level domains. The Department of Commerce also proposed that additional registrars be authorized to register domain names in these domains based upon the idea that competitive registrars would benefit consumers and businesses. ICANN was recognized as this not-for-profit corporation by the Department of Commerce in November 1998.

ICANN's authority is based upon voluntary compliance with its consensus policies. While these policies do not constitute law in the United States or elsewhere, they are expected to have a significant influence on the future of the domain name registration system. On December 1, 1999, ICANN's first substantive policy, the Uniform Dispute Resolution Policy, became effective. This dispute resolution policy was created to address the problem of cybersquatting, or registering the trademark of another as a domain name with the intent to wrongfully profit from the goodwill in that name created by the trademark holder. ICANN intends to create additional policies governing the domain name registration system, and Tucows will be affected by any of these policies.

Additionally, there have been ongoing legislative developments and judicial decisions concerning trademark infringement claims, unfair competition claims, and dispute resolution policies relating to the registration of domain names. To help protect itself from liability in the face of these ongoing legal developments, Tucows has taken the following precautions:

- Its standard registration agreement requires that each registrant indemnify, defend and hold Tucows harmless for any dispute arising from the registration or use of a domain name registered in that person's name; and
- Since December 1, 1999, Tucows has required its MSPs to ensure that all registrants are bound to the Uniform Domain Name Dispute Resolution Policy as approved by ICANN.

Despite these precautions, Tucows cannot assure you that its indemnity and dispute resolution policies will be sufficient to protect it against claims asserted by various third parties, including claims of trademark infringement and unfair competition.

New laws or regulations concerning domain names and domain name registrars may be adopted at any time. Tucows responses to uncertainty in the industry or new regulations could increase its costs or prevent it from delivering its domain name registration services over the Internet, which could delay growth in demand for Tucows' services and limit the growth of its revenues. New and existing laws may cover issues such as:

- pricing controls;
- the creation of additional generic top level domains and country code domains;
- consumer protection;
- cross-border domain name registrations;
- trademark, copyright and patent infringement;
- domain name dispute resolution; and
- other claims based on the nature of content of domain names and domain name registration.

In November 1999, the Anticybersquatting Consumer Protection Act was enacted by the United States government. This law seeks to curtail a practice commonly known in the domain name registration industry as cybersquatting. A cybersquatter is generally defined in the act as one who registers a domain name that is identical or similar to another party's trademark, or the name of another living person, with the bad faith intent to profit from use of the domain name. The law states that registrars may not be held liable for registration or maintenance of a domain name for another person absent a showing of the registrar's bad faith intent to profit from the use of the domain name. Registrars may be held liable, however, if they do not comply promptly with procedural provisions of the law. For example, if there is litigation involving a domain name, the registrar is required to deposit a certificate representing the domain name registration with the court. If Tucows is held liable under this law, any liability could have a material adverse effect on its business financial condition and results of operations.

Intellectual Property

Tucows believes that it is well positioned in the content services and domain name registration markets in part due to its highly recognized brand, Tucows. Its success and ability to compete are dependent on its ability to develop and maintain the proprietary aspects of its brand name and technology. Tucows relies on a combination of trademark, trade secret and copyright laws and contractual restrictions to protect its intellectual property rights. These legal protections cannot guarantee protection of Tucows' intellectual property. Despite precautions, third parties could obtain and use Tucows' intellectual property without authorization. The validity, enforceability and scope of protection of intellectual property in Internet-related industries is uncertain and still evolving, and the laws of some foreign countries do not protect intellectual property to the same extent as do the laws of the United States.

Tucows has registered the Tucows trademark in the United States and in other countries and will seek to register additional service marks and trademarks, as appropriate.

Tucows seeks to limit disclosure of its intellectual property by requiring employees and consultants with access to its proprietary information to execute confidentiality, non-disclosure and work-for hire agreements with Tucows. All Tucows employees are required to execute confidentiality and non-use agreements which provide that any rights they may have in copyrightable works or patentable

technologies accrue to Tucows. Before entering into discussions with potential content providers and network partners about Tucows' business and technologies, Tucows generally requires that these parties enter into a non-disclosure agreement. If these discussions result in a license or other business relationship, Tucows also generally requires that the agreement containing the parties' rights and obligations include provisions for the protection of Tucows' intellectual property rights.

Effective trademark, service mark, copyright and trade secret protection may not be available in every country in which Tucows' services are or will be made available. Tucows also expects to license proprietary rights such as trademarks or copyrighted material to network partners during planned national and international expansion.

Employees

As of May 31, 2001, Tucows had 218 full-time employees. No employees are covered by collective bargaining agreements. Tucows believes its relations with its employees are good. Competition for qualified personnel in the Internet and e-commerce industry is intense and Tucows' future success will depend in part on its continued ability to attract, hire and retain qualified technical and management personnel.

Facilities

Tucows' principal administrative, engineering, marketing and sales office totals approximately 18,426 square feet and is located in Toronto, Ontario under a lease that expires on January 10, 2004. Tucows also maintains an office in Flint, Michigan. Tucows is seeking additional office space. Tucows does not own any real estate.

Substantially all of Tucows' computer and communications hardware is located at either its facilities or at server hosting facilities in Toronto, Ontario.

Legal Proceedings

Tucows is not party to any material legal proceedings, nor is it aware of any proceedings that are planned. On July 23, 2001, however, a class action lawsuit was filed in Superior Court in California against ICANN, NeuLevel, Inc., which is the registry for the .biz generic top level domain, and over 60 other defendants including Tucows. The lawsuit claims that the defendants are engaged in unfair competition under state laws because they are conducting an illegal lottery enterprise through the pre-registration of .biz generic top level domains. Tucows intends to defend itself vigorously in the lawsuit.

DESCRIPTION OF INFONAUTICS CAPITAL STOCK

This section of the joint proxy statement/prospectus describes the material terms of the Infonautics capital stock. This section also summarizes relevant provisions of the Pennsylvania corporate law.

Authorized Capital Stock

After adoption of the amendment and restatement of the Infonautics' articles of incorporation, Infonautics will be authorized to issue a total of 251,250,000 shares of capital stock, consisting of:

- 250,000,000 shares of common stock; and
- 1,250,000 shares of preferred stock.

Following the merger, approximately 64,351,000 shares of Infonautics common stock will be outstanding.

Common Stock

Voting Rights

Holders of issued and outstanding shares of Infonautics common stock will be entitled to one vote per share held.

Dividends

Holders of common stock will be entitled to receive dividends and other distributions when and if declared by the Infonautics board of directors, subject to the rights of the holders of shares of any series of preferred stock.

Liquidation Rights

If Infonautics is liquidated, subject to the rights, if any, of the holders of any outstanding shares of preferred stock, the holders of Infonautics common stock will be entitled to share, ratably according to the number of shares of common stock held by them, in the remaining assets of Infonautics available for distribution.

Preemptive Rights

The holders of Infonautics common stock will not have preemptive rights to purchase or subscribe for any stock or any other securities of Infonautics.

Preferred Stock

The Infonautics board of directors has the authority, subject to any limitations established by law, without further shareholder approval to issue up to 1,250,000 shares of preferred stock in one or more series. The Infonautics board of directors may fix the number of shares, designations, powers, preferences and special rights of the preferred stock. The preferences, powers, rights and restrictions of different series of preferred stock may differ. The issuance of preferred stock could decrease the amount of earnings and assets available for distribution to holders of Infonautics common stock or adversely affect the rights and powers, including voting rights, of holders of common stock.

The purpose of authorizing Infonautics board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays related to a shareholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility for possible acquisitions and other corporate purposes, could make it more difficult for a third party to acquire, or could discourage a

third party from attempting to acquire, a majority of the outstanding voting stock of Infonautics. Infonautics has no plans to issue any shares of preferred stock.

Anti-Takeover Considerations

Pennsylvania corporate law has several anti-takeover provisions which apply to registered corporations. A registered corporation is a generally a corporation that has a class or series of shares entitled to vote in the election of directors registered under the Securities Exchange Act of 1934. Infonautics has elected to opt-out of substantially all of the anti-takeover provisions of the Pennsylvania corporate law, and these provisions do not apply to Infonautics.

Infonautics is subject to provisions of the Pennsylvania corporate law prohibiting business combination transactions with a person that becomes a beneficial owner of shares representing 20% or more of the voting power in an election of directors of Infonautics unless:

- the business combination or the acquisition of the 20% interest is approved by the board of directors of Infonautics before the 20% interest is acquired;
- the person beneficially owns at least 80% of the outstanding shares and the business combination is approved by a majority vote of the disinterested shareholders, and satisfies minimum price and other conditions required by the Pennsylvania corporate law;
- the business combination is approved by a majority vote of the disinterested shareholders at a meeting called no earlier than five years after the date the 20% interest is acquired; or
- the business combination is approved by shareholder vote at a meeting called no earlier than five years after the date the 20% interest is acquired, and satisfies minimum price and other conditions required by the Pennsylvania corporate law.

A business combination includes mergers, consolidations, asset sales, share exchanges, divisions of a registered corporation or any subsidiary and other transactions resulting in a disproportionate financial benefit to an interested shareholder.

The Pennsylvania corporate law contains other provisions applicable to Pennsylvania corporations that may have an anti-takeover effect. For instance, under section 1715 of the Pennsylvania corporate law, directors of a corporation are not required to consider the interests of the shareholders as being dominant or controlling in considering the best interests of the corporation. The directors may consider factors including:

- the effects of any action upon any group affected by that action, including shareholders, employees, suppliers, customers and creditors of the corporation and upon communities in which offices or other establishments of the corporation are located;
- the short term and long term interests of the corporation, including benefits that may accrue to the corporation from its long term plans and the possibility that these interests may be best served by the continued independence of the corporation; and
- the resources, intent and conduct of any person seeking to acquire control of the corporation.

The Pennsylvania corporate law also provides directors with broad discretion concerning actions that may be taken in response to acquisitions or proposed acquisitions of corporate control.

COMPARISON OF RIGHTS OF INFONAUTICS SHAREHOLDERS AND TUCOWS STOCKHOLDERS

Infonautics is organized under the laws of the Commonwealth of Pennsylvania, and Tucows is organized under the laws of the State of Delaware, so that differences in the rights of holders of Infonautics capital stock and Tucows capital stock arise both from differences between their charters and bylaws and also from differences between Pennsylvania law and Delaware law. Upon completion of the merger, holders of Tucows capital stock will become holders of Infonautics common stock, and their rights will be governed by Pennsylvania law and the Infonautics articles of incorporation and bylaws.

This section of the joint proxy statement/prospectus describes the material differences between the rights of Infonautics shareholders and Tucows stockholders. This section does not include a complete description of all differences between the rights of these shareholders or stockholders, nor does it include a complete description of the specific rights of these shareholders and stockholders. The identification of some of the differences in the rights of these shareholders and stockholders as material is not intended to indicate that other differences that are equally important do not exist.

All Infonautics shareholders and Tucows stockholders are urged to read carefully the relevant provisions of Pennsylvania law and Delaware law, the articles of incorporation and bylaws of Infonautics and the certificate of incorporation and bylaws of Tucows. Copies of the articles of incorporation and bylaws of Infonautics and the certificate of incorporation and bylaws of Tucows will be sent to Infonautics shareholders and Tucows stockholders upon request. See “Where You Can Find More Information.”

Capitalization

Infonautics

The authorized capital stock of Infonautics consists of:

- 50,000,000 shares of Infonautics class A common stock, 12,945,406 of which are outstanding as of April 2, 2001. This is the class of stock to which we have referred as Infonautics common stock in this joint proxy statement/prospectus;
- 100,000 shares of Infonautics class B common stock, none of which are outstanding;
- 2,000,000 shares of Infonautics class C common stock, none of which are outstanding; and
- 1,250,000 shares of Infonautics preferred stock, none of which are outstanding.

If the amendment and restatement of the Infonautics articles of incorporation is approved, the authorized capital stock of Infonautics will consist of:

- 250,000,000 shares of common stock; and
- 1,250,000 shares of preferred stock.

Tucows

The authorized capital stock of Tucows consists of:

- 60,000,000 shares of Tucows common stock, 3,000,000 of which are outstanding as of April 2, 2001; and
- 40,000,000 shares of Tucows preferred stock. 35,000,000 shares of Tucows’ authorized preferred stock are designated as series A convertible preferred stock, 28,677,402 of which are outstanding as of April 2, 2001.

Common Stock

Infonautics

Each holder of Infonautics common stock has the right to cast one vote for each share of Infonautics common stock held of record on all matters submitted to a vote of shareholders of Infonautics, including the election of directors. Infonautics shareholders have no cumulative voting rights. Subject to the preferences of the holders of Infonautics preferred stock, if any, the holders of Infonautics common stock are entitled to receive dividends as may be declared by Infonautics board of directors.

Tucows

Each holder of Tucows common stock has the right to cast one vote for each share of Tucows common stock held of record on all matters submitted to a vote of stockholders of Tucows. Subject to the preferences of the holders of Tucows preferred stock, the holders of Tucows common stock are entitled to receive dividends as may be declared by Tucows board of directors. The Tucows common stock has no redemption, conversion or other subscription rights.

The Tucows certificate of incorporation provides that voting rights are subject to the corporate governance provisions of a stockholders agreement initially entered into as of May 4, 1999 and subsequently amended. The corporate governance provisions of stockholders agreement include:

- rights of representation on the Tucows board of directors;
- information rights; and
- a provision that these actions may not be undertaken by Tucows without prior written approval of a majority of the shares of Tucows common stock held by specified holders of Tucows common stock:
 - any change in the powers, preferences or special rights of any shares of Tucows capital stock; or
 - entering into any material transaction with specified investors in Tucows or their associates.

The stockholders agreement will be terminated upon completion of the merger and the corporate governance provisions and other contractual rights and restrictions possessed by holders of Tucows common stock who are parties to that agreement will cease to exist after the merger. These other contractual rights and restrictions include:

- prohibitions on transfer;
- rights of first refusal; and
- preemptive rights;

Preferred Stock

Infonautics

Infonautics board of directors has the authority, without further action by the shareholders of Infonautics to issue up to 1,250,000 shares of preferred stock in one or more series and to designate the rights, preferences, privileges and restrictions of each series. The issuance of Infonautics preferred stock could have the effect of restricting dividends on the Infonautics common stock, diluting the voting power of the common stock, impairing the liquidation rights of the common stock or delaying or preventing a change in control without further action by the shareholders. Infonautics has no outstanding shares of preferred stock.

Tucows

Tucows has one outstanding series of preferred stock, the series A convertible preferred stock, to which we have referred in this joint proxy statement/prospectus as Tucows preferred stock.

Dividend Preference

Holders of Tucows preferred stock are entitled to receive dividends when, as and if declared by Tucows board of directors. If the Tucows board of directors declares a dividend on the Tucows common stock, the holders of Tucows preferred stock are entitled to receive dividends on each share of preferred stock equal to the amount of dividends declared on each share of Tucows common stock multiplied by the number of shares of Tucows common stock into which each share of preferred stock is then convertible.

Liquidation Preference

If Tucows is liquidated, dissolved or wound up, after payment of the debts and other liabilities of Tucows, distributions to the stockholders of Tucows will be made in the following order, if the assets and funds of Tucows are sufficient to make the distribution:

- holders of preferred stock will receive an amount equal to the amount invested in Tucows for each share of preferred stock plus any accrued and unpaid dividends through the date of the liquidation, dissolution or winding up plus any amounts contributed as capital; and
- the remaining assets and funds of Tucows available for distribution to stockholders of Tucows will be distributed ratably among the holders of Tucows common stock and preferred stock, on an as-converted to common stock basis.

Conversion

Holders of Tucows preferred stock may convert their shares of preferred stock into shares of Tucows common stock at any time. Outstanding shares of Tucows preferred stock will automatically be converted into shares of Tucows common stock, immediately upon the closing of an underwritten public offering by Tucows which results in gross proceeds to Tucows of at least \$60 million.

It is a condition to Infonautics' obligation to complete the merger that all Tucows preferred stock be converted into Tucows common stock.

Voting Rights and Protective Provisions

Each holder of Tucows preferred stock has the right to cast one vote for each share of Tucows common stock into which each share of Tucows preferred stock held of record is convertible on all matters submitted to a vote of stockholders of Tucows. As a general matter, the holders of Tucows preferred stock vote with the holders of Tucows common stock as a single class on all actions to be taken by Tucows stockholders. However, any voting rights are subject to the corporate governance provisions of the stockholders agreement described above under "Comparison of Rights of Infonautics Shareholders and Tucows Stockholders—Common Stock—Tucows" beginning on page 107.

Redemption Rights

Shares of Tucows preferred stock are not redeemable.

Number and Election of Directors

Infonautics

The Infonautics bylaws provide that the Infonautics board of directors will consist of a number of directors between one and nine. Within this limit, the actual number of directors is fixed by the Infonautics board of directors. There are five members of the Infonautics board of directors. Under the Infonautics bylaws, a member of the Infonautics board of directors is elected to serve until the expiration of the term for which he was elected and until his successor has been selected and qualified or until his earlier death, resignation or removal. Pennsylvania law provides that, unless the board of directors is classified, the term of office is one year.

Tucows

The Tucows bylaws provide that Tucows board of directors will consist of one or more directors. The actual number of directors is fixed by the Tucows board of directors. There are seven members of the Tucows board of directors. Under the Tucows bylaws, a member of the Tucows board of directors is elected to serve until his successor has been elected and qualified or until his earlier resignation or removal.

Some of the stockholders of Tucows are parties to a stockholders agreement that give those stockholders the right to designate one or more directors of Tucows.

Vacancies on the Board of Directors and Removal of Directors

Infonautics

Under the Pennsylvania corporate law and the Infonautics bylaws, the board of directors may be removed at any time by the vote of shareholders entitled to vote in the election of directors. The articles of incorporation of a corporation may not prohibit the removal of directors by the shareholders for cause. Pennsylvania corporate law and the Infonautics bylaws provide that vacancies on the board of directors, including vacancies resulting from an increase in the number of directors, may be filled by a majority vote of the remaining directors though less than a quorum, or by a sole remaining director. Each person so selected serves for the balance of the unexpired term and until his successor has been selected and qualified or until his earlier death, resignation or removal.

The Infonautics bylaws provide that directors may be removed by the vote of the shareholders entitled to elect directors.

The Infonautics bylaws provide that the board of directors may declare the office of a director vacant if the director:

- has been judicially declared of unsound mind;
- has been convicted of an offense punishable by imprisonment for a term of more than one year;
or
- within 60 days after notice of his election, the director does not accept his office in writing or by attending a meeting of the board of directors and fulfilling other requirements of qualification as the bylaws or articles of incorporation may provide.

Tucows

Delaware law and the Tucows bylaws provide that vacancies on the board of directors, including vacancies resulting from an increase in the number of directors, may be filled by a majority vote of the remaining directors though less than a quorum, or by a sole remaining director. Delaware law also provides that if, at the time of the filling of any vacancy or newly created directorship, the directors

then in office constitute less than a majority of the authorized number of directors, the Delaware Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the outstanding stock of the corporation having the right to vote in the election of directors, order an election to be held to fill the vacancy or replace the directors selected by the directors then in office. Delaware law also provides that, except where there is a classified board of directors or where cumulative voting applies, a director, or the entire board of directors, of a corporation may be removed by the affirmative vote of a majority of the shares of the corporation entitled to vote at an election of directors.

The Tucows bylaws provide that any or all of the board of directors may be removed, with or without reason, by a majority vote of the stockholders having the right to vote in an election of directors. The stockholders may elect a director to fill a vacancy that has not been filled by the Tucows board of directors.

Charter Amendments

Infonautics

Under the Pennsylvania corporate law, an amendment to the articles of incorporation requires the approval of the board of directors followed by the affirmative vote of a majority of the votes cast by all shareholders entitled to vote on the amendment and, if any class or series of shares is entitled to vote on the amendment as a class, the affirmative vote of a majority of the votes cast in each class vote.

The Pennsylvania corporate law also provides that, unless otherwise provided in the articles of incorporation, an amendment of the articles of incorporation need not be adopted by the board of directors before its submission to the shareholders for approval if it is proposed by a petition of shareholders entitled to cast at least 10% of the votes that all shareholders are entitled to cast on the amendment. Infonautics articles of incorporation do not contain any provisions limiting shareholders ability to propose by petition an amendment of the articles of incorporation.

Under the Pennsylvania corporate law, shareholder approval is not required for non-material amendments to the articles of incorporation, such as a change in the corporate name, a provision for perpetual existence or, if the corporation has only one class of shares outstanding, a change in the number of the authorized shares for a stock split.

Tucows

Under Delaware law, an amendment to the certificate of incorporation of a corporation requires the approval of the corporation's board of directors and the approval of holders of a majority of the outstanding stock entitled to vote upon the proposed amendment, unless a higher vote is required by the corporation's certificate of incorporation. Tucows' certificate of incorporation does not require a higher vote.

Amendments to Bylaws

Infonautics

Under the Pennsylvania corporate law, bylaws may be adopted, amended and repealed by the shareholders entitled to vote on the action. This authority may be expressly vested in the board of directors by the bylaws, subject to the power of the shareholders to change action by the board of directors, unless the subject of the amendment is solely within the province of the shareholders. The Infonautics bylaws vest the board of directors with the authority to adopt, amend or repeal bylaws subject to the power of the shareholders to make or repeal bylaws.

Tucows

Under Delaware law, after a corporation has received any payment for any of its stock, stockholders entitled to vote have the power to adopt, amend or repeal bylaws. A corporation may, in its certificate of incorporation, confer this power on the board of directors. The stockholders always have the power to adopt, amend or repeal the bylaws, even though the board of directors may also be delegated the power. The Tucows' bylaws provide that the board of directors has the authority to amend bylaws and that new bylaws may be adopted, or the bylaws may be amended or repealed, by a majority vote of Tucows' outstanding shares.

Action by Written Consent

Infonautics

Under the Pennsylvania corporate law, unless the bylaws of a corporation provide otherwise, any corporate action may be taken by the shareholders without a meeting, by unanimous written consent. If the bylaws so provide, any corporate action may be taken without a meeting, by partial written consent, that is, consent of the shareholders who would have been entitled to cast the minimum number of votes that would be necessary to authorize the action at a meeting at which all shareholders entitled to vote on the action were present and voting. However, if an action is approved by partial written consent, the action does not become effective until after at least 10 days written notice of the action has been given to each shareholder entitled to vote on the action who did not execute the consent. The Infonautics bylaws allow shareholders to take action without a meeting by partial written consent.

Tucows

Delaware law provides that, unless otherwise stated in the certificate of incorporation, any action which may be taken at an annual meeting or special meeting of stockholders may be taken without a meeting, if a consent in writing is signed by the holders of the outstanding stock having the minimum number of votes necessary to authorize the action at a meeting of stockholders. Under Delaware law, if a consent is sought from less than all stockholders entitled to vote, prompt notice of the action taken by written consent is required to be provided to all stockholders entitled to vote who did not consent in writing. The Tucows certificate of incorporation does not provide for any limitation on written consents by stockholders.

Ability to Call Special Meetings

Infonautics

Under the Pennsylvania corporate law, special meetings of shareholders may be called by the board of directors, by any officer or other persons as provided in the bylaws, and, unless otherwise provided in the articles of incorporation, by shareholders entitled to cast at least 20% of the votes that all shareholders are entitled to cast at a particular meeting. The Infonautics bylaws provide that special meetings of shareholders may be called by the board of directors and by shareholders entitled to cast at least 20% of the votes that all shareholders are entitled to cast at a particular meeting.

Tucows

Under the Delaware corporate law, a special meeting of the stockholders may be called by the board of directors or by any person or persons as may be authorized by the certificate of incorporation or by the bylaws. The Tucows bylaws provide that special meetings of stockholders may be called by the chairman of the board or the president and must be called by the president or secretary at the written request of a majority of the board of directors or of stockholders owning 50% of the shares of capital

stock entitled to vote. This written request must state the purpose or purposes of the proposed meeting.

Notice of Stockholder Action

Infonautics

The Pennsylvania corporate law does not include a provision restricting the manner in which nominations for directors may be made by shareholders or the manner in which business may be brought before a meeting. The Infonautics bylaws have no restrictions on nominations for directors by shareholders.

Tucows

The Delaware corporate law, like the Pennsylvania corporate law, does not include a provision restricting the manner in which nominations for directors may be made by stockholders or the manner in which business may be brought before a meeting. The Tucows certificate of incorporation and bylaws contain no restrictions on nominations for directors by stockholders or other actions to be brought before stockholders.

Limitation of Personal Liability of Directors and Officers

Infonautics

Under the Pennsylvania corporate law, a corporation may include in its bylaws a provision, adopted by a vote of its shareholders, that eliminates the personal liability of its directors, in their capacities as directors, for monetary damages for any action taken or the failure to take any action unless:

- a director has breached or failed to perform his duties under the Pennsylvania corporate law; and
- the breach or failure to perform constitutes self-dealing, willful misconduct or recklessness.

A Pennsylvania corporation may not, however, eliminate personal liability where the responsibility or liability of a director is under any criminal statute or is for the payment of taxes required by any federal, state or local law.

The Infonautics bylaws provide for limitation of the liability of directors as permitted by the Pennsylvania corporate law.

Tucows

Delaware law provides that a corporation may include in its certificate of incorporation a provision limiting or eliminating the liability of its directors to the corporation and its stockholders for monetary damages arising from a breach of fiduciary duty, except for:

- a breach of the duty of loyalty to the corporation or its stockholders;
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- payment of a dividend or the repurchase or redemption of stock in violation of Delaware law; or
- any transaction from which the director received an improper personal benefit.

The Tucows bylaws provide that no person shall be liable to Tucows for any loss or damage suffered by it on account of any action taken or omitted to be taken by that person as a director or officer in good faith if that person:

- exercised or used the same degree of diligence, care and skill as an ordinarily prudent person would have exercised or used under the circumstances in the conduct of his own affairs; or
- took, or omitted to take, the action in reliance upon advice of counsel for Tucows or upon statements made or information furnished by officers or employees of Tucows which he had reasonable grounds to believe to be true or upon a financial statement of Tucows provided by a person in charge of accounts or certified by a public accountant or a firm of public accountants.

Indemnification of Directors and Officers

Infonautics

Under Pennsylvania law, a corporation generally may indemnify directors and officers:

- for actions taken in good faith and in a manner they reasonably believe to be in, or not opposed to, the best interests of the corporation; and
- in any criminal proceeding, if they had no reasonable cause to believe that their conduct was unlawful.

Pennsylvania law also provides that a corporation may advance to a director or officer expenses incurred in defending any action upon receipt of an undertaking by the director or officer to repay the amount advanced if it is ultimately determined that he is not entitled to indemnification. Pennsylvania corporate law expressly permits indemnification relating to any action, including a derivative or corporate action, unless a court determines that the acts or omissions giving rise to the claim constituted willful misconduct or recklessness.

The Infonautics bylaws provide that Infonautics will indemnify and hold harmless, to the fullest extent permitted by Pennsylvania law, any person who was or is a party or is threatened to be made a party to, or is involved in any action, suit or proceeding, including involvement as a witness, because that person is or was a director or officer, or is or was serving at the request of Infonautics as a director, officer or trustee of another entity.

The indemnification rights conferred by Infonautics are not exclusive of any other right which persons seeking indemnification may be entitled, including under any statute, the Infonautics bylaws, any agreement or vote of shareholders or directors.

Infonautics is authorized to purchase and maintain insurance on behalf of its directors, officers, employees and agents.

Infonautics may pay expenses incurred by its directors and officers in defending a civil or criminal action, suit or proceeding because they are directors or officers before the final disposition of the action, suit or proceeding. The payment of expenses will be made only if Infonautics receives an undertaking by or on behalf of a director or officer to repay all amounts advanced if it is ultimately determined by a court that the director or officer is not entitled to be indemnified by Infonautics.

Tucows

The provisions of the Delaware corporate law concerning indemnification are substantially similar to those of the Pennsylvania corporate law, except that the Delaware corporate law does not expressly permit indemnification relating to any action, including a derivative action, unless a court determines that the acts or omissions giving rise to the claim constituted willful misconduct or recklessness.

The Tucows bylaws provide that Tucows will indemnify its officers and directors to the greatest extent permitted by Delaware law.

State Anti-Takeover Statutes

Infonautics

Provisions of Pennsylvania corporation law and the Infonautics articles of incorporation and bylaws that may have an anti-takeover effect are described under “Description of Infonautics Capital Stock—Anti-takeover Considerations” on page 105.

Tucows

Under the business combination statute of Delaware law, a corporation is prohibited from engaging in any business combination with an interested stockholder if the interested stockholder and its affiliates or associates own, or if the interested stockholder is an affiliate or associate of the corporation and within a three-year period did own, 15% or more of the corporation’s voting stock, for a three year period after the stockholder became an interested stockholder, unless:

- before the stockholder became an interested stockholder, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation, excluding specified shares, upon completion of the transaction which resulted in the stockholder becoming an interested stockholder; or
- at or after the time the stockholder became an interested stockholder, the business combination is approved by the board of directors of the corporation and authorized by the affirmative vote, at an annual or special meeting and not by written consent, of at least 66⅔% of the outstanding voting shares of the corporation, excluding shares held by that interested stockholder.

A business combination generally includes:

- mergers, consolidations and sales or other dispositions of 10% or more of the assets of a corporation to or with an interested stockholder;
- specified transactions resulting in the issuance or transfer to an interested stockholder of any capital stock of the corporation or its subsidiaries; and
- other transactions resulting in a disproportionate financial benefit to an interested stockholder.

The provisions of the Delaware business combination statute do not apply to a corporation if the certificate of incorporation or bylaws of the corporation contain a provision expressly electing not to be governed by the provisions of the statute or the corporation does not have voting stock listed on a national securities exchange, authorized for quotation on the Nasdaq Stock Market or held of record by more than 2,000 stockholders.

MANAGEMENT OF INFONAUTICS AFTER THE MERGER

Board of Directors of Infonautics

The directors of Infonautics upon completion of the merger will be:

<u>Name</u>	<u>Age</u>
Dennis Bennie	48
Erez Gissin	42
Elliot Noss	38
Stanley Stern	43
Robert F. Young	47
Van Morris	46
Lloyd Morrisett	71
Alan Lipton	50
Tomer Kariv	40

Executive Officers of Infonautics

The principal executive officers of Infonautics upon completion of the merger will be:

<u>Name</u>	<u>Age</u>	<u>Title</u>
Elliot Noss	38	President and Chief Executive Officer
Michael Cooperman	50	Chief Financial Officer
Scott Swedorski	30	Founder, Editor-in-Chief
Graham Morris	50	Chief Operating Officer
Supriyo Sen	54	Chief Technology Officer

Elliot Noss. Mr. Noss is Tucows' president and chief executive officer. In April 1997, Mr. Noss joined Tucows Interactive Ltd. as vice president of corporate services. Mr. Noss became president and chief executive officer of Tucows in May 1999. Before joining Tucows, Mr. Noss had been director of corporate services with Pathway Communications since 1995.

Michael Cooperman. Mr. Cooperman has been Tucows' chief financial officer since January 2000. From October 1997 to September 1999, Mr. Cooperman was the chief executive officer of Archer Enterprise Systems Inc. From January 1996 to June 1997, he was chief operating officer and a director of SoftQuad International Inc. He also served as president of SoftQuad International from December 1996 until June 1997.

Scott Swedorski. Mr. Swedorski is Tucows' founder and editor-in-chief. Mr. Swedorski founded the Tucows.com web site in 1994 and has served as its editor-in-chief since that time.

Graham Morris. Mr. Morris joined Tucows as executive vice president, content, in September 2000 and was promoted to chief operating officer in June 2001. Before joining Tucows he spent 15 years at Telemedia Publishing, a Canadian consumer magazine publishing company where he became president in 1996.

Supriyo Sen. Mr. Sen joined Tucows as chief technology officer in February 2001. Before joining Tucows, from May 2000 to February 2001, Mr. Sen was vice president, marketing at GoLinQ.com, an Internet software company focused on e-commerce solutions for small and medium businesses. Before that, Mr. Sen spent 14 years at Hitachi Data Systems, a multi-national computer hardware company, where he served at various times as vice president, knowledge center, vice president, corporate strategy and vice president, marketing.

Dennis Bennie. Mr. Bennie has served as a director of Tucows since May 1999. Mr. Bennie is the chief executive officer and president of XDL Capital Corp., a private venture capital firm that he established in January 1997. In 1988, Mr. Bennie co-founded Delrina Corporation, a designer of fax, data, and voice communications software, where he was the chairman and chief executive officer until the sale of Delrina to Symantec Corporation in November 1995. Mr. Bennie was employed by Symantec as an executive vice president from November 1995 to November 1996 and was one of its directors until 1996.

Erez Gissin. Mr. Gissin has served as a director of Tucows since May 1999. Since July 1995, Mr. Gissin has been the vice president, business development of Eurocom Communications Ltd., a holding company that owns stock in several telecommunications services, equipment and Internet companies in Israel and elsewhere.

Stanley Stern. Mr. Stern has served as a director of Tucows since January 2000. Mr. Stern joined STI Ventures in January 2000 to lead the U.S. operations as director of STI Ventures Advisory USA Inc. Mr. Stern has served as a managing director of CIBC Oppenheimer since 1990.

Robert F. Young. Mr. Young has served as a director of Tucows since December 1999. Mr. Young co-founded Red Hat Inc. and served as its president and a director from its start in 1994 until November 1998. In November 1998, he was elected chief executive officer and chairman of the board of directors. In November 1999, he resigned as chief executive officer. He continues to serve as the chairman of the board of directors.

Van Morris. Mr. Morris has served as chief executive officer, president and as a director of Infonautics since March 1998. Mr. Morris joined Infonautics as president and chief operating officer in September 1995. From 1992 until he joined Infonautics, Mr. Morris held various vice president and general management positions at Legent Corporation, a systems management software company.

Lloyd Morrisett. Dr. Morrisett has served as a director of Infonautics since February 1994 and as chairman of the board of directors since March 1998. He is the co-founder of the Children's Television Workshop—now Sesame Workshop—and served from 1969-1998 as president of The Markle Foundation, a charitable organization. Dr. Morrisett is a director of iShares MSCI Index Funds.

Alan Lipton. Over the past five years, Mr. Lipton has served as a board member of various philanthropic and charitable organizations in the Miami area. In November of 1999, Mr. Lipton became president and chief executive officer of Diamond.com.

Tomer Kariv. Mr. Kariv joined the Israeli office of STI Ventures in April 2000. Before joining STI, Mr. Kariv spent five years as a vice president at Shrem, Fudim, Kelner & Co. where he managed venture capital funds.

Employment Agreements

Tucows has entered into an employment agreement and a side letter agreement with Mr. Noss who will be the president and chief executive officer of Infonautics upon completion of the merger. The agreement is for a three year term beginning May 4, 1999 and provides for a salary of Cdn\$150,000 per year, subject to periodic increases by Tucows board of directors at its discretion. Upon the achievement of performance related goals, Mr. Noss will become eligible for an annual bonus payable at Tucows' board of directors sole discretion. Mr. Noss also received options to purchase 975,000 shares of Tucows common stock, which vest under the terms of Tucows stock option plan. These options will be assumed by Infonautics in the merger. The employment agreement also provides for an automobile allowance. If Mr. Noss' employment is terminated without cause, he will be entitled to continue to receive full compensation payable under his employment agreement until May 4, 2002.

Tucows has entered into an employment agreement and a side letter agreement with Mr. Swedorski who will be the editor-in-chief of Infonautics upon completion of the merger. The agreement is for a three year term beginning May 4, 1999 and provides for a salary US\$100,000 per year, subject to periodic increases by Tucows' board of directors at its discretion. Upon the achievement of performance related goals, Mr. Swedorski will become eligible for an annual bonus payable at Tucows' board of directors' sole discretion. Mr. Swedorski also received options to purchase 975,000 shares of Tucows common stock, which vest under the terms of Tucows stock option plan. These options will be assumed by Infonautics in the merger. The employment agreement also provides for an automobile allowance. If Mr. Swedorski's employment is terminated without cause, he will be entitled to continue to receive full compensation payable under his employment agreement until May 4, 2002.

Tucows has entered into an employment agreement with Mr. Cooperman who will be the chief financial officer of Infonautics upon completion of the merger. The agreement is for an indefinite term beginning January 1, 2000. Mr. Cooperman is entitled to a salary of Cdn\$150,000 per year, subject to periodic increases by Tucows board of directors at its discretion. The agreement also provides that Mr. Cooperman is entitled to an annual compensation package which is equal to the higher of fair market value or the amount Tucows pays to its equivalent senior executives. Mr. Cooperman also received options to purchase 450,000 shares of Tucows' common stock which vest under the terms of Tucows stock option plan. These options will be assumed by Infonautics in the merger. Mr. Cooperman is also entitled to a health club membership and an automobile allowance. If Mr. Cooperman's employment is terminated without cause, he is entitled to payment of six months of compensation plus one month of compensation for each year of service.

Tucows has entered into an employment agreement with Graham Morris who will be the chief operating officer of Infonautics upon completion of the merger. The agreement is for an indefinite term beginning September 5, 2000. Mr. Morris is entitled to a salary of Cdn\$150,000 per year, subject to periodic increases by Tucows board of directors at its discretion. Upon the achievement of performance related goals, Mr. Morris will become eligible for a bonus of Cdn\$25,000. Mr. Morris also received options to purchase 300,000 shares of Tucows' common stock which vest under the terms of Tucows stock option plan. These options will be assumed by Infonautics in the merger. Mr. Morris is also entitled to a car allowance. If Mr. Morris's employment is terminated without cause during the first 18 months of his employment, he is entitled to payment of six months of compensation. If Mr. Morris's employment is terminated without cause after his first 18 months of employment, he is entitled to six months of compensation plus four weeks of salary for each year of service.

Tucows has entered into an employment agreement with Supriyo Sen who will be the chief technology officer of Infonautics upon completion of the merger. The agreement is for an indefinite term beginning February 5, 2001. Mr. Sen is entitled to a salary of US\$125,000 per year, subject to periodic increases by Tucows board of directors at its discretion. Upon the achievement of performance related goals, Mr. Sen will become eligible for a minimum bonus of US\$25,000. Mr. Sen also received options to purchase 280,000 shares of Tucows' common stock which vest under the terms of Tucows stock option plan. These options will be assumed by Infonautics in the merger. If Mr. Sen's employment is terminated without cause, he is entitled to payment of six months of compensation plus one month of compensation for each year of service.

Under the terms of Tucows stock option plan, 25% of options granted vest one year after the date of grant and the remainder vest on a monthly basis for three years beginning one year after the date of grant.

PROPOSALS FOR INFONAUTICS SHAREHOLDERS ONLY

AMENDMENT AND RESTATEMENT OF INFONAUTICS' ARTICLES OF INCORPORATION

Proposed Amendment and Restatement of the Articles of Incorporation.

Infonautics is proposing to amend and restate its articles of incorporation. The principal purposes of the amendment and restatement are to:

- Increase the number of authorized shares of Infonautics common stock to 250,000,000;
- Eliminate Infonautics' class B common stock all of which has been converted into common stock;
- Eliminate Infonautics' class C common stock, none of which is outstanding or issuable;
- Eliminate Infonautics' series A convertible preferred stock, none of which is outstanding or issuable.

A copy of the proposed amended and restated articles of incorporation is attached to this joint proxy statement/prospectus as annex 2.

Purpose and Effect of the Proposed Amendment and Restatement

The Infonautics board of directors believes that it is in Infonautics' best interest to increase the number of authorized but unissued shares of common stock to have additional shares available for issuance to complete the merger and to meet Infonautics' future business needs as they may arise.

On April 2, 2001, 12,945,406 shares of common stock were outstanding, and 1,265,111 additional shares were reserved for issuance upon the exercise of outstanding stock options and warrants. If the merger is approved, approximately 60,054,100 shares of Infonautics common stock will be issued to Tucows stockholders or reserved for issuance on exercise of outstanding Tucows stock options, and, without an increase in the number of authorized shares, there will not be enough authorized shares to complete the merger.

As of April 30, 2001, the merger is Infonautics' only immediate commitment for which it needs additional shares of common stock. However, Infonautics is also seeking to have a sufficient reserve of shares so that it has the ability to act promptly on appropriate opportunities in the future, such as asset and stock acquisitions of other companies, equity financings or lease or debt financings in which part of the consideration would likely be warrants to purchase common stock.

Disadvantages may result from an increase in the number of authorized but unissued shares of common stock. Under the articles of incorporation, Infonautics shareholders do not have preemptive rights. After the adoption and filing of the amended and restated articles of incorporation, a significantly greater number shares of common stock will be available for issuance, both in the merger and in other transactions, and, if the additional authorized shares are issued, individual shareholders could experience a significant reduction in their relative percentage interests in Infonautics' in earnings, voting, liquidation value and book and market value.

The availability for issuance of additional shares of the common stock would also enable the Infonautics board of directors to make it more difficult, or discourage an attempt, to obtain control Infonautics. For example, the issuance of shares in a public or private sale, merger or similar transaction would increase the number of outstanding shares, which could reduce the interest of the party attempting to obtain control of Infonautics.

The Infonautics board of directors also believes it to be in the best interest of Infonautics to simplify its articles of incorporation by eliminating three classes of stock that no longer have any outstanding shares.

Board of Directors Recommendation

The Infonautics board of directors believes that the proposed amendment and restatement of the articles of incorporation is in the best interest of Infonautics and its shareholders for the reasons stated above. **The board of directors unanimously recommends a vote FOR approval of this proposal.**

ELECTION OF INFONAUTICS DIRECTORS

Nominees for Election as Directors

The board of directors of Infonautics consists of five directors, and five directors are to be elected at the annual meeting. The term of office for each director will expire at the 2002 annual meeting of shareholders. However, if the merger is completed, three of the Infonautics directors elected at the annual meeting will resign, the number of members of the Infonautics board will be increased to nine, and seven nominees of Tucows will be elected to fill the vacancies. The composition of the board of directors of Infonautics after the merger is described under “Management of Infonautics After the Merger” beginning on page 115. If the merger is not completed, each director elected at the annual meeting will hold office until the election and qualification of the director’s successor or until the director’s earlier death, removal or resignation.

The board of directors has nominated for election as directors of Infonautics Drs. Morrisett, Morgan and Segal and Messrs. Melman and Morris. All nominees are directors of Infonautics whose terms expire at the annual meeting.

All nominees have consented to be named and to serve if elected. Unless otherwise instructed by a shareholder returning a proxy card, the persons named in the proxies will vote the shares represented by the proxies for the election of the nominees recommended by the board of directors. The board of directors believes all nominees will be able to serve as directors. If all nominees are not able to serve as directors, the proxies may be voted for one or more substitute nominees to be designated by the board of directors or the board may decide to reduce the number of directors. **The board of directors unanimously recommends a vote FOR each of the nominees.**

NOMINEES FOR ELECTION

Name of Director	Age	Year First Became Director, Principal Occupations During Past Five Years and Directorships
Lloyd N. Morrisett	71	Dr. Morrisett has served as a director of Infonautics since February 1994 and as chairman of the board of directors since March 1998. He is the co-founder of the Children’s Television Workshop—now Sesame Workshop—and served from 1969-1998 as president of The Markle Foundation, a charitable organization. Dr. Morrisett is a director of iShares MSCI Index Funds.
Israel J. Melman	81	Mr. Melman, a co-founder of Infonautics, has served as a director of Infonautics since April 1993. For the last 27 years Mr. Melman has been the president of Lexan Associates, a management consulting firm working with companies in the areas of video, graphics, microelectronics, communication, optics and robotics.
Howard L. Morgan	55	Dr. Morgan has served as a director of Infonautics since March 1993. He is vice-chairman and president, New York for idealab!, which creates and operates Internet companies. Since 1989, he has been president of the Arca Group, Inc., a consulting and investment management firm specializing in the areas of computer and communications technologies. Dr. Morgan also served as chief executive officer of Franklin Electronic Publishers, Inc. in early 1998. Dr. Morgan serves as director for a number of technology companies, including Cylink Corporation, Franklin Electronic Publishers, Inc., MyPoints.com, Inc., Segue Software, Inc., and Unitronix Corporation.

<u>Name of Director</u>	<u>Age</u>	<u>Year First Became Director, Principal Occupations During Past Five Years and Directorships</u>
David Van Riper Morris	46	Mr. Morris has served as chief executive officer, president and as a director of Infonautics since March 1998. Mr. Morris joined Infonautics as president and chief operating officer in September 1995. From 1992 until he joined Infonautics, Mr. Morris held various vice president and general management positions at Legent Corporation, a systems management software company.
Brian Segal	57	Dr. Segal has served as a director of Infonautics since May 1998. Since 1992, Dr. Segal has been the president and chief executive officer of Publishing and Online Services, Rogers Media, Canada's leading magazine publishing and interactive media company.

General Information Concerning the Board of Directors and its Committees

The board of directors of Infonautics met on 18 occasions during 2000. The board of directors annually elects from its members an audit committee and a compensation committee. Each director attended at least 75% of the aggregate of the meetings of the board of directors held and the meetings of the committee or committees on which he served during the period for which he was a director, except Lester Wunderman, who attended at least 67% of all board of director meetings and who resigned from the board of directors effective June 21, 2000, and Brian Segal, who attended at least 67% of all board of director meetings.

Audit Committee

The audit committee reviews the scope of Infonautics' audit, the engagement of its independent auditors and their audit reports. The audit committee meets with the financial staff to review accounting procedures and reports. The audit committee formally met twice during 2000. The audit committee is composed of three directors: Drs. Morgan, Morrisett and Segal.

Compensation Committee

The compensation committee evaluates Infonautics compensation policies. The members of the compensation committee are Mr. Melman and Drs. Morgan and Morrisett. A subcommittee of the compensation committee, the employee stock option committee, administers Infonautics' stock option and equity compensation plans. The members of the employee stock option committee are Mr. Melman and Dr. Morrisett. The compensation committee and employee stock option committee met or acted by unanimous written consent 11 times during 2000.

Compensation of Directors

Beginning January 2001, the non-employee directors of Infonautics each receive a one time only fee of \$15,000 per year for their service on the board of directors and are reimbursed for their out-of-pocket expenses. During the year 2001, each non-employee director will receive a fee of \$1,000 per special meeting at which the director is in attendance and at which strategic options or transactions for Infonautics are considered. Dr. Morgan has agreed to waive the \$15,000 fee for himself while Infonautics continues his consulting agreement for \$3,000 per month. This consulting agreement is described below. Dr. Morrisett, as chairman of the board, receives an additional \$3,000 per month for his service on the board. Other directors do not receive compensation for their service on the board of directors or any committee of the board of directors, although they are reimbursed for their out-of-pocket expenses for serving on the board of directors.

Under Infonautics' amended and restated 1996 equity compensation plan, each non-employee director who was a member of the board of directors as of the effective date of the plan received a formula grant of a non-qualified stock option of Infonautics' common stock to purchase 10,000 shares of common stock at a price equal to the initial public offering price in Infonautics' initial public offering. Dr. Morgan waived his rights to the initial grant of options to purchase 10,000 shares of common stock. Each non-employee director who became or becomes a member of the board of directors after the effective date of the plan received or will receive a formula grant of a non-qualified stock option to purchase 10,000 shares of common stock on the date that he became or becomes a member of the board of directors at an exercise price equal to the fair market value on the date of grant.

On each date on which Infonautics holds its annual meeting of shareholders, each non-employee director in office immediately before and after the annual election of directors will receive a grant of a non-qualified stock option to purchase 2,500 shares of common stock at an exercise price equal to the fair market value on the date of the grant. The term of each option is or will be five years, and each option is or will be fully and immediately exercisable on the date of grant.

Each director is a party to an indemnification agreement with Infonautics. Under these agreements, the directors are indemnified against liabilities and expenses incurred because of litigation which may be brought alleging that they violated their fiduciary duties to Infonautics, if they have not met the applicable standard of care.

Dr. Morgan is a party to a consulting agreement with Infonautics under which he provides consulting services to Infonautics for up to three days per month for a monthly consulting fee of \$3,000. The agreement may be terminated with 10 days' notice by either Dr. Morgan or Infonautics. In general, Dr. Morgan's services have focused on technical assessment and planning and identification of the market and strategic opportunities for Infonautics.

Compensation Committee Interlocks and Insider Participation

Dr. Morgan, a member of the compensation committee, is party to a consulting agreement with Infonautics. This consulting agreement is described under "Compensation of Directors."

Related Party Transactions

On December 15, 1999, Infonautics closed a transaction with Bell & Howell Company and its wholly owned subsidiary, Bell and Howell Information and Learning Company. In the transaction, Infonautics contributed its Electric Library K-12 and public library business and assets and liabilities into what is now bigchalk.com, Inc., an Internet education company. Also in the transaction, Bell and Howell Information and Learning contributed its ProQuest K-12 and public library business and assets and liabilities into bigchalk.com. As part of the transaction, Infonautics also sold its e-commerce online archive business to Bell and Howell Information and Learning and granted an option to bigchalk.com to purchase Infonautics' Electric Library end-user business. Infonautics owns approximately 11% of the aggregate common and preferred stock of bigchalk.com as of February 28, 2001. Two members of Infonautics' board of directors, Mr. Morris and Dr. Morrisett, are also members of the board of directors of bigchalk.com and shareholders of bigchalk.com.

In February 1998, Infonautics entered into an agreement with Marvin I. Weinberger, the former chairman of the board, chief executive officer and founder of Infonautics, under which he resigned as chairman and chief executive officer of Infonautics to become the chief executive officer of a newly formed company called Electric Schoolhouse, LLC. Under this agreement, Electric Schoolhouse, LLC was obligated to repay Infonautics for expenses and costs incurred by Infonautics relating to the Electric Schoolhouse project. The amount of \$118,700 which was owed to Infonautics under this agreement was forgiven in July 2000 when Mr. Weinberger agreed to convert his shares of class B common stock to class A common stock. In March 2001, Mr. Weinberger executed a shareholder agreement in which he agreed to vote all of his shares for approval of the merger.

AMENDMENT OF THE INFONAUTICS 1996 EQUITY COMPENSATION PLAN

At the Infonautics annual meeting, the shareholders will vote on a proposal to amend the Infonautics' amended and restated 1996 equity compensation plan, as previously amended, to increase the number of shares of common stock reserved for issuance under the plan from 2,500,000 to 10,000,000. The Infonautics board of directors unanimously approved the amendment, subject to shareholder approval, by unanimous written consent dated May 3, 2001.

The Infonautics board of directors believes the plan helps Infonautics to attract, retain and motivate employees and other key personnel and to encourage them to devote their best efforts to the business and financial success of Infonautics. The board of directors believes that by providing key employees, non-employee directors and consultants with the opportunity to acquire an equity interest in Infonautics over time, stock options serve to align their interests closely with other shareholders. The plan has been amended three times before to increase the number of authorized shares from 500,000 to 2,500,000. As of May 9, 2001, Infonautics had granted options to purchase 1,114,092 shares under the plan. The Infonautics board of directors believes it is in the best interest of Infonautics to increase the number of shares authorized for issuance under the plan because the increase will allow Infonautics to continue to grant stock-based compensation at levels it considers appropriate. Infonautics has no plans to grant options except as it and Tucows have done in the past, nor are any shares required to ratify grants for which insufficient shares were available under the plan, except for options to be issued on conversion of Tucows stock options.

Description of the Plan

General

The plan was adopted on February 26, 1996. The plan provides for grants of stock options to selected officers, including officers who are also directors, of Infonautics or its subsidiaries, other employees of Infonautics or its subsidiaries and independent contractors and consultants who perform valuable services to Infonautics or its subsidiaries. Nonemployee directors of Infonautics are entitled to receive formula stock option grants under the plan. The plan also provides for grants of restricted stock, stock appreciation rights and performance units to participants other than non-employee directors. Upon approval of the proposed amendment to the plan, 8,885,908 shares of common stock will be reserved for issuance under the plan.

Administration of the Plan

The plan is administered by the executive stock option committee, a subcommittee of the compensation committee of the Infonautics board of directors. The executive stock option committee can determine the persons to whom grants may be made, the type, size and other terms and conditions of each grant, including vesting schedules and the acceleration of vesting and any other matters arising under the plan. The members of the employee stock option committee are Lloyd N. Morrisett, and Israel J. Melman and Howard Morgan.

Grants

Grants under the plan may consist of:

- options intended to qualify as incentive stock options, or ISOs, under section 422 of the Internal Revenue Code,
- non-qualified stock options that are not intended to qualify as ISOs,
- restricted stock,
- stock appreciation rights, or
- performance units.

Eligibility for Participation

Grants may be made to employees, including officers and directors, of Infonautics or its subsidiaries and to independent contractors or consultants to Infonautics or its subsidiaries. Non-employee directors are entitled only to formula grants of nonqualified stock options. As of April 1, 2001, 39 employees and five directors, including four non-employee directors, were eligible to receive grants under the plan. During any calendar year, no participant may receive grants under the plan for more than 250,000 shares of common stock. As of May 9, 2001, 421,712 options were outstanding and held by all participants as a group under the plan, at an average exercise price of \$4.50 per share. The last reported closing price of Infonautics' common stock as reported on the OTC Bulletin Board maintained by Nasdaq on July 17, 2001 was \$0.82.

Options

The exercise price of any ISO granted under the plan will not be less than the fair market value of the underlying shares of common stock on the date of grant, except that the exercise price of an ISO granted to an employee who owns more than 10% of the total combined voting power of all classes of the stock of Infonautics or its subsidiaries may not be less than 110% of the fair market value of the underlying shares of common stock on the date of grant. The exercise price of a non-qualified stock option may be greater than, equal to or less than the fair market value of the underlying shares of common stock on the date of grant.

The employee stock option committee will determine the term of each option, except that the exercise period may not exceed ten years from the date of grant and, for an ISO granted to any employee who owns more than 10% of the total voting power of all outstanding stock of Infonautics or its subsidiaries, the exercise period may not exceed five years from the date of the grant.

A participant may pay the exercise price

- in cash,
- with approval of the committee, by delivering shares of common stock owned by the participant and having a fair market value on the date of exercise equal to the exercise price, or
- by a combination of cash and delivery of shares of common stock.

Non-Employee Directors

Non-employee directors are entitled to receive nonqualified stock options in formula grants under the plan. According to the formula grants:

- Each non-employee director who was a member of the board of directors as of the effective date of the plan received a grant of a non-qualified stock option to purchase 10,000 shares of common stock at an exercise price equal to the initial public offering price in Infonautics' initial public offering.
- Each non-employee director who first became or becomes a member of the board of directors after the effective date of the plan received or will receive a grant of 10,000 shares of common stock on the date he became or becomes a member of the board of directors, at an exercise price equal to the fair market value on the date of grant.
- On each date on which Infonautics holds its annual meeting of shareholders, each non-employee director in office immediately before and after the annual election of directors will receive a grant of a non-qualified stock option to purchase 2,500 shares of common stock at an exercise price equal to the fair market value on the date of the grant.
- The term of each option is five years.
- Each option is fully exercisable upon the date of the grant.

Stock Appreciation Rights

The committee may grant stock appreciation rights alone or in tandem with any stock option under the plan. The base price of the stock appreciation right will be the greater of:

- the exercise price of the related stock option; or
- the fair market value of a share of common stock on the date of grant.

Upon exercise, the participant will receive the amount by which the fair market value of the common stock on the date of exercise exceeds the base price. The participant may elect to have the appreciation paid in cash or in shares of common stock, subject to committee approval. To the extent that a participant exercises a tandem stock appreciation right, the related option terminates. Similarly, on exercise of a stock option, any related stock appreciation right terminates.

Performance Units

The committee may grant performance unit awards payable in cash or shares of common stock at the end of a specified performance period under the plan. The committee will determine the length of the performance period, the maximum payment value of an award and the required performance goals. Payment will be contingent upon achieving the performance goals by the end of the performance period. The measure of a performance unit may, in the committee's discretion, be equal to the fair market value of a share of common stock. The performance goals will consist of specified annual levels of one or more performance criteria determined by the committee, such as:

- earnings per share,
- balance sheet measurements,
- cash return on assets,
- shareholder return, or
- return on capital.

Amendment and Termination of the Plan

The Infonautics board of directors may amend or terminate the plan at any time, except that the board of directors may not amend the plan without shareholder approval, to:

- increase the aggregate number of shares of common stock for which grants may be made,
- modify the requirements for eligibility for participation in the plan, or
- make any amendment that requires shareholder approval under section 162(m) of the Internal Revenue Code.

The plan will terminate on the date immediately preceding the tenth anniversary of its effective date, unless terminated earlier by the board of directors or extended by the board of directors with the approval of the shareholders.

Adjustment Provisions

Subject to the change of control provisions discussed under "Change of Control of Infonautics", if there is a change in the number or kind of shares of Infonautics common stock because of a stock dividend, recapitalization, stock split or similar transaction, the board of directors may appropriately adjust:

- the number of shares of common stock and the exercise price per share subject to the unexercised portion of any outstanding options or stock appreciation rights,

- the number of shares of common stock to be acquired pursuant to a grant which has not vested, and
- the number of shares of common stock for which grants may be made under the plan.

Change of Control of Infonautics

If there is a change of control of Infonautics, all options, restricted stock and stock appreciation rights will become fully vested. Infonautics will provide each participant with advance written notice before the change of control, if possible. Each participant will have the right, within 90 days after the notice, to exercise the options and stock appreciation rights in full. Any options not exercised on a timely basis will terminate unless they are exchanged for, or substituted with, options of the successor corporation. If a participant terminates employment with Infonautics or its successor within 12 months following a change of control, Infonautics or its successor will distribute to that participant a lump sum equal to the percentage of the full performance period during which the participant was in the employ or service of Infonautics or its successor and all amounts for the prior performance period if not already distributed.

A change of control is:

- a tender offer, merger or other transaction that results in any person or group, other than Infonautics, any subsidiary, any employee benefit plan or trust of Infonautics or any subsidiary, or Marvin I. Weinberger or any affiliate of Marvin I. Weinberger, becoming the owner of more than 40% of the common stock or the combined voting power of Infonautics' then outstanding securities,
- a liquidation or a sale of substantially all of Infonautics' assets,
- the individuals constituting the board of directors or individuals nominated or elected by them cease to constitute a majority of the board of directors, or
- Infonautics merges or consolidates with any other corporation other than a wholly owned subsidiary and is not the surviving corporation, or survives only as a subsidiary of another corporation.

The proposed merger with Tucows will be a change of control of Infonautics under the plan.

Section 162(m)

Under section 162(m) of the Internal Revenue Code, Infonautics may be precluded from claiming a federal income tax deduction for total remuneration in excess of \$1,000,000 paid to the chief executive officer or to any of the other four most highly compensated officers in any one year. Total remuneration would include amounts received upon the exercise of stock options granted under the plan and the value of shares received when the shares of restricted stock became transferable or at any other time when income is recognized. There is an exception for performance-based compensation, including amounts received upon the exercise of stock options under a plan approved by shareholders that meets the requirements of section 162(m). The plan is intended to allow grants of options and stock appreciation rights to be performance-based compensation. Grants of restricted stock and performance units generally will not qualify as performance-based compensation.

Options to purchase the following number of shares of common stock granted under the plan from establishment of the plan through April 1, 2001 are:

- David Van Riper Morris, president and chief executive officer, 638,200;
- Federica O'Brien, vice president and chief financial officer and treasurer, 39,100;
- Gerard J. Lewis, Jr., vice president and general counsel and secretary, 115,000;
- Cedarampattu Mohan, vice president and chief technical officer, 113,500;

- Executive officers as a group, 905,800;
- Non-employee directors as a group, 119,500; and
- All other employees as a group, 1,186,805.

New Plan Benefits

The following table provides information about the total number of options that will be issued in the merger on conversion of Tucows stock options. The position of the persons listed in the table is the position to be held upon completion of the merger. The dollar value of the options is based on the closing price for Infonautics common stock on the OTC Bulletin Board on July 17, 2001, which was \$0.82.

<u>Name and Position</u>	<u>Dollar Value</u>	<u>Number of Options</u>
Elliot Noss Chief executive officer and director	\$1,548,806	1,888,788
Michael Cooperman Chief financial officer	\$ 528,002	643,905
Scott Swedorski Founder, editor-in-chief	\$1,144,005	1,395,128
Graham Morris Chief operating officer	\$ 352,001	429,270
Supriyo Sen Chief technology officer	\$ 328,535	400,652
Executive officers as a group	\$3,901,349	4,757,743
Non-executive director group	\$ 164,267	200,326
Non-executive officer employee group	\$2,782,812	3,393,673

Federal Income Tax Consequences

The current federal income tax treatment of grants under the plan is generally described below. Local and state tax authorities may also tax incentive compensation awarded under the plan, and tax laws are subject to change. Participants are urged to consult with their personal tax advisors concerning the application of the general principles discussed below to their own situations and the application of state and local tax laws.

Non-Qualified Stock Options

There are no federal income tax consequences to a participant or to Infonautics upon the grant of a non-qualified stock option under the plan. Upon the exercise of a non-qualified stock option:

- a participant will recognize ordinary compensation income in an amount equal to the excess of the fair market value of the shares at the time of exercise over the exercise price of a non-qualified stock option, and
- Infonautics generally will be entitled to a corresponding federal income tax deduction.

Upon the sale of shares acquired by the exercise of a non-qualified stock option, a participant will have a capital gain or loss in an amount equal to the difference between the amount realized upon the sale and the participant's adjusted tax basis in the shares. The tax rate of capital gain or loss depends on the length of time the shares are held.

Incentive Stock Options

A participant who is granted an ISO will not recognize taxable income for purposes of the regular income tax, upon either the grant or exercise of the ISO. However, for purposes of the alternative

minimum tax imposed under the Internal Revenue Code, in the year in which an ISO is exercised, the amount by which the fair market value of the shares acquired upon exercise exceeds the exercise price will be treated as an item of adjustment and included in the computation of the recipient's alternative minimum taxable income.

If a participant disposes of shares acquired upon exercise of an ISO after two years from the date the ISO was granted and after one year from the date the shares were transferred to him upon exercise of the ISO:

- the participant will recognize capital gain or loss in the amount of the difference between the amount realized on the sale and the exercise price, or the participant's other tax basis in the shares, and
- Infonautics will not be entitled to any tax deduction because of the grant or exercise of the ISO.

As a general rule, if a participant disposes of the shares acquired upon exercise of an ISO before satisfying both holding period requirements, which is considered a disqualifying disposition:

- the participant's gain recognized on the disposition will be taxed as ordinary income based upon the difference between the fair market value of the shares on the date of exercise and the exercise price, and
- Infonautics will be entitled to a deduction in that amount.

The gain, if any, in excess of the amount recognized as ordinary income on a disqualifying disposition will be capital gain.

Restricted Stock Grants

A participant normally will not recognize taxable income upon receiving a restricted stock grant, and Infonautics will not be entitled to a deduction, until the stock is transferable by the participant or no longer subject to a substantial risk of forfeiture for federal tax purposes, whichever occurs earlier.

When the stock is either transferable or is no longer subject to a substantial risk of forfeiture, the participant will recognize ordinary compensation income in an amount equal to the fair market value of the shares at that time, less any amounts paid for the shares, and Infonautics will be entitled to a deduction in the same amount.

A participant may elect to recognize ordinary compensation income in the year the restricted stock grant is awarded in an amount equal to the fair market value of the shares subject to the restricted stock grant at that time, determined without regard to the restrictions, less any amounts paid for the shares. Infonautics generally will be entitled to a corresponding deduction in the same year. Any gain or loss recognized by the participant upon subsequent disposition of the shares will be capital gain or loss. If, after making the election, any shares subject to a restricted stock grant are forfeited, or if the market value declines during the restriction period, the participant will not be entitled to any tax deduction or tax refund.

Stock Appreciation Rights

There are no federal income tax consequences to a participant or to Infonautics upon the grant of a stock appreciation right under the plan.

Upon exercise:

- if the participant receives the appreciation inherent in the stock appreciation right in cash, the participant will recognize ordinary compensation income in an amount equal to the cash received;

- if the participant receives the appreciation in shares, the participant will recognize ordinary compensation income in an amount equal to the fair market value of the shares received; and
- Infonautics generally will be entitled to a corresponding federal income tax deduction.

Upon the sale of any shares acquired by the exercise of a stock appreciation right, a participant will have a capital gain or loss in an amount equal to the difference between the amount realized upon the sale and the participant's adjusted tax basis in the shares, that is, the amount of ordinary income recognized by the participant at the time of exercise of the stock appreciation right. The gain or loss will be long-term or short-term depending upon the length of time the shares were held.

Performance Units

There are no federal income tax consequences to a participant or to Infonautics upon the grant of performance units under the plan.

When the participant receives payment of the performance units:

- if the participant receives payment in cash, the participant will recognize ordinary compensation income in an amount equal to the cash received;
- if the participant receives payment in shares, the participant will recognize ordinary compensation income in an amount equal to the fair market value of the shares received; and
- Infonautics generally will be entitled to a corresponding federal income tax deduction.

Upon the sale of any shares acquired upon payment of the performance units, a participant will have a capital gain or loss in an amount equal to the difference between the amount realized upon the sale and the participant's adjusted tax basis in the shares, that is, the amount of ordinary income recognized by the participant at the time of the payment of the performance units. The gain or loss will be long-term or short-term depending upon the length of time the shares were held.

Tax Withholding

Infonautics has the right to deduct from all grants paid in cash or from other wages paid to an Infonautics employee, any federal, state or local taxes required by law to be withheld. The participant or other person receiving shares under the plan will be required to pay to Infonautics the amount of any taxes which Infonautics is required to withhold relating to the shares. A participant may elect to satisfy Infonautics' income tax withholding obligation by withholding shares received from the exercise of a stock option or a restricted stock grant. The shares withheld may not exceed the participant's marginal tax rate for federal, state and local tax liabilities.

New Plan Benefits

Because grants are made by the committee of the board of directors to those persons whom the committee determines in its discretion should receive grants, the benefits and amounts that may be received in the future by persons eligible to participate in the plan are not determinable now, except for future formula grants to be awarded to non-employee directors.

MANAGEMENT OF INFONAUTICS

<u>Name</u>	<u>Age</u>	<u>Position</u>
David Van Riper Morris	46	President and Chief Executive Officer and Director
Federica F. O'Brien	43	Vice President and Chief Financial Officer and Treasurer
Gerard J. Lewis, Jr	40	Vice President and General Counsel and Secretary
Cedarampattu Mohan	32	Vice President and Chief Technical Officer
Howard L. Morgan	55	Director
Brian Segal	57	Director
Lloyd N. Morrisett	71	Director
Israel J. Melman	81	Director

The biographies of the directors of Infonautics are found under "Election of Infonautics Directors—Nominees for Election" beginning on page 119.

Federica F. O'Brien. Ms. O'Brien joined Infonautics as director of finance in June 1996. Ms. O'Brien was appointed acting chief financial officer and treasurer in June 1998 and was named vice president and chief financial officer in September 1999. From 1994 to 1996, Ms. O'Brien was a business assurance manager with Coopers & Lybrand L.L.P., and she is a certified public accountant.

Gerard J. Lewis, Jr. Mr. Lewis was named vice president and general counsel and assistant secretary of Infonautics in February 1997. From May 1996 to February 1997, Mr. Lewis served as corporate counsel and director of business development. Before joining Infonautics in May 1996, Mr. Lewis was in private law practice with Reed Smith Shaw & McClay LLP in Philadelphia, Pennsylvania, where he practiced in the intellectual property and technology law and related corporate areas since 1992. Mr. Lewis was appointed secretary of Infonautics in September 1999.

Cedarampattu Mohan. Mr. Mohan was named vice president and chief technical officer in January 1999. From May 1997 to December 1998, Mr. Mohan served Infonautics as director of software product development. Mr. Mohan was hired by Infonautics in 1995 as a senior engineer. Before joining Infonautics, Mr. Mohan worked with First Data Corporation, Unisys Corporation and KPMG Peat Marwick in a variety of engineering, technical and leadership positions.

EXECUTIVE COMPENSATION

The following table provides information for the years ended December 31, 2000, 1999 and 1998 concerning compensation paid by Infonautics to:

- its chief executive officer; and
- its other most highly compensated executive officers earning \$100,000 or more who were serving as executive officers as of December 31, 2000.

Summary Compensation Table

Name and Principal Position	Year	Annual Compensation		Long Term Compensation Awards	
		Salary	Bonus	Securities Underlying Options	Other Compensation
David Van Riper Morris President and Chief Executive Officer	2000	\$176,041	—	—	—
	1999	\$175,000	—	200,000	—
	1998	\$166,667	—	75,000	—
Federica F. O'Brien Vice President and Chief Financial Officer, Treasurer	2000	\$140,000	\$140,000	—	—
	1999	\$121,970	\$ 5,000	20,000	—
	1998	\$ 86,500	—	13,500	—
Gerard J. Lewis, Jr. Vice President and General Counsel, Secretary	2000	\$141,160	\$ 42,000	—	—
	1999	\$127,256	—	45,000	—
	1998	\$108,986	—	25,000	—
Cedarampattu Mohan Vice President and Chief Technical Officer	2000	\$141,128	—	—	—
	1999	\$125,663	—	80,000	—
	1998	\$ 90,000	—	20,000	—

Option Grants in Last Fiscal Year

Infonautics did not grant any options to executive officers in 2000.

Aggregated Option Exercises in Last Fiscal Year and Fiscal Year-End Option Values

The following table summarizes option exercises during 2000 and the value of vested and unvested options for the executive officers named in the summary compensation table above at December 31, 2000. Year-end values are based upon a price of \$0.72 share, which was the closing market price of a share of Infonautics' common stock on December 31, 2000.

Name	Shares Acquired on Exercise	Value Realized	Number of Securities Underlying Unexercised Options at December 31, 2000		Value of Unexercised in the Money Options at December 31, 2000	
			Exercisable	Unexercisable	Exercisable	Unexercisable
David Van Riper Morris	—	—	638,200	0	0	—
Federica F. O'Brien	—	—	39,000	0	0	—
Gerard J. Lewis, Jr.	—	—	115,000	0	0	—
Cedarampattu S. Mohan	—	—	113,500	0	0	—

Other Plans and Long-Term Incentives

Infonautics does not sponsor any defined benefit or actuarial plans. Infonautics does not grant any long-term incentives, other than stock options, to its executives or other employees, except that on April 2, 2001, Infonautics offered each holder of its employee stock options a grant of restricted stock in exchange for all of their outstanding option grants. Under this offer employees could cancel their options and exchange them for restricted stock under a formula granting:

- 0.75 shares of restricted stock for options having an exercise price of less than \$3.00;
- 0.50 shares for options with an exercise price between \$3.00 and \$7.50; and
- 0.25 shares for options with an exercise price of \$7.50 or more.

Mr. Morris, Ms. O'Brien, Mr. Lewis and Mr. Mohan accepted the offer to exchange all or a portion of their options for restricted shares. After acceptance of the offer, the holdings of the executive officers named in the summary compensation table above of stock and options granted under Infonautics' amended and restated 1996 equity compensation plan are:

- Mr. Morris holds 241,300 restricted shares and options to purchase 100,000 shares of common stock;
- Ms. O'Brien holds 23,625 restricted shares;
- Mr. Lewis holds 12,500 restricted shares and options to purchase 90,000 shares of common stock; and
- Mr. Mohan holds 61,625 restricted shares.

Employment Agreements

As of September 5, 1995, Van Morris entered into an employment agreement with Infonautics that provided for an annual base salary of \$135,000. Mr. Morris' salary is subject to review at least annually and is \$200,000. His employment agreement was subsequently amended on November 4, 1996. At the time of execution of his employment agreement, Infonautics agreed to grant Mr. Morris an aggregate of 152,000 options to purchase common stock. Mr. Morris' employment can be terminated by either party at any time, with limited non-compete provisions applicable for up to one year after termination, as long as Infonautics continues salary payments during the non-competition period. However, if Infonautics terminates Mr. Morris because of his conviction of a felony or misdemeanor relating to his duties under the agreement, Infonautics must pay Mr. Morris as severance a lump sum equal to his annual salary within 30 days of termination. Infonautics must receive a general release from Mr. Morris before Infonautics is required to make this payment. Infonautics' obligations to pay Mr. Morris will terminate upon Mr. Morris obtaining other employment or other full-time consulting work.

Effective November 24, 1997, Infonautics entered into an employment agreement with Gerard J. Lewis, Jr. that provided for a base annual salary \$95,000. This salary is subject to review at least annually and is \$160,000. Mr. Lewis' employment can be terminated by either party at any time. Infonautics could terminate Mr. Lewis without cause, which is defined in the agreement to include misconduct, criminal acts, substance abuse, a failure to perform or observe any of the terms or provisions of the agreement or to comply fully with the lawful directives of Infonautics' board of directors. If Infonautics does so, it is required to pay as severance a lump sum equal to his annual salary within 30 days of termination. Before Infonautics is required to make this payment, Infonautics must receive a general release from Mr. Lewis, and Mr. Lewis must comply with any provisions of the employment agreement that expressly survive its termination.

Management Retention Plan

The Infonautics board of directors has adopted a management retention plan intended to act as an incentive to Infonautics' executive officers to remain with Infonautics while it seeks strategic alternatives and to address the fact that two of Infonautics' executive officers did not have employment or severance agreements with Infonautics. David Van Riper Morris, Federica F. O'Brien, Cedarampattu S. Mohan and Gerard J. Lewis, Jr. are the participants in the plan. Under the plan an eligible person is entitled to receive a one-time only payment when the eligible person leaves Infonautics' employment if the eligible person is employed on the latest of the dates specified in the table below:

<u>If employed on:</u>	<u>Payment shall be equal to:</u>
January 31, 2001	One month of then-current annual salary for the eligible person
February 28, 2001	Three months of then-current annual salary for the eligible person
March 31, 2001	Six months of then-current annual salary for the eligible person
April 30, 2001	Ten months of then-current annual salary for the eligible person

Any eligible person who is employed by Infonautics upon the final closing of a strategic transaction involving Infonautics occurring after May 31, 2001 is entitled to receive a one-time only payment equal to fifteen months of the eligible person's then-current annual salary. An eligible person is not entitled to receive a retention payment that is more than fifteen months of then-current annual salary. Eligible persons who are terminated under employment or severance agreements and who are entitled to receive severance payments under those agreements will receive the greater of the severance amount to be paid under those agreements or the applicable retention payment.

Under the plan, if the merger is completed and all of the eligible persons are employed on the date of completion, the eligible persons will receive the following amounts:

<u>Name</u>	<u>Amount</u>
David Van Riper Morris	\$250,000
Federica F. O'Brien	\$200,000
Cedarampattu S. Mohan	\$200,000
Gerard J. Lewis, Jr.	\$200,000

No officer is entitled to payment under both the retention plan and any applicable employment or severance agreement. For Mr. Morris and Mr. Lewis, both of whom have employment agreements with Infonautics, payments under the retention plan could be less than severance payments under their employment agreements.

Infonautics has entered into an agreement with Afilius LLC under which Infonautics has permitted Mr. Mohan to perform consulting services for Afilius. Infonautics will receive a consulting fee from Afilius and will be reimbursed for expenses relating to Mr. Mohan's consulting services. Mr. Mohan will continue to be employed by Infonautics and will receive his full retention payment under the management retention plan if he is an Infonautics employee on the date the merger is completed.

SECURITY OWNERSHIP OF PRINCIPAL BENEFICIAL OWNERS AND MANAGEMENT

Infonautics

The following table includes information as of April 2, 2001 about the ownership of Infonautics common stock

- by each person known by Infonautics to be the beneficial owner of more than five percent of Infonautics' outstanding common stock;
- by each director of Infonautics;
- by each executive officer named in the summary compensation table on page 130; and
- by all named executive officers and directors of Infonautics as a group.

The nature of each shareholder's ownership consists of sole voting and investment power unless otherwise indicated. The number of shares indicated includes shares issuable upon the exercise of outstanding stock options held by each individual or group if the options are exercisable within 60 days of April 2, 2001.

The percentage for each individual or group is based on the aggregate of the shares outstanding as of April 2, 2001, which was 12,945,406 shares, and all shares issuable upon the exercise of outstanding stock options held by the individual or group if the options are exercisable within 60 days of April 2, 2001.

Name and Address	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Marvin I. Weinberger(1) Sabine and Essex Avenues Narberth, PA 19072	1,155,637	8.9%
Emerald Advisors, Inc.(2) P.O. Box 10666 Lancaster, PA 17605	940,200	7.3%
Officers and Directors		
David Van Riper Morris(3)	375,400	2.9%
Howard L. Morgan(4)	250,000	1.9%
Gerard J. Lewis, Jr.(5)	102,650	Less than 1%
Cedarampattu Mohan(6)	64,955	Less than 1%
Israel J. Melman(7)	104,422	Less than 1%
Lloyd N. Morrisett(8)	52,000	Less than 1%
Federica O'Brien(9)	23,625	Less than 1%
Brian Segal(10)	15,000	Less than 1%
All named executive officers and directors as a group—8 persons	998,552	7.7%

(1) Represents:

- 1,109,693 shares of common stock held directly by Mr. Weinberger;
- 17,400 shares of common stock under The Marvin Weinberger GST Trust dated January 31, 1996. Fran Solow Weinberger, Mr. Weinberger's wife, and Howard L. Morgan are trustees under this trust and have shared voting and investment power over the shares held by the trust. Mr. Weinberger disclaims beneficial ownership of these shares.

- 28,544 shares of common stock held by The Danna Company, an Ohio corporation, of which Mr. Weinberger is the president and a director. Mr. Weinberger has shared voting and investment power over these shares and disclaims beneficial ownership of these shares.
- (2) Represents 940,200 shares of common stock for which the owner has either sole voting and investment power or shared voting power and sole investment power. All these shares are owned for investment advisory and investment company clients of the owner. Kenneth G. Mertz II, president and chief investment officer of Emerald Advisors, Inc., exercises voting and dispositive power over these shares.
 - (3) Represents 34,100 shares of common stock and 241,300 restricted shares of common stock and options to purchase 100,000 shares of common stock.
 - (4) Represents:
 - 125,000 shares of common stock held directly by Dr. Morgan,
 - options to purchase up to 119,000 shares of common stock held by Dr. Morgan, and
 - 6,000 shares of common stock held under three trusts for the benefit of Dr. Morgan's children. Eleanor Morgan, Dr. Morgan's wife, and Beverly Budin are trustees of all these trusts and have shared voting and investment power over the shares held by the trusts. Dr. Morgan disclaims beneficial ownership of these shares.

Excludes 160,000 shares of common stock under The Marvin Weinberger 1996 Trust Agreement dated January 31, 1996 and 17,400 shares of common stock under The Marvin Weinberger GST Trust dated January 31, 1996. Fran Solow Weinberger and Dr. Morgan are trustees under both of these trusts and have shared voting and investment power over the shares held by the trusts. Dr. Morgan disclaims beneficial ownership of these shares.
 - (5) Represents 150 shares of common stock, 12,500 restricted shares of common stock and options to purchase 90,000 shares of common stock.
 - (6) Represents 3,330 shares of common stock and 61,625 restricted shares of common stock.
 - (7) Represents:
 - 84,670 shares of common stock held directly by Mr. Melman,
 - options to purchase 12,500 shares of common stock held by Mr. Melman, and
 - 7,252 shares of common stock held by the Melman Trust, over which Mr. Melman has shared voting and investment power.
 - (8) Represents 22,000 shares of common stock held jointly by Dr. Morrisett and his wife, 10,000 shares of common stock held directly by Dr. Morrisett, and options to purchase 20,000 shares of common stock owned by Dr. Morrisett.
 - (9) Represents 23,625 restricted shares of common stock.
 - (10) Represents options to purchase 15,000 shares of common stock.

Tucows

The following table includes information as of April 2, 2001 about the ownership of Tucows capital stock by:

- each person known by Tucows to be the beneficial owner of more than five percent of Tucows' outstanding capital stock;

- each director of Tucows;
- the chief executive officer of Tucows and each of Tucows' four other most highly compensated executive officers; and
- all executive officers and directors of Tucows as a group.

Beneficial ownership is determined under the rules of the Securities and Exchange Commission. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to options and warrants held by that person that are exercisable now or are exercisable within 60 days of April 2, 2001 are considered to be outstanding. Except as otherwise noted, Tucows believes that the persons named in the table have sole voting and investment power over the shares of Tucows capital stock.

<u>Name and Address</u>	<u>Number of Shares Beneficially Owned</u>	<u>Percentage of Outstanding Shares</u>
STI Ventures N.V.(1) Hullenbergweg 379 New Line 1101 CR, Amsterdam Zuid-Oost, The Netherlands	12,265,527	29.9%
Parman Holding Corp.(2) c/o ONYX Financial Advisors SA 25, Voie Des Traz Chambre 1101 Port Franc, Batiment Aerogare Fret 1211 Geneva 5, Switzerland	6,672,280	16.3%
Hapoalim Nechasim (Menayot) Ltd.(3) 50 Rothschild Boulevard Tel Aviv, Israel	3,912,696	9.5%
Eurocom Communications Ltd(4) 2 Dov Friedman Street Ramot-Gan, Israel	3,912,696	9.5%
Yossi Vardi(5)(7) 12 Shamir Street Tel Aviv, Israel	2,302,624	5.6%
Redel Inc.(6)(7) c/o ONYX Financial Advisors SA 25, Voie Des Traz Chambre 1101 Port Franc, Batiment Aerogare Fret 1211 Geneva 5, Switzerland	2,079,038	5.1%
<u>Officers and Directors</u>		
Elliot Noss(8)	115,980	1.9%
Michael Cooperman(9)	241,540	Less than 1%
Scott Swedorski(10)	632,790	1.5%
Graham Morris(11)	26,357	Less than 1%
Supriyo Sen	—	—
Dennis Bennie(12)	1,956,348	4.8%
Erez Gissin(13)	3,912,696	9.5%
Stanley Stern(14)	46,509	Less than 1%

<u>Name and Address</u>	<u>Number of Shares Beneficially Owned</u>	<u>Percentage of Outstanding Shares</u>
Colin Campbell(15)	1,979,916	4.8%
Robert F. Young(16)	131,787	Less than 1%
All current executive officers and directors as a group—10 persons	9,703,923	23.7%

* Indicates beneficial ownership of less than one percent of the total outstanding common stock.

- (1) Represents 12,265,427 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger. Beny Steinmetz and Balda Foundation, have voting and dispositive power over these shares.
- (2) Represents 6,672,280 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger and includes 1,781,042 shares held on behalf of investors in which Parman disclaims having any beneficial interest. Vessna Foundation has voting and dispositive power over the remainder of shares.
- (3) Represents 3,912,696 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger. Yacov Elinav, Issac Bahar, Yossi Dauber, Yoram Vaisbram and Ofer Levi, the directors of Hapoalim Nechasim (Menayot) Ltd., have voting and dispositive power over these shares.
- (4) Represents 3,912,696 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger. Shaul Elavitz holds voting and dispositive power over these shares.
- (5) Represents 509,293 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger.
- (6) Represents 285,707 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger. Vessna Foundation has voting and dispositive power over these shares.
- (7) Mr. Vardi and Redel Inc. each holds an exercisable option to purchase 1,793,331 shares of preferred stock that are convertible into the same number of shares of common stock. These shares are included in the number of shares shown in the table for Mr. Vardi and Redel Inc. It is anticipated that these options will be canceled upon completion of the merger.

It is also anticipated that each Tucows stockholder will enter into an agreement with Mr. Vardi and Redel Inc. under which each Tucows stockholder will deposit into escrow a pro rata portion of the number of shares of Infonautics common stock that would be issued if the options held by Mr. Vardi and Redel Inc. were exercised before completion of the merger. Mr. Vardi and Redel Inc. will have the right to pay into escrow for the benefit of the former Tucows stockholders the amount that would have been required to exercise the options and to receive, pro rata from each former Tucows stockholder, the number of shares of Infonautics common stock attributable to the price paid. If Mr. Vardi and Redel Inc. do not make these payments for the entire amount of shares that were subject to the options by the end of the exercise period, the remaining shares held in escrow will be distributed pro rata among the former Tucows stockholders.

- (8) Includes 90,601 shares of common stock, 100,379 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger and options to purchase 585,000 shares of common stock.

- (9) Includes 63,415 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger and options to purchase 178,125 shares of common stock.
- (10) Includes 100,201 shares of common stock, 45,083 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger and options to purchase 487,506 shares of common stock.
- (11) Represents 26,357 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger.
- (12) Represents 1,956,348 shares of shares of preferred stock that are convertible into common stock, that are expected to be converted into common stock before completion of the merger and that are beneficially owned by XDL U.S. Holdings Inc., of which Mr. Bennie is an officer, director and beneficial owner.
- (13) Represents 3,912,696 shares of preferred stock beneficially owned by Eurocom Communications Ltd., as described in note (4) above, of which Mr. Gissin is an officer and a shareholder. Mr. Gissin disclaims beneficial ownership of these shares except for his pecuniary interest in them.
- (14) Represents 46,509 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger.
- (15) Includes:
- 783,857 shares of common stock and 35,192 shares of preferred stock that are convertible into common stock, that are expected to be converted into common stock before completion of the merger and that are held directly by Mr. Campbell;
 - 914,351 shares of common stock and 41,049 shares of preferred stock that are convertible into common stock, that are expected to be converted into common stock before completion of the merger and that are held by William Campbell, Mr. Campbell's brother; and
 - 196,639 shares of common stock and 8,828 shares of preferred stock that are convertible into common stock, that are expected to be converted into common stock before completion of the merger and that are held by Lillian Campbell, Mr. Campbell's mother.
- (16) Represents 131,787 shares of preferred stock that are convertible into common stock and that are expected to be converted into common stock before completion of the merger.

INFORMATION CONCERNING INDEPENDENT ACCOUNTANTS

PricewaterhouseCoopers LLP has served as Infonautics' independent accountants since Infonautics was founded in November 1992. Infonautics board of directors, based upon a recommendation of the audit committee, has selected PricewaterhouseCoopers LLP to continue as Infonautics' independent accountants in the coming year. A representative of PricewaterhouseCoopers LLP is expected to attend the annual meeting. This representative will have an opportunity to make a statement, if he desires, and will be available to respond to appropriate questions of shareholders.

Audit Fees. The aggregate audit fees billed to Infonautics by PricewaterhouseCoopers LLP during the fiscal year ended December 31, 2000, for review of Infonautics' annual financial statements and interim financial statements totaled \$66,095.

Financial Information Systems Design and Implementation Fees. During the fiscal year ended December 31, 2000, Infonautics engaged PricewaterhouseCoopers LLP to provide information technology consulting advice. The aggregate fees billed to Infonautics by PricewaterhouseCoopers LLP for this advice totaled \$6,300.

All Other Fees. The aggregate fees billed to Infonautics by PricewaterhouseCoopers LLP during the fiscal year ended December 31, 2000 for professional services other than audit services and information technology consulting totaled \$300,725.

REPORT OF INFONAUTICS AUDIT COMMITTEE

The Infonautics audit committee report that follows is not incorporated by reference into any filing made by Infonautics under the Securities Act of 1933 or the Securities Exchange Act of 1934, despite any general statement contained in any filing incorporating this joint proxy statement/prospectus by reference, unless Infonautics incorporates the report by specific reference.

The audit committee of the Infonautics board of directors is composed of three independent directors as defined in the Marketplace Rules of The Nasdaq Stock Market, and it operates under a written charter adopted by the Infonautics board of directors, a copy of which is attached to this joint proxy statement/prospectus as annex 7. The audit committee recommends to the board of directors the selection of Infonautics independent accountants.

Management is responsible for Infonautics' internal controls and the financial reporting process. Infonautics' independent accountants are responsible for performing an independent audit of Infonautics' consolidated financial statements according to generally accepted auditing standards and to issue a report. The audit committee's responsibility is to monitor and oversee these processes.

In this context, the Infonautics audit committee has met and held discussions with management and the independent accountants. Management represented to the audit committee that Infonautics' consolidated financial statements were prepared according to generally accepted accounting principles, and the audit committee has reviewed and discussed Infonautics' consolidated financial statements with management and the independent accountants. The Infonautics audit committee discussed with Infonautics' independent accountants matters required to be discussed by Statement on Auditing Standards No. 61, Communication with Audit Committees. In the year 2001, the audit committee has met at least four times with the independent accountants, and Infonautics management has been excluded from all or part of each meeting.

Infonautics' independent accountants also provided to the Infonautics audit committee the written disclosures required by Independence Standards Board Standard No. 1, Independence Discussions with Audit Committees, and the audit committee discussed with the independent accountants that firm's independence. In so doing, the Infonautics audit committee considered whether the provision of non-audit services to Infonautics was compatible with maintaining their independence. The Infonautics

audit committee also reviewed the amount of fees paid to PricewaterhouseCoopers LLP for both audit and non-audit services.

Based upon the Infonautics audit committee's discussion with Infonautics' management and independent accountants and its review of the representation of management and the report of the independent accountants to the audit committee, the Infonautics audit committee recommended that the Infonautics board of directors include the audited consolidated financial statements in Infonautics annual report on Form 10-K for the year ended December 31, 2000 filed with the Securities and Exchange Commission.

Lloyd N. Morrisett
Howard L. Morgan
Brian Segal

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934 requires Infonautics' directors and executive officers, and persons who own more than ten percent of a registered class of Infonautics' equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of common stock and other equity securities of Infonautics. Officers, directors and ten-percent shareholders are required by SEC regulation to furnish Infonautics with copies of all section 16(a) forms they file. Based solely on its review of the copies of reports received by Infonautics and written representations from reporting persons that no Forms 5 were required for those persons, Infonautics believes that during the year ended December 31, 2000, all filing requirements applicable to its officers, directors and ten-percent shareholders were satisfied.

LEGAL MATTERS

The validity of the shares of Infonautics stock offered by this joint proxy statement/prospectus will be passed upon for Infonautics by Morgan, Lewis & Bockius LLP.

Skadden, Arps, Slate, Meagher & Flom, LLP, counsel for Tucows, will issue a tax opinion to Tucows about the federal income tax consequences of the merger. A partner of Skadden, Arps beneficially owns 22,497 shares of preferred stock of Tucows.

EXPERTS

The financial statements incorporated in this joint proxy/prospectus by reference to the annual report of Infonautics, Inc. on Form 10-K for the year ended December 31, 2000 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

The financial statements of bigchalk.com, inc. as of December 31, 2000 and 1999 and for the three years in the period ended December 31, 2000 included in Infonautics' annual report on Form 10-K for the year ended December 31, 2000 accompanying this joint proxy statement/prospectus and incorporated by reference in this joint proxy statement/prospectus have been so included in reliance on the report of KPMG LLP, independent accountants, and upon the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of Tucows Inc. as of December 31, 1999 and 2000 and for the period from May 4, 1999 (commencement of operations) to December 31, 1999 and the year ended December 31, 2000 and the financial statements of Tucows division of Tucows Interactive Limited as of December 31, 1998 and May 3, 1999 and for the year ended December 31, 1998 and the period from January 1, 1999 to May 3, 1999 included in this joint proxy statement/prospectus have been so included

in reliance on the reports of KPMG LLP, independent accountants, and upon the authority of said firm as experts in auditing and accounting.

OTHER MATTERS

Neither Infonautics nor Tucows intends to bring any matters other than those described in this joint proxy statement/prospectus before its meeting. Neither Infonautics nor Tucows has any knowledge of any other matters that may be introduced by other persons. If any other matters do properly come before either company's meeting or any adjournment or postponement of either company's meeting, the persons named in the enclosed proxy forms of Infonautics or Tucows will vote the proxies in keeping with their judgment on the matters presented.

SHAREHOLDER PROPOSALS FOR THE INFONAUTICS 2002 ANNUAL MEETING

Shareholders may submit proposals on matters appropriate for shareholder action at annual meetings under regulations adopted by the SEC. To be considered for inclusion in the proxy statement and form of proxy relating to the 2002 annual meeting, shareholder proposals must be received by Infonautics no later than December 31, 2001. Proposals should be directed to the attention of the secretary of Infonautics.

WHERE YOU CAN FIND MORE INFORMATION

Infonautics files reports, proxy statements and other information with the SEC. Copies of these reports, proxy statements and other information may be inspected and copied at the public reference facilities maintained by the SEC at:

Judiciary Plaza
Room 1024
450 Fifth Street, N.W.
Washington, D.C. 20549

Citicorp Center
500 West Madison Street
Suite 1400
Chicago, Illinois 60661

Seven World Trade Center
13th Floor
New York, New York 10048

Copies of these materials can also be obtained by mail for a fee from the public reference room of the SEC, 450 Fifth Street, N.W., Washington, D.C. 20549 or by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy statements and other information about Infonautics. The address of the SEC website is <http://www.sec.gov>.

Infonautics has filed a registration statement on Form S-4 under the Securities Act with the SEC concerning the Infonautics common stock to be issued in the merger. This joint proxy statement/prospectus constitutes the prospectus of Infonautics filed as part of the registration statement. This joint proxy statement/prospectus does not contain all of the information included in the registration statement because parts of the registration statement are omitted under the rules and regulations of the SEC. The registration statement and its exhibits are available for inspection and copying as described above.

If you are an Infonautics shareholder and you have any questions about the merger or the other proposals for Infonautics shareholders, please call Gerard J. Lewis, Jr., vice president and general counsel of Infonautics, at (610) 971-8840 or e-mail him at glewis@infonautics.com. If you are a Tucows stockholder and you have any questions about the merger, please call Brenda Lazare, general counsel of Tucows at (416) 538-5488.

This joint proxy statement/prospectus does not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this joint proxy statement/prospectus, or the solicitation of a proxy, in any jurisdiction to or from any person to whom or from whom it is unlawful to make the offer, solicitation of an offer or proxy solicitation in that jurisdiction. Neither the delivery of this joint

proxy statement/prospectus nor any distribution of securities under this joint proxy statement/prospectus shall, under any circumstances, create any implication that there has been no change in the information included or incorporated into this joint proxy statement/prospectus by reference or in the affairs of Infonautics or Tucows since the date of this joint proxy statement/prospectus. The information contained in this joint proxy statement/prospectus about Infonautics was provided by Infonautics, and the information contained in this joint proxy statement/prospectus about Tucows was provided by Tucows.

INCORPORATION OF DOCUMENTS BY REFERENCE

The Securities and Exchange Commission allows Infonautics to incorporate by reference the information Infonautics files with the SEC, which means that Infonautics can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this joint proxy statement/prospectus, and later information filed with the Securities and Exchange Commission will update and supersede this information. This joint proxy statement/prospectus incorporates by reference the documents described below that Infonautics has filed with the Securities and Exchange Commission. The documents contain important information about Infonautics and its finances.

Infonautics incorporates the following documents by reference:

- Annual report on Form 10-K for the year ended December 31, 2000, filed with the Securities and Exchange Commission on April 3, 2001, which accompanies this joint proxy statement/prospectus;
- Annual report on Form 10-K/A, filed with the Securities and Exchange Commission on April 30, 2001;
- Quarterly report on Form 10-Q for the quarter ended March 31, 2001, filed with the Securities and Exchange Commission on May 15, 2001, which accompanies this joint proxy statement/prospectus;
- Current report on Form 8-K dated January 3, 2001, as filed with the Securities and Exchange Commission on January 8, 2001;
- Current report on Form 8-K dated February 21, 2001, as filed with the Securities and Exchange Commission on March 6, 2001;
- Current report on Form 8-K dated March 27, 2001, as filed with the Securities and Exchange Commission on April 11, 2001; and
- Current report on Form 8-K dated June 21, 2001, as filed with the Securities and Exchange Commission on June 21, 2001.

Infonautics is also incorporating by reference additional documents that it files with the Securities and Exchange Commission under section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 between the date of this joint proxy statement/prospectus and the date on which the merger becomes effective.

STATEMENTS ABOUT FORWARD-LOOKING INFORMATION

The SEC encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This joint proxy statement/prospectus contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be made directly in this joint proxy statement/prospectus, and they may also be made a part of this joint proxy statement/prospectus by

reference to other documents that accompany or are attached as annexes to this joint proxy statement/prospectus. These statements may include statements about the period following completion of the merger.

Words such as anticipate, estimate, expects, projects, intends, plans, believes and words and terms of similar substance used in any discussion of future operating or financial performance of Infonautics or the merger of Infonautics and Tucows, identify forward-looking statements. All forward-looking statements are management's present expectations of future events and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. The risks related to the businesses of Infonautics and Tucows and to the merger discussed or referenced under "Risk Factors," could cause actual results to differ materially from those described in the forward-looking statements.

Shareholders of Infonautics and stockholders of Tucows are cautioned not to place undue reliance on the forward-looking statements, which speak only of the date of this joint proxy statement/prospectus or the date of the document that accompanies or is attached as an annex to this joint proxy statement/prospectus. Neither Infonautics nor Tucows is under any obligation, and each expressly disclaims any obligation, to update or alter any forward-looking statements.

All subsequent forward-looking statements attributable to Infonautics or Tucows or any person acting on their behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

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Financial Statements
(Dollar amounts in U.S. dollars)

TUCOWS DIVISION
OF
TUCOWS INTERACTIVE LIMITED

Period from January 1, 1999
to May 3, 1999 and
year ended December 31, 1998

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of Tucows Inc.

We have audited the accompanying balance sheets of the Tucows Division of Tucows Interactive Limited as of December 31, 1998 and May 3, 1999 and the related statements of operations, comprehensive income (loss) and cash flows for the year ended December 31, 1998 and the period from January 1, 1999 to May 3, 1999. These financial statements are the responsibility of the Division's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Division as of December 31, 1998 and May 3, 1999 and the results of its operations and its cash flows for the year ended December 31, 1998 and the period from January 1, 1999 to May 3, 1999 in conformity with generally accepted accounting principles in the United States of America.

/s/ KPMG LLP

Chartered Accountants

Toronto, Canada

June 9, 2000

**Tucows Division of
Tucows Interactive Limited**

Balance Sheets
(Dollar amounts in U.S. dollars)

	<u>December 31, 1998</u>	<u>May 3, 1999</u>
Assets		
Current assets:		
Cash and cash equivalents	\$127,625	\$100,077
Accounts receivable, net of allowance for doubtful accounts of nil	314,406	328,020
Prepaid expenses and deposits	<u>14,081</u>	<u>19,425</u>
Total current assets	456,112	447,522
Property and equipment (note 2)	<u>202,911</u>	<u>267,971</u>
Total assets	<u>\$659,023</u>	<u>\$715,493</u>
Liabilities and Divisional Equity (Deficiency)		
Current liabilities:		
Accounts payable and accrued liabilities	\$165,104	\$515,324
Deferred revenue	148,971	211,164
Current portion of obligations under capital lease (note 3)	<u>20,167</u>	<u>21,833</u>
Total current liabilities	334,242	748,321
Deferred revenue, net of current portion	66,089	97,069
Obligations under capital lease (note 3)	28,684	22,727
Divisional equity (deficiency) (note 4)	<u>230,008</u>	<u>(152,624)</u>
Total liabilities and divisional equity (deficiency)	<u>\$659,023</u>	<u>\$715,493</u>

See accompanying notes to financial statements.

**Tucows Division of
Tucows Interactive Limited**
Statements of Operations
(Dollar amounts in U.S. dollars)

	<u>Year ended December 31, 1998</u>	<u>Period from January 1, 1999 to May 3, 1999</u>
Net revenues	\$2,271,493	\$ 746,258
Cost of revenues	97,846	57,868
Gross profit	2,173,647	688,390
Operating expenses:		
Sales and marketing	695,866	379,484
Product development	494,223	289,877
General and administrative	691,458	507,736
Amortization	169,050	53,373
Total operating expenses	<u>2,050,597</u>	<u>1,230,470</u>
Income (loss) from operations	123,050	(542,080)
Interest expense	(4,815)	—
Income (loss) before provision for income taxes	118,235	(542,080)
Provision for income taxes (recovery) (note 5)	55,000	(63,000)
Net income (loss)	<u>\$ 63,235</u>	<u>\$ (479,080)</u>

**Tucows Division of
Tucows Interactive Limited**
Statements of Comprehensive Income (Loss)
(Dollar amounts in U.S. dollars)

	<u>Year ended December 31, 1998</u>	<u>Period from January 1, 1999 to May 3, 1999</u>
Net income (loss)	\$63,235	\$(479,080)
Change in cumulative translation adjustment	(984)	4,101
Comprehensive income (loss)	<u>\$62,251</u>	<u>\$(474,979)</u>

See accompanying notes to financial statements.

**Tucows Division of
Tucows Interactive Limited**

Statements of Cash Flows
(Dollar amounts in U.S. dollars)

	<u>Year ended December 31, 1998</u>	<u>Period from January 1, 1999 to May 3, 1999</u>
Cash provided by (used in):		
Operating activities:		
Net income (loss)	\$ 63,235	\$(479,080)
Amortization of property and equipment	169,050	53,373
Change in non-cash operating working capital:		
Accounts receivable	(264,731)	(8,009)
Prepaid expenses and deposits	(9,820)	(5,093)
Accounts payable and accrued liabilities	73,011	347,277
Deferred revenue	155,601	89,339
Net cash provided by (used in) operating activities	186,346	(2,193)
Financing activities:		
Capital lease repayments	(26,659)	(5,161)
Advances from head office	181,453	92,347
Cash provided by financing activities	154,794	87,186
Investing activities:		
Purchase of property and equipment	(216,963)	(114,816)
Cash used in investing activities	(216,963)	(114,816)
Effect of exchange rate changes on cash and cash equivalents	231	2,275
Increase (decrease) in cash and cash equivalents	124,408	(27,548)
Cash, beginning of period	3,217	127,625
Cash, end of period	<u>\$ 127,625</u>	<u>\$ 100,077</u>

See accompanying notes to financial statements.

**TUCOWS DIVISION OF
TUCOWS INTERACTIVE LIMITED**

**Notes to Financial Statements
(Dollar amounts in U.S. dollars)**

These special purpose financial statements have been prepared with respect to the sale of certain of the business assets of the Tucows Division of Tucows Interactive Limited to Tucows Inc.

1. Significant accounting policies:

(a) Basis of presentation

These special purpose financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America.

The accompanying financial statements present the financial position and results of operations and cash flows of the Division as if such division had operated as a separate corporate entity unaffiliated with Tucows Interactive Limited. Accordingly, the results of operations reflect expenses common to all divisions of Tucows Interactive Limited allocated to the Division using a proportional cost allocation method. It is management's assertion that the proportional cost allocation method used is a practical and reasonable method of allocation of common expenses to all divisions of Tucows Interactive Limited. In addition, income taxes have been accounted for as if the Division was a separate taxable entity.

(b) Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

(c) Cash and cash equivalents

All highly liquid investments, with an original term to maturity of three months or less at the date of acquisition, are classified as cash equivalents.

(d) Property and equipment

Property and equipment are stated at cost net of accumulated amortization. Amortization is provided so as to amortize the cost of depreciable assets over their estimated useful lives at the following rates:

Asset	Method	Rate
Computer equipment	Declining balance	30%
Furniture and fixtures	Declining balance	20%
Computer software	Straight line	50%
Leasehold improvements	Straight line	Over term of lease

(e) Revenue recognition

The Division's revenues are derived from Internet domain name registration fees, advertising and the online sale of products. Amounts received in advance of meeting the revenue recognition criteria below are recorded as deferred revenue.

**TUCOWS DIVISION OF
TUCOWS INTERACTIVE LIMITED**
Notes to Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

1. Significant accounting policies: (Continued)

Registration fees charged to end-users for domain name registration services are recognized on a straight-line basis over the life of the registration period, which is typically one or two years. End-users typically pay for domain registrations with credit cards. A provision for chargebacks from credit card carriers is included in accounts payable and accrued liabilities and deducted from gross registration fees in determining net revenues. Commissions earned by resellers on the sale of domain name registrations are deducted from gross registration fees in arriving at net revenues.

Advertising revenues are primarily derived from short-term advertising agreements in which the Division typically guarantees a minimum number of impressions or pages to be delivered over a specified period of time. Advertising revenues are recognized ratably over the period in which the advertisement is presented. To the extent that minimum guaranteed impressions are not met, the Division defers recognition of the corresponding revenues until the guaranteed impressions are achieved.

The Division has agreements with vendors to digitally distribute their products over the Division's delivery network. Net revenue is derived by deducting royalties due to vendors from amounts billed to end-users, who typically pay for online product purchases with credit cards. Net revenue is recorded upon completion of the purchase and delivery of the product to the customer. To date, these revenues have not been significant.

(f) Translation of foreign currency transactions

Assets and liabilities of the Division have been translated from Canadian dollars (which is considered to be the measurement currency) into United States dollars (which is the reporting currency) at the exchange rate prevailing at the balance sheet date. Revenue and expenses have been translated at the average rate for the period. Exchange gains and losses resulting from the translation into the reporting currency have been included as a separate component of Divisional equity.

(g) Product and development costs:

Product development costs are expensed as incurred. The Division accounts for the costs of computer software developed or obtained for internal use in accordance with Statement of Position ("SOP") 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use". Under this SOP, costs that are incurred in the preliminary stage of software development are expensed as incurred. Costs incurred during the application and development stage are capitalized and generally include external direct costs of materials and services consumed in the development and payroll and payroll-related costs for employees who are directly associated with the development project. Costs incurred in the post implementation and operation stage are expensed as incurred. For the period ended May 3, 1999, the application of SOP 98-1 did not have a material impact on the financial statements. If the Division had adopted the provisions of SOP 98-1 for the year ended December 31, 1998, capital assets, net income and divisional equity would have increased by \$28,201. The capitalized costs of computer software developed for internal use are amortized on a straight-line basis over two years.

**TUCOWS DIVISION OF
TUCOWS INTERACTIVE LIMITED**
Notes to Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

1. Significant accounting policies: (Continued)

(h) Income taxes

The Division's results have been included in the Canadian federal and provincial income tax returns of Tucows Interactive Limited. The income tax provision (recovery) included in the accompanying statements of operations is presented on an "as-if separate return" basis.

Under the asset and liability method of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" ("SFAS 109"), deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under SFAS 109, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in the statement of income in the period that includes the enactment date. A valuation allowance is recorded if it is not "more likely than not" that some portion or all of a deferred tax asset will not be recognized.

(i) Concentration of credit risk

Financial instruments that potentially subject the Division to concentrations of credit risk consist primarily of cash equivalents and accounts receivable. Cash equivalents consist of deposits with, or guaranteed, by major commercial banks, the maturities of which are three months or less from the date of purchase. With respect to accounts receivable, management performs periodic credit evaluations of the financial condition of its customers and typically does not require collateral from them. Management assesses the need for allowances for potential credit losses by considering the credit risk of specific customers, historical trends and other information.

(j) Fair values of financial assets and financial liabilities

The carrying values of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities and obligations under capital lease approximate their fair values due to the relatively short periods to maturity of the instruments.

**TUCOWS DIVISION OF
TUCOWS INTERACTIVE LIMITED**
Notes to Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

2. Property and equipment:

Property and equipment consist of the following:

	December 31, 1998	May 3, 1999
Computer equipment	\$113,990	\$212,158
Computer software	212,064	223,319
Furniture and fixtures	21,947	26,046
Leasehold improvements	6,281	7,600
Equipment under capital lease	67,681	71,273
	<u>421,963</u>	<u>540,396</u>
Less accumulated amortization	219,052	272,425
	<u>\$202,911</u>	<u>\$267,971</u>

3. Capital lease obligations:

The Division has entered into a lease agreement for computer equipment at an imputed interest rate of 8%. Future minimum lease payments under the lease are as follows:

Year ending May 3,	
2000	\$24,715
2001	21,539
	<u>46,254</u>
Less amount representing interest	1,694
	<u>44,560</u>
Less current portion	21,833
	<u>\$22,727</u>

4. Divisional equity (deficiency):

The Division maintains its own cash accounts which are funded either from operations or through financing received from the head office of Tucows Interactive Limited. No provision

**TUCOWS DIVISION OF
TUCOWS INTERACTIVE LIMITED**
Notes to Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

4. Divisional equity (deficiency): (Continued)

for interest expense has been made for financing provided by Tucows Interactive Limited. The activity in the divisional equity (deficiency) can be summarized as follows:

	Year ended December 31, 1998	Period from January 1, 1999 to May 3, 1999
Division equity (deficiency), beginning of period	\$(13,696)	\$ 230,008
Income (loss) for the period	63,235	(479,080)
Net transactions with Tucows Interactive Limited head office	181,453	92,347
Change in cumulative translation adjustment	(984)	4,101
Divisional equity (deficiency), end of period	<u>\$230,008</u>	<u>\$(152,624)</u>

5. Income taxes:

The provision for income taxes differs from the amount computed by applying the statutory income tax rate of 45% to the income (loss) before provision for income taxes as a result of the following:

	Year ended December 31, 1998	Period from January 1, 1999 to May 3, 1999
Income (loss) before income taxes	<u>\$18,235</u>	<u>\$(542,080)</u>
Computed expected tax provision (recovery)	\$53,000	\$(244,000)
Increase in income tax provision or reduction in recovery resulting from:		
Non-deductible expenses	2,000	7,000
Change in beginning of the period balance of the valuation allowance allocated to income tax expense	—	174,000
	<u>\$55,000</u>	<u>\$ (63,000)</u>

In assessing the realizability of future tax assets, management considers whether it is more likely than not that some portion or all of the future tax assets will not be realized. The ultimate realization of future tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers projected future taxable income, uncertainties related to the industry in which the Division operates, and tax planning strategies in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods which the future tax assets are deductible, management believes it is appropriate to record a full valuation allowance.

**TUCOWS DIVISION OF
TUCOWS INTERACTIVE LIMITED**
Notes to Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

6. Commitments:

The Division leases office space and is committed to minimum annual rental payments under the terms of the lease agreement which expires in 2001, as follows:

2000	\$9,126
2001	5,324

Consolidated Financial Statements
(Dollar amounts in U.S. dollars)

TUCOWS INC.

**Period from May 4, 1999 (commencement
of operations) to December 31, 1999 and
year ended December 31, 2000
Information as of March 31, 2001
and the three months ended
March 31, 2000 and March 31, 2001
is unaudited**

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of Tucows Inc.

We have audited the accompanying consolidated balance sheets of Tucows Inc. as of December 31, 2000 and 1999 and the related consolidated statements of operations, stockholders' equity and cash flows for the year ended December 31, 2000 and the period from May 4, 1999 (commencement of operations) to December 31, 1999. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2000 and 1999 and the results of its operations and its cash flows for the year ended December 31, 2000 and the period from May 4, 1999 (commencement of operations) to December 31, 1999 in conformity with accounting principles generally accepted in the United States of America.

These consolidated financial statements have been restated from those previously presented as explained in note 2.

/s/ KPMG LLP

Chartered Accountants

Toronto, Canada

March 24, 2001, except

as to note 14(a) which is

as of March 27, 2001;

note 14(b) which is as of April 26, 2001;

note 14(c) which is as of May 8, 2001;

note 14(d) which is as of June 27, 2001;

and notes 2 and 4(b) which are as of July 25, 2001

Tucows Inc.
Consolidated Balance Sheet (restated—note 2)
(Dollar amounts in U.S. dollars)

	December 31, 1999	December 31, 2000	March 31, 2001 (unaudited)
Assets			
Current assets:			
Cash and cash equivalents	\$ 1,669,887	\$ 2,170,195	\$ 1,081,058
Accounts receivable, net of allowance for doubtful accounts of \$73,258 at December 31, 1999, \$248,500 at December 31, 2000 and \$248,500 at March 31, 2001	659,651	767,104	624,000
Prepaid digital certificates	—	—	995,071
Prepaid expenses and deposits	401,471	983,544	1,426,664
Prepaid domain name registry fees	—	7,873,677	8,959,084
Total current assets	2,731,009	11,794,520	13,085,877
Prepaid domain name registry fees, net of current portion.	—	1,584,408	1,748,837
Property and equipment (note 5)	2,290,237	3,842,364	4,132,168
Intangible assets (note 6)	25,655,812	5,204,446	4,278,586
Investment in Afiliis Limited, at cost (note 7)	—	100,000	100,000
Deferred acquisition costs	—	—	313,098
Total assets	<u>\$30,677,058</u>	<u>\$ 22,525,738</u>	<u>\$ 23,658,566</u>
Liabilities and Stockholders' Equity (Deficiency)			
Current liabilities:			
Accounts payable	\$ 602,124	\$ 2,796,892	\$ 1,772,170
Accrued liabilities	315,682	3,467,592	4,065,546
Customer deposits	—	2,150,185	2,038,022
Deferred revenue	460,826	13,109,801	14,796,982
Total current liabilities	1,378,632	21,524,470	22,672,720
Deferred revenue, net of current portion	215,400	2,698,131	2,949,772
Stockholders' equity (deficiency):			
Capital stock (note 8):			
Series A convertible preferred stock, \$0.001 par value:			
Authorized:			
35,000,000 shares			
Issued and outstanding:			
27,000,000 shares at December 31, 1999 and 28,677,402 shares at December 31, 2000 and March 31, 2001	27,000	28,677	28,677
Preferred stock, \$0.001 par value:			
Authorized:			
5,000,000 shares			
Issued and outstanding:			
Nil shares issued at December 31, 1999 and 2000 and March 31, 2001	—	—	—
Common stock, \$0.001 par value:			
Authorized:			
60,000,000 shares			
Issued and outstanding:			
3,000,000 shares at December 31, 1999 and 2000 and March 31, 2001	3,000	3,000	3,000
Additional paid-in capital	38,414,444	44,358,580	44,358,580
Common stock to be issued	—	1,512,778	4,537,147
Option (notes 4(a) and 8(b))	1,072,412	1,072,412	1,072,412
Deferred stock-based compensation	—	(508,704)	(468,586)
Deficit	(10,433,830)	(48,163,606)	(51,495,156)
Total stockholders' equity (deficiency)	29,083,026	(1,696,863)	(1,963,926)
Total liabilities and stockholders' equity (deficiency)	<u>\$30,677,058</u>	<u>\$ 22,525,738</u>	<u>\$ 23,658,566</u>

See accompanying notes to consolidated financial statements.

Tucows Inc.
Consolidated Statement of Operations (restated—note 2)
(Dollar amounts in U.S. dollars)

	Period from May 4, 1999 (commencement of operations) to December 31, 1999	Year ended December 31, 2000	Three months ended March 31, 2000	Three months ended March 31, 2001
			(unaudited)	(unaudited)
Net revenues (note 13)	\$ 2,833,509	\$ 14,439,829	\$ 1,548,728	\$ 6,391,647
Cost of revenues	282,742	7,785,105	613,040	4,091,582
Gross profit	<u>2,550,767</u>	<u>6,654,724</u>	<u>935,688</u>	<u>2,300,065</u>
Operating expenses:				
Sales and marketing, which includes stock-based compensation of nil for the period from May 4, 1999 (commencement of operations) to December 31, 1999 and \$93,092 for the year ended December 31, 2000 and \$13,109 for the three months ended March 31, 2000 and \$27,105 for the three months ended March 31, 2001 . .	2,120,063	11,121,051	1,810,102	1,951,076
Technical operations and development expenses	1,095,083	4,132,301	518,440	1,246,084
General and administrative, which includes stock-based compensation of \$1,072,412 for the period from May 4, 1999 (commencement of operations) to December 31, 1999 and \$49,018 for the year ended December 31, 2000 and \$9,254 for the three months ended March 31, 2000 and \$13,013 for the three months ended March 31, 2001 . .	2,242,372	4,704,213	752,934	844,360
Amortization of property and equipment .	227,379	1,700,944	395,161	690,673
Amortization of intangible assets	7,329,964	11,616,414	2,748,840	925,860
Write-down of intangible assets (note 6) .	—	11,324,731	—	—
Total operating expenses	<u>13,014,861</u>	<u>44,599,654</u>	<u>6,225,477</u>	<u>5,658,053</u>
Loss from operations	<u>(10,464,094)</u>	<u>(37,944,930)</u>	<u>(5,289,789)</u>	<u>(3,357,988)</u>
Interest income, net	30,264	215,154	20,667	26,438
Loss before provision for income taxes	<u>(10,433,830)</u>	<u>(37,729,776)</u>	<u>(5,269,122)</u>	<u>(3,331,550)</u>
Provision for income taxes (note 11)	—	—	—	—
Loss for the period	<u>\$(10,433,830)</u>	<u>\$(37,729,776)</u>	<u>\$(5,269,122)</u>	<u>\$ (3,331,550)</u>
Basic and diluted loss per common share . .	<u>\$ (3.48)</u>	<u>\$ (12.58)</u>	<u>\$ (1.76)</u>	<u>\$ (1.01)</u>
Shares used in computing basic and diluted loss per common share	<u>3,000,000</u>	<u>3,000,000</u>	<u>3,000,000</u>	<u>3,295,982</u>

See accompanying notes to consolidated financial statements.

Tucows Inc.

Consolidated Statement of Stockholders' Equity (Deficiency) (restated—note 2)

(Dollar amounts in U.S. dollars)

	Common Stock		Series A Convertible Preferred Stock		Additional Paid-in Capital	Common Stock to be Issued	Option	Deferred Stock-based Compensation	Deficit	Total Stockholders' Equity
	Number	Amount	Number	Amount						
Balances, May 4, 1999 (commencement of operations)	—	\$ —	—	\$ —	\$ —	\$ —	—	\$ —	—	\$ —
Issued for cash	—	—	27,000,000	27,000	30,973,000	—	—	—	—	31,000,000
Issued on acquisition of business	3,000,000	3,000	—	—	3,441,444	—	—	—	—	3,444,444
Issuance of option	—	—	—	—	—	—	1,072,412	—	—	1,072,412
Additional capital contribution	—	—	—	—	4,000,000	—	—	—	—	4,000,000
Loss for the period	—	—	—	—	—	—	—	—	(10,433,830)	(10,433,830)
Balances, December 31, 1999	3,000,000	3,000	27,000,000	27,000	38,414,444	—	1,072,412	—	(10,433,830)	29,083,026
Issued for cash	—	—	1,677,402	1,677	5,293,322	—	—	—	—	5,294,999
Acquisition of Eklektix Inc. (note 4(a))	—	—	—	—	—	1,500,000	—	—	—	1,500,000
Exercise of stock options for cash	—	—	—	—	—	12,778	—	—	—	12,778
Deferred stock-based compensation	—	—	—	—	650,814	—	—	(650,814)	—	—
Amortization of deferred stock-based compensation	—	—	—	—	—	—	—	142,110	—	142,110
Loss for the period	—	—	—	—	—	—	—	—	(37,729,776)	(37,729,776)
Balances, December 31, 2000	3,000,000	3,000	28,677,402	28,677	44,358,580	1,512,778	1,072,412	(508,704)	(48,163,606)	(1,696,863)
Rights issue for cash (unaudited)	—	—	—	—	—	2,999,973	—	—	—	2,999,973
Exercise of stock options for cash (unaudited) . .	—	—	—	—	—	24,396	—	—	—	24,396
Amortization of deferred stock-based compensation (unaudited)	—	—	—	—	—	—	—	40,118	—	40,118
Loss for the period (unaudited)	—	—	—	—	—	—	—	—	(3,331,550)	(3,331,550)
Balance March 31, 2001 (unaudited)	<u>3,000,000</u>	<u>\$3,000</u>	<u>28,677,402</u>	<u>\$28,677</u>	<u>\$44,358,580</u>	<u>\$4,537,147</u>	<u>\$1,072,412</u>	<u>\$(468,586)</u>	<u>\$(51,495,156)</u>	<u>\$ (1,963,926)</u>

See accompanying notes to consolidated financial statements.

Tucows Inc.
Consolidated Statement of Cash Flows (restated—note 2)
(Dollar amounts in U.S. dollars)

	Period from May 4, 1999 (Commencement of Operations) to December 31, 1999	Year Ended to December 31, 2000	Three months Ended March 31, 2000 (Unaudited)	Three months Ended March 31, 2001 (Unaudited)
Cash provided by (used in):				
Operating activities:				
Loss for the period	\$(10,433,830)	\$(37,729,776)	\$ (5,269,122)	\$ (3,331,550)
Items not involving cash:				
Amortization of property and equipment	227,379	1,700,944	395,161	864,955
Amortization of intangible assets	7,329,964	11,616,414	2,748,840	925,860
Write-down of intangible assets	—	11,324,731	—	—
Stock-based compensation	1,072,412	—	—	—
Amortization of deferred stock-based compensation	—	142,110	22,363	40,118
Change in non-cash operating working capital:				
Accounts receivable	(480,715)	(107,453)	(112,807)	143,104
Prepaid digital certificates	—	—	—	(995,071)
Prepaid expenses and deposits	(376,411)	(582,073)	(334,750)	(443,120)
Prepaid domain name registry fees	—	(9,458,085)	(1,236,400)	(1,249,836)
Accounts payable	602,124	2,204,989	73,119	(1,024,722)
Accrued liabilities	315,682	3,151,910	284,763	597,954
Customer deposits	—	2,150,185	653,890	(112,163)
Deferred revenue	676,226	15,131,706	2,652,402	1,938,822
Net cash used in operating activities	(1,067,169)	(454,398)	(122,541)	(2,645,649)
Financing activities:				
Proceeds on issue of Series A convertible preferred stock	35,000,000	5,294,999	5,294,999	—
Proceeds on rights issue	—	—	—	2,999,973
Proceeds received on common stock to be issued	—	12,778	—	24,396
Cash provided by financing activities	35,000,000	5,307,777	5,294,999	3,024,369
Investing activities:				
Acquisition of net assets of the Tucows Division of Tucows Interactive Limited	(30,000,000)	—	—	—
Acquisition of net assets of Eklektix Inc.	—	(1,000,000)	—	—
Investment in Afiliis Limited	—	(100,000)	—	—
Additions to property and equipment	(2,262,944)	(3,253,071)	(705,691)	(1,154,759)
Deferred acquisition costs	—	—	—	(313,098)
Cash used in investing activities	(32,262,944)	(4,353,071)	(705,691)	(1,467,857)
Increase (decrease) in cash and cash equivalents	1,669,887	500,308	4,466,767	(1,089,137)
Cash and cash equivalents, beginning of period	—	1,669,887	1,669,887	2,170,195
Cash and cash equivalents, end of period	<u>\$ 1,669,887</u>	<u>\$ 2,170,195</u>	<u>\$ 6,136,654</u>	<u>\$ 1,081,058</u>
Supplemental cash flow information:				
Interest paid	<u>\$ 377</u>	<u>\$ —</u>	<u>\$ 710</u>	<u>\$ 303</u>
Income taxes paid	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Supplemental disclosure of non-cash investing and financing activities:				
Common stock to be issued on the acquisition of Eklektix Inc.	\$ —	\$ 1,500,000	\$ —	\$ —
Value assigned to common stock issued on acquisition of the Tucows Division of Tucows Interactive Limited	\$ 3,444,444	\$ —	\$ —	\$ —

See accompanying notes to consolidated financial statements.

Tucows Inc.
Notes to Consolidated Financial Statements
(Dollar amounts in U.S. dollars)

1. Organization of the Company:

The Company provides Internet domain name registration and other online products and services such as the delivery of private label applications, services and content through its global Internet-based distribution network to Internet Service Providers, Web hosting companies and telecommunications and cable companies.

2. Prior period restatement

In July 2001, after review by the Securities and Exchange Commission ("SEC"), it was concluded that the value assigned to the common stock issued by the Company on the acquisition of the Tucows Division of Tucows Interactive Limited (note 4(b)) should be based on the concurrent issue of preferred stock for cash consideration and not on the independent valuation obtained as previously reported. As a result, the Company has restated the consolidated financial statements for the periods ended December 31, 1999 and 2000 and for the three months ended March 31, 2000 to increase the value assigned to the common stock issued to \$3,444,444, which is an increase from the original value assigned to the common stock recorded by the Company of \$688,800.

The impact of the change in valuation of the common stock on previously issued financial statements is as follows:

Increase (decrease) from the previously-reported amounts:

Consolidated balance sheet:

	December 31, 1999	December 31, 2000
Goodwill	\$2,143,279	\$ —
Stockholders' equity	\$2,143,279	\$ —

Consolidated statement of operations:

	Period from May 4, 1999 (commencement of operations) to December 31, 1999	Year ended December 31, 2000	Three months ended March 31, 2000 (unaudited)
Amortization of intangible assets . .	\$612,365	\$ 918,548	\$229,637
Write-down of intangible assets . . .	—	1,224,731	—
Loss for the period	\$612,365	\$2,143,279	\$229,637

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

3. Significant accounting policies:

These financial statements are stated in U.S. dollars, except where otherwise noted. The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America.

(a) Basis of consolidation

These consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated on consolidation.

Investments, which the Company is unable to exercise significant influence, are recorded at cost and written down only when there is evidence that a decline in value that is other than temporary has occurred.

(b) Unaudited interim financial statements

The unaudited interim consolidated balance sheet of the Company as of March 31, 2001 and the consolidated statements of operations, and the consolidated statement of stockholders' equity (deficiency) for the three months ended March 31, 2001 and cash flows for each of the three months ended March 31, 2000 and 2001 have been included herein. In the opinion of management, these unaudited interim consolidated financial statements reflect all adjustments, consisting only of normal recurring adjustments, necessary to present fairly the financial position of the Company as of March 31, 2001 and the results of its operations and its cash flows for each of the three months ended March 31, 2000 and 2001. Results for the three months ended March 31, 2001 are not necessarily indicative of the results to be expected for the entire year.

(c) Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(d) Cash and cash equivalents

All highly liquid investments, with an original term to maturity of three months or less at the date of acquisition, are classified as cash equivalents.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

3. Significant accounting policies: (Continued)

(e) Property and equipment

Property and equipment are stated at cost net of accumulated amortization. Amortization is provided on a straight-line basis so as to amortize the cost of depreciable assets over their estimated useful lives at the following annual rates:

<u>Asset</u>	<u>Rate</u>
Computer equipment	30%
Computer software	50%
Furniture and equipment	20%
Leasehold improvements	Over term of lease

The Company regularly reviews the carrying values of its property and equipment for potential impairment in value. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount. If such assets are considered impaired, the amount of the impairment loss recognized is measured as the amount by which the carrying value of the asset exceeds the fair value of the asset, fair value being determined based upon discounted cash flows or appraised values, depending on the nature of the asset.

(f) Intangible assets

Goodwill represents the excess of the purchase price over the fair values of net assets acquired, and is being amortized on a straight-line basis over three years.

Non-competition agreements were entered into with the former owners of the Tucows Division of Tucows Interactive Limited (note 4(b)). These balances are being amortized on a straight-line basis over the term of the non-competition agreement, being three years.

The Company regularly reviews the carrying value of its intangible assets for potential impairment in value. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount. If such assets are considered impaired, the amount of the impairment loss recognized is measured as the amount by which the carrying value of the asset exceeds the fair value of the asset, fair value being determined based upon discounted cash flows or appraised values, depending on the nature of the asset. Any impairment in the carrying value of intangible assets is charged to the statement of operations.

(g) Revenue recognition

The Company's revenues are derived from Internet private label domain name registration services, software and other digital content distribution and advertising. Amounts received in advance of meeting the revenue recognition criteria below are recorded as deferred revenue.

Registration fees charged for domain name registration and ancillary services are recognized on a straight-line basis over the life of the registration period, which ranges from one to ten years and are net of any promotional rebates. A provision for chargebacks from credit card

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

3. Significant accounting policies: (Continued)

carriers is included in accounts payable and accrued liabilities and deducted from gross registration fees in determining net revenues.

The Company has agreements with vendors to digitally distribute their products over the Company's delivery network. Net revenue is derived by deducting royalties due to vendors from amounts billed to end-users, who typically pay for online product purchases with credit cards. Net revenue is recorded upon completion of the purchase and delivery of the product to the customer. To date, these revenues have not been significant.

Advertising revenues are primarily derived from short-term advertising agreements in which the Company typically guarantees a minimum number of impressions or pages to be delivered over a specified period of time. Advertising revenues are recognized ratably over the period in which the advertisement is presented. To the extent that minimum guaranteed impressions are not met, the Company defers recognition of the corresponding revenues until the guaranteed impressions are achieved. In addition, the Company will enter into barter arrangements with other Internet companies to place advertisements on each other's web sites. Revenue and expense from an advertising barter transaction is recognized only when the value of the advertising surrendered is determinable based on the Company's own historical practice of receiving cash for similar advertising. The Company recognized \$342,609 of barter advertising revenue for the period from May 4, 1999 (commencement of operations) to December 31, 1999 and \$988,878 for the year ended December 31, 2000 and \$462,596 (unaudited) for the three month period ended March 31, 2000 and \$nil (unaudited) for the three month period ended March 31, 2001.

(h) Prepaid digital certificates:

Prepaid digital certificates are recorded at the lower of cost or net realizable value and represents amounts paid for digital certificates to be sold to the Company's customers. Prepaid digital certificates are recognized as cost of sales as the certificates are sold.

(i) Prepaid domain name registry fees:

Prepaid domain name registry fees represent amounts paid to registrants for .com, .net, .org and country code domains for updating and maintaining the registries. Domain name registry fees are recognized on a straight-line basis over the life of the registration term for initial registrations and registration renewals.

(j) Translation of foreign currency transactions

Monetary assets and liabilities of the Company and of its wholly owned subsidiaries that are denominated in foreign currencies are translated into United States dollars (which is considered to be the measurement currency) at the exchange rate prevailing at the balance sheet date. Non-monetary assets and liabilities are translated at the historical exchange rate. Transactions included in operations are translated at the average rate for the period. Exchange gains and losses, which were not material, resulting from the translation of these foreign denominated amounts are reflected in the consolidated statement of operations in the period in which they occur.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

3. Significant accounting policies: (Continued)

(k) Development costs

Development costs are expensed as incurred. The Company accounts for the costs of computer software developed or obtained for internal use in accordance with Statement of Position ("SOP") 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use". Under this SOP, costs that are incurred in the preliminary stage of software development are expensed as incurred. Costs incurred during the application and development stage are capitalized and generally include external direct costs of materials and services consumed in the development and payroll and payroll-related costs for employees who are directly associated with the development project. Costs incurred in the post implementation and operation stage are expensed as incurred. Costs of upgrades and enhancements are accounted for in the accounts based on the same criteria as the original computer software developed or obtained for internal use such that: costs related to the preliminary stage of software development and during the post implementation period are expensed as incurred and costs incurred during the application and development stage are capitalized. The Company capitalized \$96,792 for the period from May 4, 1999 (commencement of operations) to December 31, 1999 and \$668,222 for the year ended December 31, 2000 and \$69,615 (unaudited) for the three month period ended March 31, 2000 and \$439,500 (unaudited) for the three month period ended March 31, 2001 of such costs relating to the development of internal use software. The capitalized costs of computer software developed for internal use is amortized on a straight-line basis over two years from the date the software is put into use.

(l) Income taxes

Under the asset and liability method of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" ("SFAS 109"), deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under SFAS 109, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in the consolidated statement of operations in the period that includes the enactment date. A valuation allowance is recorded if it is not "more likely than not" that some portion of or all of a deferred tax asset will not be realized.

(m) Stock-based compensation

The Company has elected to follow Accounting Principles Board Opinion No. 25 ("APB 25"), "Accounting for Stock Issued to Employees" and related interpretations, in accounting for its employee stock options. Under APB 25, deferred stock-based compensation is recorded at the option grant date in an amount equal to the difference between the fair market value of a common share and the exercise price of the option. Deferred stock-based compensation resulting from employee option grants is amortized over the vesting period of the individual options, generally four years, in accordance with Financial Accounting Standards Board Interpretation No. 28.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

3. Significant accounting policies: (Continued)

Stock options granted to consultants and other non-employees are accounted for using the fair value method under Statement of Financial Accounting Standards No. 123 "Accounting for Stock-based Compensation" ("SFAS 123"). Under this method, the fair value of options granted is recognized at its fair value as services are performed and options are earned.

(n) Loss per common share

Loss per common share has been calculated on the basis of loss for the period divided by the weighted average number of common shares outstanding during each period. The dilutive effect on loss per common share, calculated assuming that the Series A convertible preferred shares, the Series A convertible preferred share options and the common share options outstanding at the end of the period had been issued, converted or exercised at the later of the beginning of the period or their date of issuance, is anti-dilutive.

(o) Concentration of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash equivalents and accounts receivable. Cash equivalents consist of deposits with, or guaranteed by, major commercial banks, the maturities of which are three months or less from the date of purchase. With respect to accounts receivable, the Company performs periodic credit evaluations of the financial condition of its customers and typically does not require collateral from them. Management assesses the need for allowances for potential credit losses by considering the credit risk of specific customers, historical trends and other information.

During the year ended December 31, 2000, one customer accounted for 12% of net revenues and during the three months ended March 31, 2001, one customer accounted for 18% net revenues.

(p) Fair values of financial assets and financial liabilities

The carrying values of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate their fair values due to the relatively short periods to maturity of the instruments.

(q) Comprehensive income

The Company follows Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" ("SFAS No. 130"). This statement requires companies to classify items of their comprehensive income by their nature in the financial statements and display the accumulated balance of other comprehensive income separately from deficit and additional paid-in capital in the equity section of the balance sheet. There was no difference between loss for the period and comprehensive income for the period from May 4, 1999 (commencement of operations) to December 31, 1999 and the year ended December 31, 2000 or the three month periods ended March 31, 2000 and 2001.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

3. Significant accounting policies: (Continued)

(r) Segment reporting

The Company follows Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information" ("SFAS 131"), which establishes standards for reporting information about operating segments in annual financial statements. It also establishes standards for related disclosures about products and services, geographic areas and major customers. The Company operates in one business segment.

The Company's revenues are attributed to the country in which the contract originates, primarily Canada. Revenues from domain names issued from the Toronto, Canada location are attributed to Canada because it is impracticable to determine the country of the customer.

(s) Recent accounting pronouncements

In June 1998, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 133, "Accounting for Derivative Instruments and Hedging Activities" ("SFAS No. 133"). In June 2000, the FASB issued Statement of Financial Accounting Standards No. 138, "Accounting for Certain Hedging Activities" ("SFAS No. 138"), which amended SFAS No. 133. SFAS 138 must be adopted concurrently with the adoption of SFAS No. 133. The Company was required to adopt these statements for the quarter ended March 31, 2001. SFAS No. 133 and SFAS No. 138 establish methods of accounting for derivative financial instruments and hedging activities related to those instruments as well as other hedging activities. Because the Company currently holds no derivative financial instruments and the Company does not currently engage in hedging activities, the adoption of SFAS No. 133 and SFAS No. 138 did not have a material impact on the Company's financial condition or results of operations on adoption.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

4. Business acquisitions:

- (a) On April 4, 2000, the Company acquired 100% of the outstanding shares of Eklektix Inc., a newsletter publishing company. Total consideration consisted of \$1,000,000 in cash and \$1,500,000 in common shares valued at \$3.16 per share which is equal to the estimated fair value of the Company's common shares on April 4, 2000. The shares will be issued in April, 2001. There are no contingency or performance requirements of these shares. The acquisition has been accounted for as a purchase and, accordingly, these consolidated financial statements include the results of operations from the date of acquisition. The fair value of the assets acquired, based on the consideration paid, is as follows:

Net assets acquired	\$ 10,221
Goodwill	2,489,779
	<u>\$2,500,000</u>

A pro forma statement of operations to reflect the acquisition of Eklektix Inc. has not been presented as it would not be materially different than the Company's consolidated statement of operations.

- (b) On May 4, 1999, the Company acquired certain of the business assets of the Tucows Division of Tucows Interactive Limited. Total consideration consisted of \$30,000,000 in cash and 3,000,000 common shares of the Company having a fair value of \$3,444,444. The acquisition has been accounted for as a purchase and, accordingly, these consolidated financial statements include the results of operations from the date of acquisition. The fair value of the assets acquired, based on the consideration paid, is as follows:

Accounts receivable	\$ 178,936
Prepaid expenses and deposits	25,060
Property and equipment	254,672
Non-competition agreements	2,000,000
Goodwill	30,985,776
	<u>\$33,444,444</u>

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

5. Property and equipment:

Property and equipment consist of the following:

	December 31, 1999	December 31, 2000	March 31, 2001 (unaudited)
Computer equipment	\$ 774,728	\$2,370,759	\$2,472,492
Computer software	1,162,547	2,047,193	3,093,030
Furniture and equipment	75,079	773,704	780,893
Leasehold improvements	505,262	579,031	551,698
	<u>2,517,616</u>	<u>5,770,687</u>	<u>6,898,113</u>
Less accumulated amortization	<u>227,379</u>	<u>1,928,323</u>	<u>2,765,945</u>
	<u>\$2,290,237</u>	<u>\$3,842,364</u>	<u>\$4,132,168</u>

6. Intangible assets:

Intangible assets consist of the following:

	December 31, 1999 (note 2)	December 31, 2000 (note 2)	March 31, 2001 (unaudited) (note 2)
Goodwill	\$30,985,776	\$33,475,555	\$33,475,555
Non-competition agreements	2,000,000	2,000,000	2,000,000
	<u>32,985,776</u>	<u>35,475,555</u>	<u>35,475,555</u>
Less accumulated amortization	7,329,964	18,946,378	19,872,238
write-down of intangible assets	—	11,324,731	11,324,731
	<u>\$25,655,812</u>	<u>\$ 5,204,446</u>	<u>\$ 4,278,586</u>

During 2000, management concluded that the value of the goodwill related to the Tucows Division of Tucows Interactive Limited acquisition and the goodwill related to the Eklektix Inc. acquisition was impaired and a write-down of approximately \$11.3 million was necessary. The impairment is the result of the significant downturn in the emerging new economy and the overall decline in the on-line advertising industry. The impairment evaluation was determined based upon the excess of the carrying value over the estimated discounted cash flows from these operations. The assumptions supporting the cash flows, including the discount rate, were determined using management's best estimates of future cash flows and economic conditions. The remaining goodwill and identifiable intangible asset balance of approximately \$5.2 million will be amortized over the remaining estimated useful life at December 31, 2000 of approximately 16 months.

7. Investment in Afiliis Limited:

The Company holds a 6.8% interest in Afiliis Limited, a private company, which is a consortium of 18 registrars, has been selected to serve as the registry for the new top level domain ".info".

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

8. Capital stock:

	December 31, 1999		December 31, 2000		March 31, 2001	
	Shares	Amount (note 2)	Shares	Amount (note 2)	Shares (unaudited)	Amount (unaudited) (note 2)
Authorized:						
35,000,000 Series A convertible preferred stock, \$0.001 par value, voting, participating, convertible to common stock on a 1 for 1 basis at the option of the holder unless the Company closes an initial public offering with gross proceeds of greater than \$60,000,000 whereby the conversion will be automatic						
5,000,000 preferred stock, \$0.001 par value						
60,000,000 common stock, \$0.001 par value						
Issued and outstanding:						
Series A convertible preferred shares	27,000,000	\$ 27,000	28,677,402	\$ 28,677	28,677,402	\$ 28,677
Common shares	3,000,000	3,000	3,000,000	3,000	3,000,000	3,000
Additional paid-in capital		38,414,444		44,358,580		44,358,580
		<u>\$38,444,444</u>		<u>\$44,390,257</u>		<u>\$44,390,257</u>

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

8. Capital stock: (Continued)

- (a) The Company's share capital and loss per common share information has been restated to reflect a 3-for-1 split of the Company's preferred and common stock, which was approved by the Company's Board of Directors on January 27, 2000.

In the event of liquidation, dissolution or wind up of the Company, the holders of the preferred shares are entitled to a liquidation preference equal to the amount invested in the Company for each preferred share, plus any accrued and unpaid dividends.

- (b) On May 4, 1999, the Company issued 27,000,000 Series A convertible preferred shares for a total cash consideration of \$31,000,000.

Simultaneously with the issue of the Series A convertible preferred shares, the Company issued options to the Chairman of the Company and an advisor to the Company. Each of these options entitle the holder to acquire 1,793,331 Series A convertible preferred shares with an exercise price of \$1.30 exercisable until May 4, 2004. As the exercise price is not less than the market value of the common shares at the date of grant, no compensation expense has been recorded for the options granted to the Chairman.

The Company has accounted for the option issued to the advisor of the Company based on the fair value at the date of grant of the option, which was also the date the option vested, consistent with the method under SFAS 123. To determine the fair value of this option, the following assumptions were used: dividend yield of 0.0%, 80% volatility, a weighted average risk free interest rate of 5.5% and an average expected life of the option of 2 years. Compensation of \$1,072,412 arising on the issuance of this option has been included in general and administrative expenses in the consolidated statement of operations during the period from May 4, 1999 (commencement of operations) to December 31, 1999.

- (c) During September 1999, the Company's Board of Directors issued a working capital call amounting to \$4,000,000 to the holders of the Series A convertible preferred shares as stipulated within the stockholders' agreement dated May 4, 1999. No additional preferred shares were issued relating to this additional equity injection and, correspondingly, additional paid-in capital was increased to reflect this working capital call.
- (d) During March 2000, the Company issued 1,677,402 Series A convertible preferred shares for a total cash consideration of \$5,294,999.
- (e) In January 2001, the Company entered into irrevocable subscription agreements with certain of the Company's shareholders whereby they subscribed for and paid \$2,999,973 for the right to acquire Series A convertible preferred shares. Under the subscription agreements, the value that was to be used in determining the number of Series A convertible preferred shares to be issued to each subscriber was the valuation used by the Company in its next equity financing less a discount of 25%. It is anticipated that immediately before the completion of the merger with Infonautics, Inc. (note 14(a)) these stock rights will be exercised for approximately 4 million shares of the Company's common stock.

The proceeds received in respect of the above subscription agreements have been accounted for as common stock to be issued. When the Company is able to determine the number of Series A convertible preferred shares to be issued, the Company will value the contingent

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

8. Capital stock: (Continued)

conversion option relating to the 25% discount from the next equity financing. The value of the contingent conversion feature will then be recorded as a distribution to the Series A convertible preferred shareholders and as an increase to additional paid-in capital.

9. 1999 Stock Option Plan:

The Company's 1999 Stock Option Plan (the "Plan") was established for the benefit of the employees, officers, directors and certain consultants of the Company. The maximum number of common stock which may be set aside for issuance under the Plan is 6,000,000 common shares and 3,586,662 Series A convertible preferred shares, provided that the Board of Directors of the Company has the right, from time to time, to increase such number subject to the approval of the stockholders of the Company when required by law or regulatory authority. Generally, options issued under the Plan vest over a four year period.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

9. 1999 Stock Option Plan: (Continued)

Details of stock option transactions are as follows:

	Period from May 4, 1999 (commencement of operations) to December 31, 1999		Year ended December 31, 2000		Three months ended March 31, 2001	
	Number of shares	Weighted average exercise price per share	Number of shares	Weighted average exercise price per share	Number of shares	Weighted average exercise price per share
					(unaudited)	
Outstanding, beginning of period	—	\$ —	6,980,292	\$1.30	9,018,829	\$ 2.07
Granted	6,983,892	1.30	2,403,600	3.08	626,800	1.30
Exercised	—	—	(9,829)	1.30	(15,500)	1.30
Forfeited	(3,600)	1.30	(355,234)	1.57	(206,762)	2.21
Outstanding, end of period	<u>6,980,292</u>	<u>\$1.30</u>	<u>9,018,829</u>	<u>\$1.52</u>	<u>9,423,367</u>	<u>\$ 1.98</u>
Options exercisable at end of period	<u>3,886,662</u>	<u>\$1.30</u>	<u>4,977,426</u>	<u>\$1.38</u>	<u>3,541,584</u>	<u>\$ 1.34</u>
Weighted average fair value of options granted during the period with exercise prices equal to fair value at date of grant		<u>\$0.26</u>		<u>\$0.44</u>		<u>\$ 0.25</u>
Weighted average fair value of options granted during the period with exercise prices less than fair value at date of grant		<u>\$ —</u>		<u>\$0.80</u>		<u>\$ —</u>
Weighted average fair value of options granted during the period with exercise prices greater than fair value at date of grant . . .		<u>\$ —</u>		<u>\$0.17</u>		<u>\$ —</u>

The stock options expire at various dates between July 2002 and October 2010.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

9. 1999 Stock Option Plan: (Continued)

As of December 31, 2000, the exercise prices and weighted average remaining contractual life of outstanding options were as follows:

<u>Exercise price</u>	<u>Options outstanding</u>		<u>Options exercisable</u>	
	<u>Number outstanding</u>	<u>Weighted average remaining contractual life (years)</u>	<u>Number exercisable</u>	<u>Weighted average exercise price per share</u>
\$1.30	7,517,679	8.5	4,910,377	\$1.30
3.16	1,213,150	9.4	7,099	3.16
8.00	288,000	1.6	60,000	8.00

The Company recorded deferred stock-based compensation amounting to \$650,814 for the year ended December 31, 2000. Amortization of deferred stock-based compensation amounted to \$142,110 for the year ended December 31, 2000, and \$22,363 (unaudited) for the three months ended March 31, 2000 and \$40,118 (unaudited) for the three months ended March 31, 2001.

Had employee compensation expense for the Company's 1999 Stock Option Plan and the Series A convertible preferred share option issued to the Chairman been determined based on the fair value at the grant dates for the awards under the plan consistent with the method under SFAS 123 "Accounting for Stock-Based Compensation", the Company's loss and loss per common share would have been reported at the pro forma amounts indicated in the table below. To determine the fair value of each option on the grant date the following assumptions were used for the Company's stock option plan: dividend yield of 0.0% for each period, zero volatility for each period, a weighted average risk free interest rate of 5.5% and 6.5% respectively and a weighted average expected life of options of 4 years for each period; and the following assumptions were used for the Series A convertible preferred stock option issued to the Chairman: dividend yield of 0.0%, zero volatility, a weighted average risk free

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

9. 1999 Stock Option Plan: (Continued)

interest rate of 5.5% and a weighted average expected life of the option of 2 years. Pro forma information for the periods is indicated as follows:

	Period from May 4, 1999 (commencement of operations) to December 31, 1999	Year ended December 31, 2000	Three months ended March 31, 2000	Three months ended March 31, 2001
	(note 2)	(note 2)	(unaudited) (note 2)	(unaudited)
Loss, as reported . . .	\$(10,433,830)	\$(37,729,776)	\$ (5,269,122)	\$ (3,331,550)
Loss, pro forma	(10,634,601)	(38,191,648)	(5,363,929)	(3,520,001)
Loss per common share, as reported . . .	(3.48)	(12.58)	(1.76)	(1.01)
Loss per common share, pro forma	(3.54)	(12.73)	(1.79)	(1.07)

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

10. Loss per common share:

The following table reconciles the numerators and denominators of the basic and diluted loss per common share computation:

	Period from May 4, 1999 (commencement of operations) to December 31, 1999 <u>(note 2)</u>	Year ended December 31, 2000 <u>(note 2)</u>	Three months ended March 31, 2000 <u>(unaudited)</u> <u>(note 2)</u>	Three months ended March 31, 2001 <u>(unaudited)</u>
Numerator for basic and diluted loss per common share: Loss for the period	<u>\$ (10,433,830)</u>	<u>\$ (37,729,776)</u>	<u>\$ (5,269,122)</u>	<u>\$ (3,331,550)</u>
Denominator for basic and diluted loss per common share: Weighted average common shares	<u>3,000,000</u>	<u>3,000,000</u>	<u>3,000,000</u>	<u>3,295,982</u>
Basic and diluted loss per common share	<u>\$ (3.48)</u>	<u>\$ (12.58)</u>	<u>\$ (1.76)</u>	<u>\$ (1.01)</u>

Due to the loss for all periods presented, all potential common shares outstanding, being shares issued on exercise of options or on conversion of Series A convertible preferred stock, are considered anti-dilutive and are excluded from the calculation of diluted loss per common share.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

11. Income taxes:

The provision for income taxes differs from the amount computed by applying the statutory income tax rate of 40% to the loss before provision for income taxes as a result of the following:

	Period from May 4, 1999 (commencement of operations) to December 31, 1999	Year ended December 31, 2000	Three months ended March 31, 2000	Three months ended March 31, 2001
	(note 2)	(note 2)	(unaudited) (note 2)	(unaudited)
Loss for the period	\$(10,433,830)	\$(37,729,776)	\$(5,269,122)	\$(3,331,550)
Computed expected tax recovery	\$ 4,174,000	\$ 15,092,000	\$ 2,108,000	\$ 1,333,000
Reduction in income tax recovery resulting from:				
Permanent differences	(430,000)	(487,000)	—	—
Change in beginning of the period balance of the valuation allowance allocated to income tax expense	(3,744,000)	(14,605,000)	(2,108,000)	(1,333,000)
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

The tax effects of temporary differences that give rise to significant portions of the future tax assets as of December 31, 1999 and 2000 are presented below:

	December 31, 1999	December 31, 2000	March 31, 2000	March 31, 2001
	(note 2)	(note 2)	(unaudited) (note 2)	(unaudited) (note 2)
Future tax assets:				
Non-operating loss carried forward	\$ 1,350,000	\$ 4,702,000	\$ 2,240,000	\$ 5,157,000
Deferred revenue	—	3,158,000	320,000	3,515,000
Tax basis of property and equipment and intangible assets in excess of carrying value	2,394,000	10,489,000	3,292,000	11,010,000
Total gross future tax assets	3,744,000	18,349,000	5,852,000	19,682,000
Less valuation allowance	(3,744,000)	(18,349,000)	(5,852,000)	(19,682,000)
Net future tax assets	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

In assessing the realizability of future tax assets, management considers whether it is more likely than not that some portion or all of the future tax assets will not be realized. The ultimate realization

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

11. Income taxes: (Continued)

of future tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers projected future taxable income, uncertainties related to the industry in which the Company operates, and tax planning strategies in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods which the future tax assets are deductible, management believes it is appropriate to record a full valuation allowance at this time.

As of December 31, 2000, the Company had approximately \$11,820,000 of losses available to reduce future years' taxable income which expire in various dates between 2006 and 2019.

12. Commitments:

The Company has several non-cancelable leases primarily for general office facilities and equipment that expire over the next five years. Future minimum lease payments under these leases are as follows:

Year ending March 31:	
2002	243,000
2003	247,000
2004	255,000
2005	223,000
2006	25,000

13. Supplemental information:

The following is summary of the Company's revenue earned from each significant revenue stream:

	Period from May 4, 1999 (commencement of operations) to December 31, 1999	Year ended December 31, 2000	Three months ended March 31, 2000 (Unaudited)	Three months ended March 31, 2001 (Unaudited)
Advertising	\$2,715,000	\$ 4,693,000	\$1,181,000	\$ 592,000
Retail and wholesale domain name registry	96,000	9,629,000	353,000	5,768,000
Digital content distribution	23,000	118,000	15,000	32,000
	<u>\$2,834,000</u>	<u>\$14,440,000</u>	<u>\$1,549,000</u>	<u>\$6,392,000</u>

14. Subsequent events:

(a) Merger with Infonautics, Inc.

On March 27, 2001, the Company signed a definitive merger agreement with Infonautics, Inc. ("Infonautics"), a public company listed on the Nasdaq SmallCap Market trading under the symbol INFO. Infonautics is a provider of personalized information agents and web sites.

Tucows Inc.
Notes to Consolidated Financial Statements (Continued)
(Dollar amounts in U.S. dollars)

14. Subsequent events: (Continued)

In consideration for the merger, Infonautics will issue approximately 50 million shares of Class A common stock to the Company's shareholders, resulting in these shareholders owning approximately 80% of the merged company at closing. Upon completion of the merger, which is subject to Company and Infonautics shareholder approval, certain regulatory approvals, and certain other closing conditions, Infonautics will remain a public company and is expected to adopt the Tucows name. The transaction is expected to close during the third quarter of 2001.

(b) Promissory note payable to Infonautics, Inc.

During April 2001, the Company received proceeds of \$1,300,000 from Infonautics, Inc. and issued a promissory note payable bearing interest at 8% per annum due on August 31, 2001, secured by a first priority security interest against all assets of the Company.

(c) On May 8, 2001, Liberty Registry Management Services Inc. (LRMSI), a wholly owned subsidiary of the Company, signed a services agreements with Afiliis Limited. In terms of the agreement, LRMSI will serve as a back-end registry provider for the .info top-level domain.

In order to provide the services contemplated under this arrangement, the Company has entered into a two year services agreement with a third party, for the provision of services and technical support, including but not limited to web hosting necessary for the operation of the .info registry. In terms of this contract, the Company is committed to monthly payments ranging from approximately \$97,000 to \$377,000 per month, dependent upon the completion of certain milestones as specified in the agreement.

(d) Promissory note payable to XDL Capital Corporation

In June 2001, the Company entered into an agreement with XDL Capital Corporation, a management company of one of the shareholders of the Company, XDL USA Holdings Inc., which provides for a \$2,500,000 promissory note bearing interest at 20% per annum repayable on the earlier of four months from the date of the first drawdown or 10 business days after the merger with Infonautics, Inc. (note 14(a)) secured by a first priority general security interest over all assets of the Company but subject to a prior general security interest granted to Infonautics, Inc. (note 14(b)).

**AGREEMENT AND PLAN OF MERGER
AMONG
INFONAUTICS, INC.,
TUCOWS INC. AND
TAC ACQUISITION CORP.**

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AGREEMENT AND PLAN OF MERGER

AGREEMENT AND PLAN OF MERGER (the "Agreement") dated as of March 27, 2001, by and among INFONAUTICS, INC., a Pennsylvania corporation ("Acquiror"), TUCOWS INC., a Delaware corporation ("Company") and TAC ACQUISITION CORP., a Delaware corporation ("Sub").

W I T N E S S E T H:

WHEREAS, this Agreement contemplates a business combination between Acquiror and Company in a merger of equals to be accomplished through the formation of Sub as a direct subsidiary of Acquiror and the merger of Sub with and into Company, as a result of which Company will become a direct wholly owned subsidiary of Acquiror and the stockholders of Company will become shareholders of Acquiror (the "Merger");

WHEREAS, the Board of Directors of each of Acquiror, Company and Sub has approved this Agreement and the Merger, upon the terms and subject to the conditions set forth herein;

WHEREAS, the Board of Directors of Acquiror has determined that the Merger is advisable and is fair to and in the best interests of the holders of Acquiror's Class A Common Stock, no par value per share (the "Shares"), and has resolved to recommend the approval by the Acquiror Shareholders (as defined in §1 below) of the Certificate Amendment (as defined in §1 below) and the issuance of the Shares in the Merger;

WHEREAS, the Board of Directors of Company has determined that the Merger is advisable and is fair to and in the best interests of the holders of Company's common stock, par value \$.001 per share (the "Company Shares") and Company's Series A Convertible Preferred Stock, par value \$.001 per share (the "Company Preferred Shares"), and has resolved to recommend the approval of the Merger and the adoption of this Agreement by the Company Stockholders (as defined in §1 below);

WHEREAS, concurrently with the execution and delivery of this Agreement and as an inducement to Acquiror to enter into this Agreement, certain of the Company Stockholders listed on Exhibit A hereto have executed and delivered a Stockholder Agreement in substantially the form of Exhibit B hereto;

WHEREAS, concurrently with the execution and delivery of this Agreement and as an inducement to Company to enter into this Agreement, certain of the Acquiror Shareholders listed on Exhibit C have executed and delivered a Stockholder Agreement in substantially the form of Exhibit D hereto; and

WHEREAS, this Agreement contemplates that the Merger will qualify as a reorganization within the meaning of §368(a) of the United States Internal Revenue Code of 1986, as amended (the "Code");

NOW, THEREFORE, in consideration of the premises and the mutual promises set forth herein, and in consideration of the representations, warranties and covenants set forth herein, the parties agree as follows:

1. Definitions.

"Acquiror" has the meaning set forth in the preambles.

"Acquiror 10-K" has the meaning set forth in §3(h)(i) below.

"Acquiror 10-Qs" has the meaning set forth in §3(h)(i) below.

"Acquiror Acquisition Agreement" has the meaning set forth in §5(h)(ii) below.

"Acquiror Acquisition Proposal" means any proposal or offer (including, without limitation, any proposal or offer to the Acquiror Shareholders) with respect to a merger, acquisition, consolidation, recapitalization, reorganization, liquidation, tender offer or exchange offer or similar

transaction involving, or any purchase of 25% or more of the consolidated assets of, or any equity interest representing 25% or more of the voting power of, Acquiror.

“Acquiror Audited Financial Statements” has the meaning set forth in §5(k)(iii) below.

“Acquiror Benefit Plan” and “Acquiror Benefit Plans” have the meanings set forth in §3(o)(i) below.

“Acquiror Board” means the board of directors of Acquiror.

“Acquiror Contracts” has the meaning set forth in §3(s) below.

“Acquiror Disclosure Letter” has the meaning set forth in §3(a) below.

“Acquiror Draft Financial Statements” has the meaning set forth in §3(h)(ii) below.

“Acquiror Employees” has the meaning set forth in §3(o)(i) below.

“Acquiror ERISA Affiliate” has the meaning set forth in §3(o)(iii) below.

“Acquiror Fully Diluted Shares” means the aggregate of (i) the number of issued and outstanding Shares as of the date hereof and (ii) any restricted Shares issued or to be issued to Acquiror Employees by Acquiror in exchange for the cancellation of options to purchase shares previously granted to such Acquiror Employees pursuant to any Acquiror Benefit Plan or otherwise.

“Acquiror Intellectual Property” means patents and patent rights, trademarks and trademark rights, trade names and trade name rights, service marks and service mark rights, copyrights and copyright rights, trade secret and trade secret rights, and other intellectual property rights, and all pending applications for and registrations of any of the foregoing that are individually or in the aggregate material to the conduct of the business of Acquiror and its Subsidiaries taken as a whole.

“Acquiror Material Adverse Effect” has the meaning set forth in §3(a) below.

“Acquiror Pension Plan” has the meaning set forth in §3(o)(ii) below.

“Acquiror Recommendation” has the meaning set forth in §5(c)(ii)

“Acquiror Reports” has the meaning set forth in §3(g) below.

“Acquiror Shareholder” means any Person who or which holds any Shares.

“Acquiror Special Meeting” has the meaning set forth in §5(c)(ii) below.

“Acquiror Stock Option” has the meaning set forth in §5(o)(i) below.

“Affiliate” has the meaning set forth in Rule 12b-2 of the regulations promulgated under the Securities Exchange Act.

“Agreement” has the meaning set forth in the preambles.

“Cash on Hand” means (i) the sum of (A) cash that is not subject to any restrictions on its use or disposition and bank account balances (excluding cash necessary to fund any outstanding but unpaid checks), (B) marketable securities (including, with respect to up to 26,453 shares of common stock of eBay, Inc. which are currently hedged, the net positive or negative current fair market value of the related put options and call options entered into on August 23, 2000), (C) accounts receivable collectible in the ordinary course of business and, to the extent not included therein, \$85,660 billable to Entertainment Weekly, Inc. prior to June 30, 2001, and (D) the principal amount of, and all accrued and unpaid interest on, the Note, less (ii) accounts payable, accrued expenses, and other short term liabilities (excluding deferred revenues and leases

but including all liabilities, fees and expenses incurred by Acquiror relating to or resulting from the transactions contemplated hereby), all in accordance with GAAP.

“Certificate Amendment” means an amendment to the Articles of Incorporation of Acquiror increasing the number of authorized Shares to 250,000,000.

“Certificate of Merger” has the meaning set forth in §2(c) below.

“Change in the Acquiror Recommendation” has the meaning set forth in §5(h)(iv) below.

“Closing” has the meaning set forth in §2(b) below.

“Closing Date” has the meaning set forth in §2(b) below.

“Code” has the meaning set forth in the preambles.

“Company Acquisition Proposal” means any proposal or offer (including, without limitation, any proposal or offer to Company Stockholders) with respect to a merger, acquisition, consolidation, recapitalization, reorganization, liquidation, tender offer or exchange offer or similar transaction involving, or any purchase of 25% or more of the consolidated assets of, or any equity interest representing 25% or more of the outstanding shares of capital stock in, Company.

“Company Audited Financial Statements” has the meaning set forth in §5(k)(iv) below.

“Company Benefit Plan” and “Company Benefit Plans” have the respective meanings set forth in §4(m)(i) below.

“Company Board” means the board of directors of Company.

“Company Draft Financial Statements” has the meaning set forth in §4(g)(ii) below.

“Company Forecast” has the meaning set forth in §5(e) below.

“Company Canadian Retirement Plans” has the meaning set forth in §4(m)(ix) below.

“Company Capital Stock” means, collectively, the Company Shares and the Company Preferred Shares.

“Company Contracts” has the meaning set forth in §4(q) below.

“Company Disclosure Letter” has the meaning set forth in §4(a) below.

“Company Employees” has the meaning set forth in §4(m)(i) below.

“Company ERISA Affiliate” has the meaning set forth in §4(m)(iii) below.

“Company Intellectual Property” means patents and patent rights, trademarks and trademark rights, trade names and trade name rights, service marks and service mark rights, copyrights and copyright rights, trade secret and trade secret rights, and other intellectual property rights, and all pending applications for and registrations of any of the foregoing that are individually or in the aggregate material to the conduct of the business of Company and its Subsidiaries taken as a whole.

“Company Material Adverse Effect” has the meaning set forth in §4(a) below.

“Company Option Plan(s)” means the Tucows Inc. Amended and Restated 1999 Stock Option Plan.

“Company Outstanding Shares” shall mean the aggregate number of shares of Company Capital Stock outstanding immediately prior to the Effective Time, excluding the aggregate number of shares of Company Shares, if any, issuable (with or without the passage of time or satisfaction of other conditions) upon exercise or conversion of any Company Stock Option outstanding or

issuable (with or without the passage of time or satisfaction of other conditions) immediately prior to the Effective Time.

“Company Pension Plan” has the meaning set forth in §4(m)(ii) below.

“Company Preferred Shares” has the meaning set forth in the preambles.

“Company Rights Holder” means any Person having the right to acquire Company Shares on exercise or conversion of Stock Rights.

“Company Shares” has the meaning set forth in the preambles.

“Company Special Meeting” has the meaning set forth in §5(c)(ii) below.

“Company Stockholder” means any Person who or which holds any Company Shares or Company Preferred Shares.

“Company Stock Option” has the meaning set forth in §5(o)(i) below.

“Confidentiality Agreement” means the Mutual Confidentiality and Non-disclosure Agreement dated January 3, 2001 between Acquiror and Company, providing that, among other things, each party would maintain confidential certain information of the other party.

“Confidential Information” means Information, as defined in the Confidentiality Agreement.

“Continuing Directors” means the members of the Acquiror Board on the date hereof who continue to serve as members of the Acquiror Board following the Effective Time.

“Dissenting Holder” means a holder of Company Shares or Company Preferred Shares who has demanded appraisal rights in compliance with the applicable provisions of the DGCL concerning the right of such holder to dissent from the Merger and demand appraisal of such holder’s Company Shares or Company Preferred Shares.

“DGCL” means Title 8, Chapter 1 of the Delaware Code, as amended.

“Effective Time” has the meaning set forth in §2(d)(i) below.

“Environmental Law” means any federal, state, local, foreign or other law (including common law), statutes, ordinances or codes relating to: (i) the protection, investigation or restoration of the environment, health, safety or natural resources, (ii) the handling, use, presence, disposal, release or threatened release of any Hazardous Substance, or (iii) noise, odor, wetlands, pollution, contamination or any injury or threat of injury to person or property in connection with any Hazardous Substance.

“ERISA” has the meaning set forth in §3(o)(i) below.

“Exchange Agent” has the meaning set forth in §2(e)(i) below.

“Exchange Fund” has the meaning set forth in §2(e)(i) below.

“Exchange Ratio” shall mean a number of Shares equal to the quotient obtained by dividing (i) the Merger Consideration by (ii) the Company Outstanding Shares (with the result rounded to four decimal places).

“Fairness Opinion” means an opinion of Janney Montgomery Scott, addressed to the Acquiror Board, as to the fairness of the Merger to the Acquiror Shareholders from a financial point of view.

“GAAP” means United States generally accepted accounting principles as in effect from time to time.

“Government Entity” has the meaning set forth in §3(f) below.

“Hart-Scott-Rodino Act” means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

“Hazardous Substances” means any substance that is listed, classified or regulated pursuant to any Environmental Law, including any petroleum product or by-product, asbestos-containing material, lead-containing paint or plumbing, polychlorinated biphenyls, radioactive materials or radon.

“IRS” means the United States Internal Revenue Service.

“Indemnitee” has the meaning set forth in §5(j)(ii) below.

“Joint Proxy Statement/Prospectus” has the meaning set forth in §5(c)(i) below.

“Merger” has the meaning set forth in the preambles.

“Merger Consideration” means the (i) the product of four times the Acquiror Fully Diluted Shares less (ii) 80,000.

“Note” has the meaning set forth in §5(r) below.

“Order” has the meaning set forth in §6(a)(v) below.

“Outside Date” has the meaning set forth in §7(a)(ii) below.

“Person” means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization or a governmental entity (or any department, agency or political subdivision thereof).

“Per Company Share Merger Consideration” has the meaning set forth in §2(d)(v)(A) below.

“Pre-Termination Acquisition Proposal Event” has the meaning set forth in §7(b)(vi) below.

“Registration Statement” has the meaning set forth in §5(c)(i) below.

“Representative” has the meaning set forth in §5(h)(i) below.

“Required Acquiror Consents” has the meaning set forth in §3(f) below.

“Required Company Consents” has the meaning set forth in §4(f) below.

“Requisite Stockholder Approval” means, with respect to Acquiror, the affirmative vote of a majority of the votes cast by Acquiror Shareholders at a meeting at which a quorum is present in favor of the Certificate Amendment and the issuance of the Shares in the Merger in accordance with the rules and regulations of Nasdaq or, with respect to Company, the affirmative vote of a majority of the voting power of the outstanding Company Capital Stock in favor of the Merger and the adoption of this Agreement in accordance with the DGCL.

“SEC” means the Securities and Exchange Commission.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Securities Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Security Interest” means any mortgage, pledge, lien, encumbrance, charge or other security interest, other than (a) mechanic’s, materialman’s and similar liens; (b) liens for taxes not yet due and payable or for taxes that the taxpayer is contesting in good faith through appropriate proceedings; (c) purchase money liens and liens securing rental payments under capital lease

arrangements; and (d) other liens arising in the ordinary course of business and not incurred in connection with the borrowing of money.

“Shares” has the meaning set forth in the preambles.

“Stock Rights” means each option, warrant, purchase right, subscription right, conversion right, exchange right or other contract, commitment or security providing for the issuance or sale of any capital stock, or otherwise causing to become outstanding any capital stock.

“Subsidiary” of a specified Person means any corporation, limited liability company, partnership, joint venture or other legal entity of which the specified Person (either alone or together with any other Subsidiary of the specified Person) owns, directly or indirectly, more than 50% of the stock or other equity, partnership, limited liability company or equivalent interests, the holders of which are generally entitled to vote for the election of the board of directors or other governing body of such corporation or other legal entity, or otherwise has the power to vote or direct the voting of sufficient securities to elect a majority of such board of directors or other governing body.

“Superior Proposal” has the meaning set forth in §5(h)(iii) below.

“Surviving Corporation” has the meaning set forth in §2(a) below.

“Tax Return” means any report, return, declaration or other information required to be supplied to a taxing authority in connection with Taxes.

“Taxes” means all taxes or other like assessments including, without limitation, income, withholding, gross receipts, excise, ad valorem, real or personal property, asset, sales, use, license, payroll, transaction, capital, net worth and franchise taxes imposed by or payable to any federal, state, county, local or foreign government, taxing authority, subdivision or agency thereof, including interest, penalties, additions to tax or additional amounts thereto.

2. The Transaction.

(a) *The Merger.* On and subject to the terms and conditions of this Agreement, at the Effective Time, Sub will be merged with and into Company in accordance with the DGCL, with Company surviving the Merger (the “Surviving Corporation”).

(b) *Closing.* The closing of the Merger (the “Closing”) will take place at 10:00 a.m., prevailing time, at the offices of Morgan, Lewis & Bockius LLP, 101 Park Avenue, New York, NY 10178, or at such other place as Acquiror and Company may agree, on a date (the “Closing Date”) to be specified by Acquiror and Company, which shall be no later than the second business day after satisfaction or waiver of the latest to occur of the conditions set forth in §6 (other than those conditions that, by their terms, cannot be satisfied until the Closing Date).

(c) *Actions at the Closing.* At the Closing, (i) Acquiror will deliver to Company the various certificates, instruments and documents referred to in §6(a) below; (ii) Company will deliver to Acquiror the various certificates, instruments and documents referred to in §6(b) below; (iii) Sub and Company will file with the Secretary of State of the State of Delaware a Certificate of Merger with respect to the Merger in such form as required by and executed in accordance with the relevant provisions of the DGCL (the “Certificate of Merger”).

(d) *Effect of Merger.*

(i) *General.* The Merger shall become effective at the date and time (the “Effective Time”) that the Certificate of Merger has been filed with the Secretary of State of the State of Delaware or at such later time as the parties may agree and specify in the Certificate of Merger. The Merger shall have the effects set forth in the DGCL.

(ii) *Charter.* The certificate of incorporation of Sub in effect immediately prior to the Effective Time shall be the certificate of incorporation of the Surviving Corporation until thereafter amended in accordance with its terms and as provided by law.

(iii) *By-laws.* The by-laws of Sub in effect immediately prior to the Effective Time shall be the by-laws of the Surviving Corporation until thereafter amended in accordance with their terms and as provided by law.

(iv) *Directors and Officers.* At and as of the Effective Time, the Board of Directors of the Surviving Corporation shall consist of two directors who shall be Elliot Noss and Michael Cooperman, who shall serve as directors until the earlier of their respective resignation, removal or otherwise ceasing to be a director or until their respective successors are duly elected and qualified, as the case may be. The officers of Company immediately prior to the Effective Time shall be the officers of the Surviving Corporation at and as of the Effective Time (retaining their respective positions), until the earlier of their respective resignation, removal or otherwise ceasing to be an officer or until their respective successors are duly elected and qualified, as the case may be.

(v) *Conversion of Shares.*

(A) *Shares to be Issued; Effect on Capital Stock.* The number of Shares issuable in exchange for the acquisition by Acquiror of all outstanding Company Capital Stock shall be equal to the Merger Consideration. Subject to the terms and conditions of this Agreement, as of the Effective Time, by virtue of the Merger and without any action on the part of Acquiror, Sub, Company, or the holder of any shares of Company Capital Stock each share of Company Capital Stock issued and outstanding immediately prior to the Effective Time shall be canceled and extinguished and shall be converted automatically into the right to receive, upon the terms and subject to conditions set forth below and throughout this Agreement, a number of fully paid and nonassessable Shares equal to the Exchange Ratio (the “Per Company Share Merger Consideration”). All such shares of Company Capital Stock shall no longer be outstanding, shall be canceled and shall cease to exist, and each holder of a certificate representing any such share of Company Capital Stock shall thereafter cease to have any rights with respect to such share of Company Capital Stock except the right to receive the Per Company Share Merger Consideration for each such share of Company Capital Stock and any unpaid dividends and distributions, if any, to which the holder of such share of Company Capital Stock is entitled pursuant to §2(e) below.

(B) *Shares of Sub.* At the Effective Time each issued and outstanding share of common stock, par value \$.01 per share, of Sub shall be converted into one fully paid and nonassessable share of common stock, par value \$.01 per share, of the Surviving Corporation.

(C) *General.* No Company Share or Company Preferred Share shall be deemed to be outstanding or to have any rights other than those set forth above in this §2(d)(v) after the Effective Time. Notwithstanding anything to the contrary in this §2(d)(v), no fractional Shares shall be issued to then former Company Stockholders. In lieu thereof, each then former holder of a share of Company Capital Stock who would otherwise have been entitled to receive a fraction of a Share (after taking into account all certificates delivered by such then former holder at any one time) shall receive an amount in cash (without interest) equal to such fraction of a Share multiplied by the last reported sale price on the securities exchange or over-the-counter market on which the Shares are traded on the first full trading day following the date on which the Effective Time occurs.

(vi) *Company Options.* At the Effective Time, all then outstanding options to purchase Company Shares under the Company Option Plan(s) shall be assumed by Acquiror in accordance with §5(o) hereof.

(vii) *Dissenters' Rights.*

(A) No conversion under §2(d)(v) hereof shall be made with respect to Company Shares or Company Preferred Shares held by a Dissenting Holder; *provided, however*, that each share of Company Capital Stock outstanding immediately prior to the Effective Time and held by a Dissenting Holder who shall, after the Effective Time, withdraw his demand for appraisal or lose his right of appraisal, in either case pursuant to the applicable provisions of the DGCL, shall be deemed to be converted, as of the Effective Time, into the Merger Consideration as set forth in §2(d)(v) hereof.

(B) Any Dissenting Holder (x) who files with Company a written objection to the Merger before the taking of the votes to approve this Agreement by the Company Stockholders and who states in such objection that he intends to demand payment for his shares of Company Capital Stock if the Merger is concluded and (y) whose shares of Company Capital Stock are not voted in favor of the Merger shall be entitled to demand payment from Company for his shares of Company Capital Stock and an appraisal of the value thereof, in accordance with the provisions of Section 262 of the DGCL.

(e) *Procedure for Exchange.*

(i) Prior to the Effective Time, Acquiror and Company will select a bank or trust company to act as exchange agent (the "Exchange Agent") hereunder. At or prior to the Effective Time, Acquiror shall deposit with the Exchange Agent a corpus (the "Exchange Fund") consisting of Shares and cash sufficient to permit the Exchange Agent to make full payment of the applicable Merger Consideration to the holders of all of the issued and outstanding Company Capital Stock, and (B) Acquiror will cause the Exchange Agent to mail or deliver a letter of transmittal (with instructions for its use) in a form to be mutually agreed upon by Acquiror and Company prior to Closing to each holder of issued and outstanding Company Capital Stock for the holder to use in surrendering the certificates which, immediately prior to the Effective Time, represented his or its Company Capital Stock against payment of the applicable Merger Consideration to which such holder is entitled pursuant to §2(d)(v). Upon surrender to the Exchange Agent of such certificates, together with such letter of transmittal, duly executed and completed in accordance with the instructions thereto, Acquiror shall promptly cause to be issued a certificate representing that number of whole Shares and a check representing the amount of cash in lieu of any fractional shares and unpaid dividends and distributions, if any, to which such Persons are entitled, after giving effect to any required tax withholdings. No interest will be paid or accrued on the cash in lieu of fractional shares and unpaid dividends and distributions, if any, payable to recipients of Shares. If payment is to be made to a Person other than the registered holder of the certificate surrendered, it shall be a condition of such payment that the certificate so surrendered shall be properly endorsed or otherwise in proper form for transfer and that the Person requesting such payment shall pay any transfer or other taxes required by reason of the payment to a Person other than the registered holder of the certificate surrendered or establish to the reasonable satisfaction of Acquiror or the Exchange Agent that such tax has been paid or is not applicable. In the event any certificate representing Company Capital Stock shall have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the Person claiming such certificate to be lost, stolen or destroyed, the Exchange Agent will issue in exchange for such lost, stolen or destroyed certificate the applicable Merger Consideration deliverable in respect thereof; *provided, however*, the Person to whom such

Merger Consideration is paid shall, as a condition precedent to the payment thereof, give Acquiror a bond or undertaking in such sum as it may direct or otherwise indemnify Acquiror in a manner reasonably satisfactory to it against any claim that may be made against Acquiror with respect to the certificate alleged to have been lost, stolen or destroyed. No dividends or other distributions declared after the Effective Time with respect to Shares and payable to the holders of record thereof shall be paid to the holder of any unsurrendered certificate until the holder thereof shall surrender such certificate in accordance with this §2(e). After the surrender of a certificate in accordance with this §2(e), the record holder thereof shall be entitled to receive any such dividends or other distributions, without any interest thereon, which theretofore had become payable with respect to the Shares represented by such certificate. No holder of an unsurrendered certificate shall be entitled, until the surrender of such certificate, to vote the Shares which his or its Company Capital Stock shall have been converted into the right to receive.

(ii) Company will furnish promptly to Acquiror a list, as of a recent date, of the record holders of Company Shares and Company Preferred Shares and their addresses, as well as mailing labels containing the names and addresses of all record holders of Company Shares and Company Preferred Shares. Company will furnish Acquiror with such additional information (including, but not limited to, updated lists of holders of Company Shares and Company Preferred Shares and their addresses and mailing labels) and such other assistance as Acquiror or its agents may reasonably request.

(iii) Acquiror may cause the Exchange Agent to invest the cash included in the Exchange Fund in one or more investments selected by Acquiror; *provided, however*, that the terms and conditions of the investments shall be such as to permit the Exchange Agent to make prompt payment of the Merger Consideration as necessary. Acquiror may cause the Exchange Agent to pay over to Acquiror any net earnings with respect to the investments, and Acquiror will replace promptly any portion of the Exchange Fund which the Exchange Agent loses through investments.

(iv) Acquiror may cause the Exchange Agent to pay over to Acquiror any portion of the Exchange Fund (including any earnings thereon) remaining 180 days after the Effective Time, and thereafter all former stockholders of Company shall be entitled to look to Acquiror (subject to abandoned property, escheat and other similar laws) as general creditors thereof with respect to the Merger Consideration and any cash payable upon surrender of their certificates.

(v) Acquiror shall pay all charges and expenses of the Exchange Agent; provided that if a Closing does not occur, Acquiror and Company shall split equally any charges and expenses of the Exchange Agent.

(f) *Closing of Transfer Records.* After the Effective Time, no transfer of Company Capital Stock outstanding prior to the Effective Time shall be made on the stock transfer books of the Surviving Corporation. If, after the Effective Time, certificates representing such shares are presented for transfer to the Exchange Agent, they shall be canceled and exchanged for certificates representing Shares, cash in lieu of fractional shares, if any, and unpaid dividends and distributions, if any, as provided in §2(e).

3. Representations and Warranties of Acquiror. Acquiror represents and warrants to Company:

(a) *Organization, Qualification and Corporate Power.* Acquiror is a corporation duly organized, validly existing and in good standing under the laws of Pennsylvania. Each of Acquiror's Subsidiaries is a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation. Each of Acquiror and its Subsidiaries is duly authorized to

conduct business and is qualified as a foreign corporation and in good standing under the laws of each jurisdiction where such qualification is required, except where the lack of such qualification or failure to be in good standing would not reasonably be expected to have a material adverse effect on the business, financial condition (including Cash on Hand) or results of operations of Acquiror and its Subsidiaries taken as a whole or on the ability of Acquiror to consummate the transactions contemplated by this Agreement (an “Acquiror Material Adverse Effect”). Each of Acquiror and its Subsidiaries has full corporate power and corporate authority, and all foreign, federal, state and local governmental permits, licenses and consents, required to carry on the businesses in which it is engaged and to own and use the properties owned and used by it, except for such permits, licenses and consents the failure of which to have would not reasonably be expected to have an Acquiror Material Adverse Effect. Acquiror does not own any equity interest in any corporation, partnership, limited liability company, joint venture or other legal entity other than those listed in §3(a) of the Acquiror Disclosure Letter accompanying this Agreement (the “Acquiror Disclosure Letter”). The jurisdiction of incorporation of each Subsidiary of Acquiror is listed in §3(a) of the Acquiror Disclosure Letter. Acquiror has delivered to Company a true, complete and correct copy of the articles of incorporation (or comparable charter document) and by-laws, each as amended to date, of Acquiror and all of its Subsidiaries. Neither Acquiror nor any of its Subsidiaries is in violation of any provision of its articles of incorporation (or comparable charter document) or by-laws.

(b) *Capitalization.* The entire authorized capital stock of Acquiror consists of 53,350,000 shares of capital stock, including 50,000,000 Shares, of which 12,574,406 Shares were issued and outstanding as of the date hereof, 100,000 shares of Class B Common Stock, no par value per share, none of which were issued and outstanding as of the date hereof, 2,000,000 shares of Class C Common Stock, no par value per share, none of which were issued and outstanding as of the date hereof, and 1,250,000 authorized shares of preferred stock, of which 5,000 shares have been designated Series A Convertible Preferred Stock, stated value \$1,000 per share, none of which were issued and outstanding as of the date hereof. The authorized capital stock of Sub consists, or will consist as of the Closing, of 1 share of common stock, par value \$.01. All of the issued and outstanding Shares have been duly authorized and are validly issued, fully paid and nonassessable, and none have been issued in violation of any preemptive or similar right granted by Acquiror. The Shares to be issued in connection with the Merger have been duly authorized by all necessary corporate action, and when issued in accordance with the terms of this Agreement, will be validly issued, fully paid and nonassessable and not subject to any preemptive rights, and will be issued in compliance with the requirements of the Securities Act and applicable state securities or blue sky laws. As of the date hereof, except as set forth in §3(b) of the Acquiror Disclosure Letter, no warrants of Acquiror were outstanding. As of the date hereof, 1,326,712 Shares were subject to issuance pursuant to employee stock options issued under Acquiror Benefit Plans. §3(b) of the Acquiror Disclosure Letter lists the exercise price and vesting schedule of all such employee stock options. Except as set forth above or in §3(b) of the Acquiror Disclosure Letter, neither Acquiror nor any of its Subsidiaries has any outstanding or authorized Stock Rights, and there are no outstanding or authorized stock appreciation, phantom stock, profit participation or similar rights with respect to Acquiror or any of its Subsidiaries. Except as set forth in §3(b) of the Acquiror Disclosure Letter, there are no rights, contracts, commitments or arrangements obligating Acquiror or any of its Subsidiaries to redeem, purchase or acquire, or offer to purchase, redeem or acquire, any outstanding shares of, or any outstanding options, warrants or rights of any kind to acquire any shares of, or any outstanding securities that are convertible into or exchangeable for any shares of, capital stock of Acquiror.

(c) *Subsidiaries.* Except as set forth in §3(c) of the Acquiror Disclosure Letter, Acquiror owns, directly or indirectly, 100% of the outstanding shares of capital stock or other equity interests of each of its Subsidiaries free and clear of any Security Interest and each such share of

capital stock or other equity interest has been duly authorized and is validly issued, fully paid and nonassessable, and none of such shares of capital stock or other equity interests has been issued in violation of any preemptive or similar right. No shares of capital stock of, or other equity interests in, any Subsidiary of Acquiror are reserved for issuance, and there are no contracts, agreements, commitments or arrangements obligating Acquiror or any of its Subsidiaries (i) to offer, sell, issue, grant, pledge, dispose of or encumber any shares of capital stock of, or other equity interests in, or any options, warrants or rights of any kind to acquire any shares of capital stock of, or other equity interests in, any of the Subsidiaries of Acquiror or (ii) to redeem, purchase or acquire, or offer to purchase or acquire, any outstanding shares of capital stock of, or other equity interests in, or any outstanding options, warrants or rights of any kind to acquire any shares of capital stock of, or other equity interest in, or any outstanding securities that are convertible into or exchangeable for, any shares of capital stock of, or other equity interests in, any of the Subsidiaries of Acquiror.

(d) *Voting Arrangements.* Except as set forth in §3(d) of the Acquiror Disclosure Letter or in Acquiror Reports filed prior to the date hereof, there are no voting trusts, proxies or other similar agreements or understandings to which Acquiror or any of its Subsidiaries is a party or by which Acquiror or any of its Subsidiaries is bound with respect to the voting of any shares of capital stock of Acquiror or any of its Subsidiaries or with respect to the registration of the offering, sale or delivery of any shares of capital stock of Acquiror or any of its Subsidiaries under the Securities Act or any other securities law. There are no issued or outstanding bonds, debentures, notes or other indebtedness of Acquiror having the right to vote on any matters on which stockholders of Acquiror may vote.

(e) *Authorization of Transaction.* Acquiror has full power and authority (including full corporate power and corporate authority), and has taken all required action, necessary to properly execute and deliver this Agreement and to perform its obligations hereunder, and this Agreement constitutes the valid and legally binding obligation of Acquiror, enforceable in accordance with its terms and conditions, except as limited by (i) applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally and (ii) general principles of equity, regardless of whether asserted in a proceeding in equity or at law; *provided, however*, that Acquiror cannot consummate the Merger unless and until it receives the Requisite Stockholder Approval of the Acquiror Shareholders.

(f) *Noncontravention.* Except as disclosed in §3(f) of the Acquiror Disclosure Letter, neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby, will (i) violate any constitution, statute, regulation, rule, injunction, judgment, order, decree or other restriction of any government, governmental agency or court of competent jurisdiction (a "Government Entity") to which Acquiror or any of its Subsidiaries is subject or any provision of the articles of incorporation or by-laws of Acquiror or any of its Subsidiaries or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of, create in any party the right to accelerate, terminate, modify or cancel or require any notice under any agreement, contract, lease, license, instrument or other arrangement to which Acquiror or any of its Subsidiaries is a party or by which it is bound or to which any of its assets is subject, except in the case of clause (ii) where the violation, conflict, breach, default, acceleration, termination, modification, cancellation, or failure to give notice would not reasonably be expected to have an Acquiror Material Adverse Effect or except as set forth in §3(f) of the Acquiror Disclosure Letter. Other than as required under the provisions of the Hart-Scott-Rodino Act, Nasdaq, the Securities Exchange Act, the Securities Act and state securities laws, neither Acquiror nor any of its Subsidiaries needs to give any notice to, make any filing with or obtain any authorization, consent or approval of any Government Entity in order for the parties to consummate the transactions contemplated by this Agreement, except where the failure to give notice, to file or to obtain any authorization, consent or approval would not reasonably be

expected to have an Acquiror Material Adverse Effect or except as set forth in §3(f) of the Acquiror Disclosure Letter. “Required Acquiror Consents” means any authorization, consent or approval of a Government Entity or other third party required to be obtained pursuant to any state securities laws or so that a matter set forth in §3(f) of the Acquiror Disclosure Letter would not be reasonably expected to have an Acquiror Material Adverse Effect for purposes of this §3(f).

(g) *Filings with the SEC.* Acquiror has made all filings with the SEC that it has been required to make under the Securities Act and the Securities Exchange Act (collectively, the “Acquiror Reports”). Each of the Acquiror Reports has complied with the Securities Act and the Securities Exchange Act in all material respects. None of the Acquiror Reports, as of their respective dates, contained any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading.

(h) *Financial Statements.*

(i) Acquiror has filed an Annual Report on Form 10-K (the “Acquiror 10-K”) for the fiscal year ended December 31, 1999 and Quarterly Reports on Form 10-Q (the “Acquiror 10-Qs”) for the fiscal quarters ended March 31, 2000, June 30, 2000 and September 30, 2000. The financial statements included in the Acquiror 10-K and the Acquiror 10-Qs (including the related notes and schedules) have been prepared from the books and records of Acquiror and its Subsidiaries in accordance with GAAP applied on a consistent basis throughout the periods covered thereby, and present fairly in all material respects the financial condition of Acquiror and its Subsidiaries as of the indicated dates and the results of operations and cash flows of Acquiror and its Subsidiaries for the periods set forth therein (subject in the case of quarterly financial statements to the absence of complete footnotes and subject to normal year-end audit adjustments).

(ii) Acquiror has delivered to Company a draft dated March 22, 2001, of Acquiror’s audited financial statements for the year ended December 31, 2000 (the “Acquiror Draft Financial Statements”).

(iii) From January 1, 2001 until the date of this Agreement, Acquiror and its Subsidiaries have not incurred any liabilities that are of a nature that would be required to be disclosed on a balance sheet of Acquiror and its Subsidiaries or the footnotes thereto prepared in conformity with GAAP, other than (A) liabilities incurred in the ordinary course of business that would not, individually or in the aggregate, reasonably be expected to have an Acquiror Material Adverse Effect or (B) liabilities disclosed in §3(h) of the Acquiror Disclosure Letter or in Acquiror Reports filed prior to the date hereof.

(i) *Events Subsequent to January 1, 2001.* From January 1, 2001 to the date of this Agreement, except as disclosed in the Acquiror Reports filed prior to the date hereof or except as set forth in §3(i) of the Acquiror Disclosure Letter, (i) Acquiror and its Subsidiaries have conducted their respective businesses only in, and have not engaged in any transaction other than according to, the ordinary and usual course of such businesses, and (ii) there has not been (A) any change in the financial condition, business or results of operations of Acquiror or any of its Subsidiaries, or any development or combination of developments relating to Acquiror or any of its Subsidiaries of which management of Acquiror has knowledge, and which would reasonably be expected to have an Acquiror Material Adverse Effect; (B) any declaration, setting aside or payment of any dividend or other distribution with respect to the capital stock of Acquiror, or any redemption, repurchase or other reacquisition of any of the capital stock of Acquiror; (C) any change by Acquiror in accounting principles, practices or methods materially affecting the reported consolidated assets, liabilities or results of operations of Acquiror; (D) any increase in the compensation of any officer of Acquiror or any of its Subsidiaries or grant of any general salary or

benefits increase to the employees of Acquiror or any of its Subsidiaries other than in the ordinary course of business consistent with past practices; (E) any issuance or sale of any capital stock or other securities (including any Stock Rights) by Acquiror or any of its Subsidiaries of any kind, other than upon exercise of Stock Rights issued by or binding upon Acquiror; (F) any material modification, amendment or change to the terms or conditions of any Stock Right; or (G) any split, combination, reclassification, redemption, repurchase or other reacquisition of any capital stock or other securities of Acquiror or any of its Subsidiaries.

(j) *Compliance.* Except as set forth in §3(j) of the Acquiror Disclosure Letter or in Acquiror Reports filed prior to the date hereof, Acquiror and its Subsidiaries are in compliance with all applicable foreign, federal, state and local laws, rules and regulations and all court orders, judgments and decrees to which any of them is a party, except where the failure to be in compliance would not reasonably be expected to have an Acquiror Material Adverse Effect.

(k) *Brokers' and Other Fees.* Except as set forth in §3(k) of the Acquiror Disclosure Letter, none of Acquiror and its Subsidiaries has any liability or obligation to pay any fees or commissions to any broker, finder or agent with respect to the transactions contemplated by this Agreement.

(l) *Litigation and Liabilities.* Except as disclosed in §3(l) of the Acquiror Disclosure Letter or in Acquiror Reports filed prior to the date hereof, there are (i) no actions, suits or proceedings pending or, to the knowledge of Acquiror, threatened against Acquiror or any of its Subsidiaries, or any facts or circumstances known to Acquiror which may give rise to an action, suit or proceeding against Acquiror or any of its Subsidiaries, which would reasonably be expected to have an Acquiror Material Adverse Effect, and (ii) no obligations or liabilities of Acquiror or any of its Subsidiaries, whether accrued, contingent or otherwise, known to Acquiror which would reasonably be expected to have an Acquiror Material Adverse Effect.

(m) *Taxes.* Except as set forth in §3(m) of the Acquiror Disclosure Letter or in Acquiror Reports filed prior to the date hereof, Acquiror and each of its Subsidiaries have duly filed or caused to be duly filed on their behalf all federal, state, local and foreign Tax Returns required to be filed by them, and have duly paid, caused to be paid or made adequate provision for the payment of all Taxes required to be paid in respect of the periods covered by such Tax Returns, except where the failure to file such Tax Returns or to pay such Taxes would not reasonably be expected to have an Acquiror Material Adverse Effect. Except as set forth in §3(m) of the Acquiror Disclosure Letter, no claims for Taxes have been asserted against Acquiror or any of its Subsidiaries and no material deficiency for any Taxes has been proposed, asserted or assessed which has not been resolved or paid in full. To the knowledge of Acquiror, no Tax Return or taxable period of Acquiror or any of its Subsidiaries is under examination by any taxing authority, and neither Acquiror nor any of its Subsidiaries has received written notice of any pending audit by any taxing authority. There are no outstanding agreements or waivers extending the statutory period of limitation applicable to any Tax Return for any period of Acquiror or any of its Subsidiaries. Except as set forth in §3(m) of the Acquiror Disclosure Letter, there are no tax liens other than liens for Taxes not yet due and payable relating to Acquiror or any of its Subsidiaries. Except as provided in §3(m) of the Acquiror Disclosure Letter, neither Acquiror nor any of its Subsidiaries is a party to any agreement or contract which would result in payment of any "excess parachute payment" within the meaning of Section 280G of the Code as of the date of this Agreement. Neither Acquiror nor any of its Subsidiaries has filed any consent pursuant to Section 341(f) of the Code or agreed to have Section 341(f)(2) of the Code apply to any disposition of a subsection (f) asset owned by Acquiror or any of its Subsidiaries. Acquiror has not been and is not a United States real property holding company (as defined in Section 897(c)(2) of the Code) during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code. None of Acquiror or its Subsidiaries (x) has been a member of an "affiliated group," within the meaning of Section 1504(a) of the Code, other than a group the common parent of which was Acquiror or

(y) has any liability for the Taxes of any person, other than any of Acquiror or its Subsidiaries under Treasury Regulation §1.1502-6 (or any similar provision of state, local or foreign law) as a transferee, successor, by contract or otherwise. Acquiror has withheld and has timely paid over to the proper governmental authorities all Taxes required to have been withheld and paid over, and complied with all information reporting and backup withholding requirements, including maintenance of required records with respect thereto, in connection with amounts paid to any shareholder, employee, independent contractor, creditor or other third party. Except as set forth in §3(m) of the Acquiror Disclosure Letter, Acquiror's tax basis in its assets for purposes of determining its future amortization, depreciation and other federal income tax deductions is accurately reflected on Acquiror's tax books and records. Acquiror has disclosed on its Tax Returns all positions taken therein that could give rise to substantial understatement of Tax within the meaning of Code Section 6662. Except as set forth in §3(m) of the Acquiror Disclosure Letter, the liability of each of Acquiror and its Subsidiaries for unpaid Taxes did not, as of the dates of the financial statements described in §3(h), exceed the current liability accruals for Taxes (excluding reserves for deferred Taxes) set forth on such financial statements. The liability of each of Acquiror and its Subsidiaries for unpaid Taxes as of the Closing Date will not exceed such accruals as adjusted on the books of Acquiror to reflect transactions occurring in the ordinary course of business through the Closing Date. Acquiror has a taxable year ending on December 31. Each of Acquiror and its Subsidiaries currently utilizes the accrual method of accounting for income tax purposes and such method of accounting has not changed since 1999. Other than in relation to its conversion to the accrual method of accounting as of January 1, 1999, neither Acquiror nor any of its Subsidiaries has agreed to, and is not and will not be required to, make any adjustments under Code section 481(a) or a similar provision of foreign law as a result of a change in accounting methods. Copies of filed Tax Returns of each of Acquiror and its Subsidiaries for taxable years beginning after December 31, 1998, and copies of any Tax examinations, audit reports, or notices of deficiencies of each of Acquiror and its Subsidiaries, without regard to time, have been delivered to Company. Neither Acquiror nor any of its Subsidiaries is, or has ever been, a party to a Tax sharing, Tax indemnity or Tax allocation agreement, and neither Acquiror nor any of its Subsidiaries has assumed the Tax liability of any other Person under contract. To the best knowledge and belief of Acquiror after due inquiry (i) Acquiror's adjusted tax basis in BigChalk.com, Inc. is approximately \$2.87 million and (ii) as of December 31, 2000, Acquiror's aggregate adjusted tax basis in its assets is approximately \$11,696,149. Acquiror's aggregate adjusted tax basis in its assets at Closing will be the amount referred to in clause (ii) of the previous sentence as adjusted in a manner consistent with past practice to reflect depreciation, amortization and transactions in the ordinary course of the Acquiror's business.

(n) *Fairness Opinion.* Janney Montgomery Scott has delivered the Fairness Opinion to the Acquiror Board, and a true and complete copy thereof has been furnished to Company.

(o) *Employee Benefits.*

(i) All pension, profit-sharing, deferred compensation, savings, cash or equity-based incentive plans, medical, dental, life insurance, severance plans, programs, policies and arrangements, whether or not subject to the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and all other employee benefit plans, programs, policies and arrangements which are sponsored by Acquiror, any Subsidiary of Acquiror or any Acquiror ERISA Affiliate (as defined below) of Acquiror or to which Acquiror, any Subsidiary of Acquiror or any Acquiror ERISA Affiliate contributes or has, since January 1, 1996, been required to contribute, and which cover employees or directors of Acquiror or any Subsidiary of Acquiror (the "Acquiror Employees") or former employees or directors of Acquiror or any Subsidiary of Acquiror, all employment, consulting or severance contracts with employees or former employees of Acquiror or any Subsidiary of Acquiror, and any applicable "change of

control” or similar provisions in any plan, contract or arrangement that covers Acquiror Employees (collectively, “Acquiror Benefit Plans” and individually an “Acquiror Benefit Plan”) are accurately and completely listed in §3(o) of the Acquiror Disclosure Letter. No Acquiror Benefit Plan is a multi-employer plan, money purchase plan, defined benefit plan, multiple employer plan or multiple employer welfare arrangement (each term as defined in ERISA), and no Acquiror Benefit Plan is covered by Title IV of ERISA. True and complete copies of all Acquiror Benefit Plans have been provided to Company.

(ii) All Acquiror Benefit Plans have been established and maintained in compliance with their terms and applicable law, including, but not limited to the Code and ERISA and the rules and regulations promulgated thereunder. Each Acquiror Benefit Plan which is an “employee pension benefit plan” within the meaning of Section 3(2) of ERISA (“Acquiror Pension Plan”) and which is intended to be qualified under Section 401(a) of the Code, has received a favorable determination letter from the Internal Revenue Service, which determination letter is currently in effect, and there are no proceedings pending or, to the knowledge of Acquiror, threatened, or any facts or circumstances known to Acquiror, which are reasonably likely to result in revocation of any such favorable determination letter. There is no pending or, to the knowledge of Acquiror, threatened litigation relating to the Acquiror Benefit Plans. Neither Acquiror, any Acquiror ERISA Affiliate or Acquiror Benefit plan or trustee thereof has engaged in a transaction with respect to any Acquiror Benefit Plan that, assuming the taxable period of such transaction expired as of the date hereof, is reasonably likely to subject Acquiror or any Acquiror ERISA Affiliate to a tax or penalty imposed by either Section 4975 of the Code or Section 502(i) of ERISA.

(iii) No liability under Title IV of ERISA has been or is reasonably likely to be incurred by Acquiror or any of its Subsidiaries with respect to any ongoing, frozen or terminated Acquiror Benefit Plan that is a “single-employer plan”, within the meaning of Section 4001(a)(15) of ERISA, currently or formerly maintained by any of them, or the single-employer plan of any entity which is considered a predecessor of Acquiror or one employer with Acquiror under Section 4001 of ERISA (an “Acquiror ERISA Affiliate”). All contributions required to be made under the terms of any Acquiror Benefit Plan have been timely made or reserves therefor on the balance sheet of Acquiror have been established, which reserves are adequate.

(iv) Acquiror and its Subsidiaries have not incurred any liability under, and have complied in all material respects with, the WARN Act and no fact or event exists that could give rise to liability under such act.

(v) No Acquiror Benefit Plan is presently under audit or examination (nor has notice been received of a potential audit or examination) by the IRS, the Department of Labor, or any other governmental entity, and no matters are pending with respect to any Acquiror Benefit Plan under any IRS program.

(vi) No Acquiror Benefit Plan contains any provision or is subject to any law that would prohibit the transactions contemplated by this Agreement or, except as set forth in Section 3(o) of the Acquiror Disclosure Letter, that would give rise to any vesting or increase of benefits, any severance, termination, or other payments or liabilities as a result of the transactions contemplated by this Agreement. No Acquiror Benefit Plan provides for any bonus compensation in contemplation of the transactions contemplated by this Agreement.

(vii) Acquiror has made no plan or commitment, whether or not legally binding, to create any additional Acquiror Benefit Plan or to modify or change any existing Acquiror Benefit Plan. No statement, either written or oral, has been made by Acquiror to any Person with regard to any Acquiror Benefit Plan that was not in accordance with the Acquiror Benefit

Plan and that could have an adverse economic consequence to Acquiror. All Acquiror Benefit Plans may be amended or terminated without penalty by Acquiror at any time on or after the Closing.

(viii) With respect to any Acquiror Benefit Plan that is an “employee welfare benefit plan” (within the meaning of Section 3(1) of ERISA), (A) each welfare plan for which contributions are claimed as deductions under any provision of the Code is in compliance with all applicable requirements pertaining to such deduction, (B) with respect to any welfare benefit fund (within the meaning of Section 419 of the Code) related to a welfare plan, there is no disqualified benefit (within the meaning of Section 4976(b) of the Code) that would result in the imposition of a tax under Section 4976(a) of the Code, (C) any Acquiror Benefit Plan that is a group health plan (within the meaning of Section 4980B(g)(2) of the Code) complies, and in each and every case has complied, in all material respects with all of the requirements of Section 4980B of the Code, ERISA, Title XXII of the Public Health Service Act, the applicable provisions of the Social Security Act, the Health Insurance Portability and Accountability Act of 1996, and other applicable laws, and (D) no welfare plan provides health or other benefits after an employee’s or former employee’s retirement or other termination of employment except as required by Section 4980B of the Code.

(ix) All Persons classified by Acquiror as independent contractors satisfy and have at all times satisfied the requirements of applicable law to be so classified; Acquiror has fully and accurately reported their compensation on IRS Forms 1099 when required to do so; and Acquiror has no obligations to provide benefits with respect to such Persons under Acquiror Benefit Plans or otherwise. Acquiror does not employ and has not employed any “leased employees” as defined in Section 414(n) of the Code.

(p) *Environmental Matters.* Except for such matters that, individually or in the aggregate, would not reasonably be expected to have an Acquiror Material Adverse Effect or would not otherwise require disclosure pursuant to the Securities Exchange Act, or are listed in §3(p) of the Acquiror Disclosure Letter or described in Acquiror Reports filed prior to the date hereof, (i) each of Acquiror and its Subsidiaries has complied and is in compliance with all applicable Environmental Laws; (ii) the properties currently owned or operated by Acquiror or any of its Subsidiaries (including soils, groundwater, surface water, buildings or other structures) are not contaminated with Hazardous Substances; (iii) neither Acquiror nor any of its Subsidiaries is subject to liability for any Hazardous Substance disposal or contamination on any third party property; (iv) neither Acquiror nor any of its Subsidiaries has had any release or threat of release of any Hazardous Substance; (v) neither Acquiror nor any of its Subsidiaries has received any notice, demand, threat, letter, claim or request for information alleging that it or any of its Subsidiaries may be in violation of or liable under any Environmental Law (including any claims relating to electromagnetic fields or microwave transmissions); (vi) neither Acquiror nor any of its Subsidiaries is subject to any orders, decrees, injunctions or other arrangements with any governmental or regulatory authority of competent jurisdiction or is subject to any indemnity or other agreement with any third party relating to liability under any Environmental Law or relating to Hazardous Substances; and (vii) to Acquiror’s knowledge, there are no circumstances or conditions involving Acquiror or any of its Subsidiaries that would reasonably be expected to result in any claims, liabilities, investigations, costs or restrictions on the ownership, use or transfer of any of its properties pursuant to any Environmental Law.

(q) *Intellectual Property.* Except as disclosed in §3(q) of the Acquiror Disclosure Letter or in the Acquiror Reports filed prior to the date hereof, Acquiror and its Subsidiaries have all right, title and interest in, or a valid and binding license to use, all Acquiror Intellectual Property. Except as disclosed in §3(q) of the Acquiror Disclosure Letter or in the Acquiror Reports filed prior to the date hereof, Acquiror and its Subsidiaries (i) have not defaulted in any material respect under

any license to use any Acquiror Intellectual Property, (ii) are not the subject of any proceeding or litigation for infringement of any third party intellectual property, (iii) have no knowledge of circumstances that would be reasonably expected to give rise to any such proceeding or litigation and (iv) have no knowledge of circumstances that are causing or would be reasonably expected to cause the loss or impairment of any Acquiror Intellectual Property, other than a default, proceeding, litigation, loss or impairment that is not having or would not be reasonably expected to have, individually or in the aggregate, an Acquiror Material Adverse Effect.

(r) *Insurance.* Except as set forth in §3(r) of the Acquiror Disclosure Letter, each of Acquiror and its Subsidiaries is insured with financially responsible insurers in such amounts and against such risks and losses as are customary for companies conducting the business as conducted by Acquiror and its Subsidiaries.

(s) *Certain Contracts.* Except as set forth in §3(s) of the Acquiror Disclosure Letter, all material contracts to which Acquiror or any of its Subsidiaries is a party or may be bound that are required by Item 601(b)(10) of Regulation S-K to be filed as exhibits to, or incorporated by reference in, the Acquiror 10-K or the Acquiror 10-Q have been so filed or incorporated by reference. All material contracts to which Acquiror or any of its Subsidiaries is a party or may be bound that have been entered into as of the date hereof and will be required by Item 601(b)(10) of Regulation S-K to be filed or incorporated by reference into Acquiror's Annual Report on Form 10-K for the year ended December 31, 2000, but which have not previously been filed or incorporated by reference into any Acquiror Report, are set forth in §3(s) of the Acquiror Disclosure Letter. All contracts, licenses, consents, royalty or other agreements which are material to Acquiror and its Subsidiaries, taken as a whole, to which Acquiror or any of its Subsidiaries is a party (the "Acquiror Contracts") are valid and in full force and effect on the date hereof except to the extent they have previously expired or been terminated in accordance with their terms or, to the extent such invalidity would not reasonably be expected to have an Acquiror Material Adverse Effect and, to Acquiror's knowledge, neither Acquiror nor any of its Subsidiaries has violated any provision of, or committed or failed to perform any act which with or without notice, lapse of time or both would constitute a default under the provisions of, any Acquiror Contract, except for defaults which individually and in the aggregate would not reasonably be expected to result in an Acquiror Material Adverse Effect.

(t) *Investment Company.* Acquiror is not an "Investment Company" as defined in the Investment Company Act of 1940, as amended.

(u) *Cash on Hand.* As of February 28, 2001, Cash on Hand of Acquiror exceeded \$10,000,000. As of the Closing, Cash on Hand (disregarding any Cash on Hand of the Company) shall be no less than \$7.5 million.

(v) *Takeover Statutes; Dissenters Rights.* In connection with the transactions contemplated hereby, (i) no "fair price," "control transaction," "control share acquisition" or other form of anti-takeover provision under the Pennsylvania Business Corporation Law is applicable to the Merger, the Acquiror or the acquisition of Shares by holders of Company Capital Stock in the Merger, and (ii) Acquiror Shareholders are not entitled to exercise any dissenters rights. Acquiror represents that the restrictions on "business combinations" contained in Section 2555 of the Pennsylvania Business Corporation Law, are inapplicable to the transactions contemplated by this Agreement and the acquisition of Shares by holders of Company Capital Stock pursuant to the terms of this Agreement has been approved by the Acquiror Board for purpose of such Section 2555.

4. Representations and Warranties of Company. Company represents and warrants to Acquiror:

(a) *Organization, Qualification and Corporate Power.* Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. Each of Company's Subsidiaries is a corporation or other entity duly organized, validly existing and in good standing under the laws of its jurisdiction of organization. Each of Company and its Subsidiaries is duly authorized to conduct business and is qualified as a foreign corporation or other entity in good standing under the laws of each jurisdiction where such qualification is required, except where the lack of such qualification or failure to be in good standing would not reasonably be expected to have a material adverse effect on the business, financial condition or results of operations of Company and its Subsidiaries taken as a whole or on the ability of Company to consummate the transactions contemplated by this Agreement (a "Company Material Adverse Effect"). Each of Company and its Subsidiaries has full corporate power and corporate authority, and all foreign, federal, state and local governmental permits, licenses and consents, required to carry on the businesses in which it is engaged and to own and use the properties owned and used by it, except for such permits, licenses and consents the failure of which to have would not reasonably be expected to have a Company Material Adverse Effect. Company does not own any equity interest in any corporation, partnership, limited liability company, joint venture or other entity other than the Subsidiaries listed in §4(a) of Company's Disclosure Letter accompanying this Agreement (the "Company Disclosure Letter"). The jurisdiction of incorporation of each Subsidiary of Company is listed in §4(a) of the Company Disclosure Letter. Except as set forth in §4(a) of the Company Disclosure Letter, Company has delivered to Acquiror a true, complete and correct copy of its certificate of incorporation (or comparable charter document) and by-laws, each as amended to date, of Company and all of its Subsidiaries. Neither Company nor any of its Subsidiaries is in violation of any provision of its certificate of incorporation (or comparable charter document) or by-laws.

(b) *Capitalization.* The entire authorized capital stock of Company consists of 100,000,000 shares of capital stock, including 60,000,000 authorized Company Shares, of which 3,000,000 are issued and outstanding as of the date hereof and 40,000,000 authorized shares of preferred stock, of which 28,677,402 Company Preferred Shares are issued and outstanding as of the date hereof. All of the issued and outstanding shares of Company Capital Stock have been duly authorized and are validly issued, fully paid and nonassessable, and none have been issued in violation of any preemptive or similar right granted by Company. As of the date hereof, 5,836,705 Company Shares were subject to issuance pursuant to employee stock options issued under the Company Option Plan(s). §4(b) of the Company Disclosure Letter lists the exercise price and vesting schedule of all such employee stock options. Except as set forth above or in §4(b) of the Company Disclosure Letter, neither Company nor any of its Subsidiaries has any outstanding or authorized Stock Rights or outstanding or authorized stock appreciation, phantom stock, profit participation or similar rights with respect to Company or any of its Subsidiaries. Except as set forth in §4(b) of the Company Disclosure Letter, there are no rights, contracts, commitments or arrangements obligating Company or any of its Subsidiaries to redeem, purchase or acquire, or offer to purchase, redeem or acquire, any outstanding shares of, or any outstanding options, warrants or rights of any kind to acquire any shares of, or any outstanding securities that are convertible into or exchangeable for any shares of, capital stock of Company.

(c) *Subsidiaries.* Except as set forth in §4(c) of the Company Disclosure Letter, Company, directly or indirectly, owns 100% of the outstanding shares of capital stock or other equity interests of each of its Subsidiaries free and clear of any Security Interest and each such share of capital stock or other equity interest has been duly authorized and is validly issued, fully paid and nonassessable, and none of such shares of capital stock or other equity interests has been issued in violation of any preemptive or similar right. No shares of capital stock of, or other equity interests

in, any Subsidiary of Company are reserved for issuance, and there are no contracts, agreements, commitments or arrangements obligating Company or any of its Subsidiaries (i) to offer, sell, issue, grant, pledge, dispose of or encumber any shares of capital stock of, or other equity interests in, or any options, warrants or rights of any kind to acquire any shares of capital stock of, or other equity interests in, any of the Subsidiaries of Company or (ii) to redeem, purchase or acquire, or offer to purchase or acquire, any outstanding shares of capital stock of, or other equity interests in, or any outstanding options, warrants or rights of any kind to acquire any shares of capital stock of, or other equity interest in, or any outstanding securities that are convertible into or exchangeable for, any shares of capital stock of, or other equity interests in, any of the Subsidiaries of Company.

(d) *Voting Arrangements.* Except as set forth in §4(d) of the Company Disclosure Letter there are no voting trusts, proxies or other similar agreements or understandings to which Company or any of its Subsidiaries is a party or by which Company or any of its Subsidiaries is bound with respect to the voting of any shares of capital stock of Company or any of its Subsidiaries or with respect to the registration of the offering, sale or delivery of any shares of capital stock of Company or any of its Subsidiaries under the Securities Act or any other securities law. There are no issued or outstanding bonds, debentures, notes or other indebtedness of Company having the right to vote on any matters on which stockholders of Company may vote.

(e) *Authorization of Transaction.* Company has full power and authority (including full corporate power and corporate authority), and has taken all required action, necessary to properly execute and deliver this Agreement and to perform its obligations hereunder, and this Agreement constitutes the valid and legally binding obligation of Company, enforceable in accordance with its terms and conditions, except as limited by (i) applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally and (ii) general principles of equity, regardless of whether asserted in a proceeding in equity or at law; *provided, however*, that Company cannot consummate the Merger unless and until it receives the Requisite Stockholder Approval of the Company Stockholders.

(f) *Noncontravention.* Except as disclosed in §4(f) of the Company Disclosure Letter, neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby, will (i) violate any constitution, statute, regulation, rule, injunction, judgment, order, decree or other restriction of any Government Entity to which Company or any of its Subsidiaries is subject or any provision of the charter or by-laws of Company or any of its Subsidiaries or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of, create in any party the right to accelerate, terminate, modify or cancel or require any notice under any agreement, contract, lease, license, instrument or other arrangement to which Company or any of its Subsidiaries is a party or by which it is bound or to which any of its assets is subject, except in the case of clause (ii) where the violation, conflict, breach, default, acceleration, termination, modification, cancellation or failure to give notice would not reasonably be expected to have a Company Material Adverse Effect or except as set forth in §4(f) of the Company Disclosure Letter. Other than as required under the provisions of the Hart-Scott-Rodino Act, the DGCL and applicable securities laws, neither Company nor any of its Subsidiaries needs to give any notice to, make any filing with or obtain any authorization, consent or approval of any Government Entity in order for the parties to consummate the transactions contemplated by this Agreement, except where the failure to give notice, to file or to obtain any authorization, consent or approval would not reasonably be expected to have a Company Material Adverse Effect or except as set forth in §4(f) of the Company Disclosure Letter. "Required Company Consents" means any authorization, consent or approval of a Government Entity or other third party required to be obtained pursuant to any state securities laws or so that a matter set forth in § 4(f) of the Company Disclosure Letter would not be reasonably expected to have a Company Material Adverse Effect for purposes of this §4(f).

(g) *Financial Statements.*

(i) Company's consolidated balance sheets as at December 31, 1999 and its consolidated statements of operations, cash flows and stockholders' equity for the period from May 4, 1999 through December 31, 1999, audited by KPMG LLP, and its unaudited interim consolidated balance sheets as at June 30 and September 30, 1999 and March 31, June 30 and September 30, 2000 and its consolidated statements of operations, cash flows and stockholders' equity for the periods then ended, have been prepared from the books and records of Company and its Subsidiaries in accordance with GAAP applied on a consistent basis throughout the periods covered thereby, and present fairly in all material respects the financial condition of Company and its Subsidiaries as of the indicated dates and the results of operations and cash flows of Company and its Subsidiaries for the periods set forth therein (subject in the case of quarterly financial statements to the absence of complete footnotes and subject to normal year-end audit adjustments). The Tucows Division of Tucows Interactive Limited's (the "Division") balance sheet as at December 31, 1998 and its statements of operations and cash flows for the years ended December 31, 1997 and 1998 and the period from January 1, 1999 through May 3, 1999, audited by KPMG LLP, and its unaudited interim balance sheet as at March 31, 1999 and its statements of operations and cash flows for the period then ended, have been prepared from the books and records of the Division in accordance with GAAP applied on a consistent basis throughout the periods covered thereby, and present fairly in all material respects the financial condition of the Division as of the indicated dates and the results of operations and cash flows of the Division for the periods set forth therein (subject in the case of quarterly financial statements to the absence of complete footnotes and subject to normal year-end audit adjustments).

(ii) Company has delivered to Acquiror a draft dated March 23, 2001, of Company's audited financial statements for the years ended December 31, 1999 and 2000 (the "Company Draft Financial Statements").

(iii) From January 1, 2001 until the date of this Agreement, Company and its Subsidiaries have not incurred any liabilities that are of a nature that would be required to be disclosed on a balance sheet of Company and its Subsidiaries or the footnotes thereto prepared in conformity with GAAP, other than (A) liabilities incurred in the ordinary course of business that would not, individually or in the aggregate, reasonably be expected to have a Company Material Adverse Effect or (B) liabilities disclosed in §4(g) of the Company Disclosure Letter.

(h) *Events Subsequent to January 1, 2001.* From January 1, 2001 to the date of this Agreement, except as set forth in §4(h) of the Company Disclosure Letter, (i) Company and its Subsidiaries have conducted their respective businesses only in, and have not engaged in any transaction other than according to, the ordinary and usual course of such businesses, and (ii) there has not been (A) any change in the financial condition, business or results of operations of Company or any of its Subsidiaries, or any development or combination of developments relating to Company or any of its Subsidiaries of which management of Company has knowledge, and which would reasonably be expected to have a Company Material Adverse Effect; (B) any declaration, setting aside or payment of any dividend or other distribution with respect to the capital stock of Company, or any redemption, repurchase or other reacquisition of any of the capital stock of Company; (C) any change by Company in accounting principles, practices or methods materially affecting the reported consolidated assets, liabilities or results of operations of Company; (D) any increase in the compensation of any officer of Company or any of its Subsidiaries or grant of any general salary or benefits increase to the employees of Company or any of its Subsidiaries other than in the ordinary course of business consistent with past practices; (E) any issuance or sale of any capital stock or other securities (including any Stock Rights) by Company or any of its Subsidiaries of any kind, other than upon exercise of Stock Rights issued by

or binding upon Company; (F) any material modification, amendment or change to the terms or conditions of any Stock Right; or (G) any split, combination, reclassification, redemption, repurchase or other reacquisition of any capital stock or other securities of Company or any of its Subsidiaries.

(i) *Compliance.* Except as set forth in §4(i) of the Company Disclosure Letter, Company and its Subsidiaries are in compliance with all applicable foreign, federal, state and local laws, rules and regulations and all court orders, judgments and decrees to which any of them is a party except where the failure to be in compliance would not reasonably be expected to have a Company Material Adverse Effect.

(j) *Brokers' and Other Fees.* Except as set forth in §4(j) of the Company Disclosure Letter, none of Company and its Subsidiaries has any liability or obligation to pay any fees or commissions to any broker, finder or agent with respect to the transactions contemplated by this Agreement.

(k) *Litigation and Liabilities.* Except as disclosed in §4(k) of the Company Disclosure Letter, there are (i) no actions, suits or proceedings pending or, to the knowledge of Company, threatened against Company or any of its Subsidiaries, or any facts or circumstances known to Company which may give rise to an action, suit or proceeding against Company or any of its Subsidiaries, which would reasonably be expected to have a Company Material Adverse Effect and (ii) no obligations or liabilities of Company or any of its Subsidiaries, whether accrued, contingent or otherwise, known to Company which would reasonably be expected to have a Company Material Adverse Effect.

(l) *Taxes.* Except as set forth in §4(l) of the Company Disclosure Letter, Company and each of its Subsidiaries have duly filed or caused to be duly filed on their behalf all federal, state, local and foreign Tax Returns required to be filed by them, and have duly paid, caused to be paid or made adequate provision for the payment of all Taxes required to be paid in respect of the periods covered by such Tax Returns, except where the failure to file such Tax Returns or to pay such Taxes would not reasonably be expected to have a Company Material Adverse Effect. Except as set forth in §4(l) of the Company Disclosure Letter, no claims for Taxes have been asserted against Company or any of its Subsidiaries and no material deficiency for any Taxes has been proposed, asserted or assessed which has not been resolved or paid in full. To the knowledge of Company, no Tax Return or taxable period of Company or any of its Subsidiaries is under examination by any taxing authority, and neither Company nor any of its Subsidiaries has received written notice of any pending audit by any taxing authority. There are no outstanding agreements or waivers extending the statutory period of limitation applicable to any Tax Return for any period of Company or any of its Subsidiaries. Except as set forth in §4(l) of the Company Disclosure Letter, there are no tax liens other than liens for Taxes not yet due and payable relating to Company or any of its Subsidiaries. Company has no reason to believe that any conditions exist that could reasonably be expected to prevent the Merger from qualifying as a reorganization within the meaning of Section 368(a) of the Code. Except as provided in §4(l) of the Company Disclosure Letter, neither Company nor any of its Subsidiaries is a party to any agreement or contract which would result in payment of any "excess parachute payment" within the meaning of Section 280G of the Code as of the date of this Agreement. Neither Company nor any of its Subsidiaries has filed any consent pursuant to Section 341(f) of the Code or agreed to have Section 341(f)(2) of the Code apply to any disposition of a subsection (f) asset owned by Company or any of its Subsidiaries. Company has not been and is not a United States real property holding company (as defined in Section 897(c)(2) of the Code) during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code. None of Company or its Subsidiaries (x) has been a member of an "affiliated group," within the meaning of Section 1504(a) of the Code, other than a group the common parent of which was Company or (y) has any liability for the Taxes of any Person, other than any of Company or its Subsidiaries under Treasury Regulation §1.1502-6 (or any similar

provision of state, local or foreign law) as a transferee, successor, by contract or otherwise. Company has withheld and has timely paid over to the proper governmental authorities all Taxes required to have been withheld and paid over, and complied with all information reporting and backup withholding requirements, including maintenance of required records with respect thereto, in connection with amounts paid to any shareholder, employee, independent contractor, creditor or other third party. Company's tax basis in its assets for purposes of determining its future amortization, depreciation and other federal income tax deductions is accurately reflected on Company's tax books and records. Company has disclosed on its Tax Returns all positions taken therein that could give rise to substantial understatement of Tax within the meaning of Code Section 6662. The liability of each of Company and its Subsidiaries for unpaid Taxes did not, as of the dates of the financial statements described in §4(g), exceed the current liability accruals for Taxes (excluding reserves for deferred Taxes) set forth on such financial statements. The liability of each of Company and its Subsidiaries for unpaid Taxes as of the Closing Date will not exceed such accruals as adjusted on the books of Company to reflect transactions occurring in the ordinary course of business through the Closing Date. Company has a taxable year ending on December 31. Each of Company and its Subsidiaries currently utilizes the accrual method of accounting for income tax purposes and such method of accounting has not changed since its incorporation. Neither Company nor any of its Subsidiaries has agreed to, and is not and will not be required to, make any adjustments under Code section 481(a) or a similar provision of foreign law as a result of a change in accounting methods. Copies of filed Tax Returns of each of Company and its Subsidiaries for taxable years beginning after December 31, 1998, and copies of any Tax examinations, audit reports, or notices of deficiencies of each of Company and its Subsidiaries, without regard to time, have been delivered to Acquiror. Neither Company nor any of its Subsidiaries is, or has ever been, a party to a Tax sharing, Tax indemnity or Tax allocation agreement, and neither Company nor any of its Subsidiaries has assumed the Tax liability of any other Person under contract.

(m) *Employee Benefits.*

(i) All pension, profit-sharing, deferred compensation, savings, cash or equity based incentive plans, medical, dental, life insurance, severance plans, programs, policies and arrangements, whether or not subject to ERISA, and all other employee benefit plans, programs, policies and arrangements which are sponsored by Company, any Subsidiary of Company or any Company ERISA Affiliate (as defined below) of Company or to which Company, any Subsidiary of Company or any Company ERISA Affiliate contributes or has, since January 1, 1996, been required to contribute, and which cover employees or directors of Company or any Subsidiary of Company (the "Company Employees") or former employees or directors of Company or any Subsidiary of Company, all employment, consulting or severance contracts with employees or former employees of Company or any Subsidiary of Company, and any applicable "change of control" or similar provisions in any plan, contract or arrangement that covers Company Employees (collectively, "Company Benefit Plans" and individually a "Company Benefit Plan") are accurately and completely listed in §4(m) of the Company Disclosure Letter. No Company Benefit Plan is a multi-employer plan, money purchase plan, defined benefit plan, multiple employer plan or multiple employer welfare arrangement (each term as defined in ERISA) and no Company Benefit Plan is covered by Title IV of ERISA. True and complete copies of all Company Benefit Plans have been made available to Acquiror.

(ii) All Company Benefit Plans have been established and maintained in compliance with their terms and applicable law, including, but not limited to the Code and ERISA and the rules and regulations promulgated thereunder. Each Company Benefit Plan which is an "employee pension benefit plan" within the meaning of Section 3(2) of ERISA ("Company

Pension Plan”) and which is intended to be qualified under Section 401(a) of the Code, has received a favorable determination letter from the Internal Revenue Service, which determination letter is currently in effect, and there are no proceedings pending or, to the knowledge of Company, threatened, or any facts or circumstances known to Company, which are reasonably likely to result in revocation of any such favorable determination letter. There is no pending or, to the knowledge of Company, threatened litigation relating to the Company Benefit Plans. Neither Company, any Company ERISA Affiliate or any Company Benefit plan or trustee thereof engaged in a transaction with respect to any Company Benefit Plan that, assuming the taxable period of such transaction expired as of the date hereof, is reasonably likely to subject Company or any Company ERISA Affiliate to a tax or penalty imposed by either Section 4975 of the Code or Section 502(i) of ERISA.

(iii) No liability under Title IV of ERISA has been or is reasonably likely to be incurred by Company or any of its Subsidiaries with respect to any ongoing, frozen or terminated Company Benefit Plan that is a “single-employer plan”, within the meaning of Section 4001(a)(15) of ERISA, currently or formerly maintained by any of them, or the single-employer plan of any entity which is considered a predecessor of Company or one employer with Company under Section 4001 of ERISA (a “Company ERISA Affiliate”). All contributions required to be made under the terms of any Company Benefit Plan have been timely made or reserves therefore on the balance sheet of Company have been established, which reserves are adequate.

(iv) Company and its Subsidiaries have not incurred any liability under, and have complied in all material respects with, the WARN Act or any equivalent Canadian or provincial statute or regulation, and no fact or event exists that could give rise to liability under such act.

(v) No Company Benefit Plan is presently under audit or examination (nor has notice been received of a potential audit or examination) by the IRS, the Department of Labor, or any other governmental entity, and no matters are pending with respect to any Company Benefit Plan under any IRS program.

(vi) No Company Benefit Plan contains any provision or is subject to any law that would prohibit the transactions contemplated by this Agreement or that, except as set forth in Section 4(m) of the Company Disclosure Letter, would give rise to any vesting or increase of benefits, any severance, termination, or other payments or liabilities as a result of the transactions contemplated by this Agreement. No Company Benefit Plan any bonus compensation in contemplation of the transactions contemplated by this Agreement.

(vii) Company has made no plan or commitment, whether or not legally binding, to create any additional Company Benefit Plan or to modify or change any existing Company Benefit Plan. No statement, either written or oral, has been made by Company to any Person with regard to any Company Benefit Plan that was not in accordance with the Company Benefit Plan and that could have an adverse economic consequence to Company. All Company Benefit Plans may be amended or terminated without penalty by Company at any time on or after the Closing.

(viii) With respect to any Company Benefit Plan that is an “employee welfare benefit plan” (within the meaning of Section 3(1) of ERISA), (A) each welfare plan for which contributions are claimed as deductions under any provision of the Code is in compliance with all applicable requirements pertaining to such deduction, (B) with respect to any welfare benefit fund (within the meaning of Section 419 of the Code) related to a welfare plan, there is no disqualified benefit (within the meaning of Section 4976(b) of the Code) that would result in the imposition of a tax under Section 4976(a) of the Code, (C) any Company Benefit

Plan that is a group health plan (within the meaning of Section 4980B(g)(2) of the Code) complies, and in each and every case has complied, in all material respects with all of the requirements of Section 4980B of the Code, ERISA, Title XXII of the Public Health Service Act, the applicable provisions of the Social Security Act, the Health Insurance Portability and Accountability Act of 1996, and other applicable laws, and (D) no welfare plan provides health or other benefits after an employee's or former employee's retirement or other termination of employment except as required by Section 4980B of the Code.

(ix) All pension, retirement, retirement compensation, retirement savings, retiring allowance, or deferred compensation plans established, maintained or contributed to by Company for Canadian employees ("Company Canadian Retirement Plans") comply in all material respects with all applicable Canadian and provincial legal requirements, including without limitation requirements imposed under the Income Tax Act and any applicable provincial pension legislation. Any Company Canadian Retirement Plan intended to be a registered pension plan has been duly registered with the Minister of National Revenue (and, where applicable, provincial authorities); such registration has not been revoked, and to Seller's Knowledge, there are no presently existing grounds for revocation of any such registration. In the case of any Company Canadian Retirement Plan which is a defined benefit plan, as of the date of the most recent annual actuarial valuation for each such plan, the fair market value of assets was at least equal to the aggregate present value of all accumulated benefit obligations, as such obligations are determined for purposes of financial statement disclosure under FAS 87 (or the equivalent Canadian accounting standard). All contributions required by law or contract to be made by Company to any Company Canadian Retirement Plan as of the date hereof have been made in full, or to the extent a contribution obligation has accrued but is not yet payable, such obligation has been fully accrued on Company's financial statements. To Company's knowledge, there are no currently pending or threatened (i) governmental audits, investigations or enforcement actions, or (ii) lawsuits or administrative claims or charges, related to or concerning any Company Canadian Retirement Plan, other than claims for benefits in the ordinary course.

(x) All Persons classified by Company as independent contractors satisfy and have at all times satisfied the requirements of applicable law to be so classified; Company has fully and accurately reported their compensation on IRS Forms 1099 when required to do so; and Company has no obligations to provide benefits with respect to such Persons under Company Benefit Plans or otherwise. Company does not employ and has not employed any "leased employees" as defined in Section 414(n) of the Code.

(n) *Environmental Matters.* Except for such matters that, individually or in the aggregate, would not reasonably be expected to have a Company Material Adverse Effect or would not otherwise require disclosure pursuant to the Securities Exchange Act, or are listed in §4(n) of the Company Disclosure Letter, (i) each of Company and its Subsidiaries has complied and is in compliance with all applicable Environmental Laws; (ii) the properties currently owned or operated by Company or any of its Subsidiaries (including soils, groundwater, surface water, buildings or other structures) are not contaminated with Hazardous Substances; (iii) neither Company nor any of its Subsidiaries is subject to liability for any Hazardous Substance disposal or contamination on any third party property; (iv) neither Company nor any of its Subsidiaries has had any release or threat of release of any Hazardous Substance; (v) neither Company nor any of its Subsidiaries has received any notice, demand, threat, letter, claim or request for information alleging that it or any of its Subsidiaries may be in violation of or liable under any Environmental Law (including any claims relating to electromagnetic fields or microwave transmissions); (vi) neither Company nor any of its Subsidiaries is subject to any orders, decrees, injunctions or other arrangements with any governmental or regulatory authority of competent jurisdiction or is

subject to any indemnity or other agreement with any third party relating to liability under any Environmental Law or relating to Hazardous Substances; and (vii) to Company's knowledge, there are no circumstances or conditions involving Company or any of its Subsidiaries that would reasonably be expected to result in any claims, liabilities, investigations, costs or restrictions on the ownership, use or transfer of any of its properties pursuant to any Environmental Law.

(o) *Intellectual Property.* Except as disclosed in §4(o) of the Company Disclosure Letter, Company and its Subsidiaries have all right, title and interest in, or a valid and binding license to use, all Company Intellectual Property. Except as disclosed in §4(o) of the Company Disclosure Letter, Company and its Subsidiaries (i) have not defaulted in any material respect under any license to use any Company Intellectual Property, (ii) are not the subject of any proceeding or litigation for infringement of any third party intellectual property, (iii) have no knowledge of circumstances that would be reasonably expected to give rise to any such proceeding or litigation and (iv) have no knowledge of circumstances that are causing or would be reasonably expected to cause the loss or impairment of any Company Intellectual Property, other than a default, proceeding, litigation, loss or impairment that is not having or would not be reasonably expected to have, individually or in the aggregate, a Company Material Adverse Effect.

(p) *Insurance.* Except as set forth in §4(p) of the Company Disclosure Letter, each of Company and its Subsidiaries is insured with financially responsible insurers in such amounts and against such risks and losses as are customary for companies conducting the business as conducted by Company and its Subsidiaries.

(q) *Certain Contracts.* Section 4(q) of the Company Disclosure Letter lists all material contracts to which Company or any of its Subsidiaries is a party or may be bound that would be required by Item 601(b)(10) of Regulation S-K to be filed as exhibits to, or incorporated by reference in an Annual Report on Form 10-K or a Quarterly Report on Form 10-Q filed by Company if Company were required to make such a filing. All contracts, licenses, consents, royalty or other agreements which are material to Company and its Subsidiaries, taken as a whole, to which Company or any of its Subsidiaries is a party (the "Company Contracts") are valid and in full force and effect on the date hereof except to the extent they have previously expired or been terminated in accordance with their terms or, to the extent such invalidity would not reasonably be expected to have a Company Material Adverse Effect and, to Company's knowledge, neither Company nor any of its Subsidiaries has violated any provision of, or committed or failed to perform any act which with or without notice, lapse of time or both would constitute a default under the provisions of, any Company Contract, except for defaults which individually and in the aggregate would not reasonably be expected to result in a Company Material Adverse Effect.

(r) *Investment Company.* Company is not an "investment company" as defined in the Investment Company Act of 1940, as amended.

5. Covenants. The parties agree as follows with respect to the period from and after the execution of this Agreement through and including the Effective Time (except for §5(j), which will apply from and after the Effective Time in accordance with its terms and §5(p) which will apply from the date hereof and shall survive after the Closing).

(a) *General.* Each of the parties will use all reasonable efforts to take all actions and to do all things necessary in order to consummate and make effective the transactions contemplated by this Agreement (including satisfaction, but not waiver, of the closing conditions set forth in §6 below).

(b) *Notices and Consents.* Acquiror and Company will give any notices (and will cause each of their respective Subsidiaries to give any notices) to third parties, and will use all reasonable efforts to obtain (and will cause each of their respective Subsidiaries to use all reasonable efforts

to obtain) any third-party consents, that may be required in order for the parties to consummate the transactions contemplated by this Agreement; provided, that no party shall be required to make any material payment to any third party in order to obtain any third-party consent.

(c) *Regulatory Matters and Approvals.* Each of the parties, promptly after the date hereof, will, and will cause each of their respective Subsidiaries to, give any notices to, make any filings with and use all reasonable efforts to obtain any authorizations, consents and approvals of Government Entities in order for the parties to consummate the transactions contemplated by this Agreement. Without limiting the generality of the foregoing:

(i) *Securities Laws.* As promptly as practicable after the execution of this Agreement, Acquiror shall prepare, with the cooperation of Company, and file with the SEC the joint proxy statement/prospectus (such joint proxy statement/prospectus and any amendments or supplements thereto, the “Joint Proxy Statement/Prospectus”) and the registration statement in which the Joint Proxy Statement/Prospectus will be included as a prospectus (such registration statement and any amendments or supplements thereto, the “Registration Statement”). Acquiror shall use its reasonable efforts to cause the Registration Statement to be declared effective under the Securities Act as soon as practicable after such filing. Company shall provide promptly such information concerning its business and financial statements and affairs as may be required or appropriate for inclusion in the Joint Proxy Statement/Prospectus and the Registration Statement, and use its reasonable efforts to cause its counsel, accountants and financial advisor to cooperate in the preparation of the Joint Proxy Statement/Prospectus and the Registration Statement. Acquiror shall take reasonable steps to comply with the securities and blue sky laws of all jurisdictions which are applicable to the issuance of the Shares in connection with the Merger. Company shall use reasonable efforts to assist Acquiror as may be necessary to comply with the securities and blue sky laws of all jurisdictions which are applicable in connection with the issuance of Shares in connection with the Merger. Acquiror and Company shall cause the Joint Proxy Statement/Prospectus to be mailed to their respective stockholders at the earliest practicable time after the Registration Statement is declared effective by the SEC. Company shall prepare such other materials conforming to the requirements of applicable law as may be necessary to solicit the Requisite Stockholder Approval of the Company Stockholders. The Registration Statement and the Joint Proxy Statement/Prospectus shall comply as to form in all material respects with the applicable provisions of the Securities Act and the Exchange Act and the rules and regulations thereunder. Each of Acquiror and Company agrees that none of the information supplied or to be supplied by it for inclusion or incorporation by reference in the Registration Statement and/or the Joint Proxy Statement/Prospectus and each amendment or supplement thereto, at the time of mailing thereof and at the time of the Acquiror Special Meeting or the Company Special Meeting, will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. For purposes of the foregoing, it is understood and agreed that information concerning or related to Acquiror and the Acquiror Special Meeting will be deemed to have been supplied by Acquiror, and information concerning or related to Company and the Company Special Meeting shall be deemed to have been supplied by Company. Acquiror will cooperate with Company and provide Company with a reasonable opportunity to review and comment on the Joint Proxy Statement/Prospectus and any amendment or supplement thereto prior to filing such with the SEC, will provide Company with a copy of all such filings concurrent with their filing with the SEC and will notify Company as promptly as practicable after the receipt of any comments from the SEC or its staff or from any state securities administrators and of any request by the SEC or its staff or by any state securities administrators for amendments or supplements to the Registration Statement or any blue sky filings or for additional

information, and will supply Company and its legal counsel with copies of all correspondence between Acquiror or any of its representatives, on the one hand, and the SEC, its staff or any state securities administrators, on the other hand, with respect to the Registration Statement. No change, amendment or supplement to the Joint Proxy Statement/Prospectus shall be made without the approval of Acquiror and Company, which approval shall not be unreasonably withheld or delayed. If, at any time prior to the Effective Time, any event relating to Acquiror, Company or any of their respective Affiliates, officers or directors is discovered by Acquiror or Company, as the case may be, that is required by the Securities Act or the Securities Exchange Act to be set forth in an amendment to the Registration Statement or a supplement to the Joint Proxy Statement/Prospectus, Acquiror or Company, as the case may be, will as promptly as practicable inform the other, and such amendment or supplement will be promptly filed with the SEC and disseminated to the stockholders of Acquiror and Company, to the extent required by applicable securities laws. All documents which Acquiror or Company files or is responsible for filing with the SEC and any other regulatory agency in connection with the Merger (including, without limitation, the Registration Statement and the Joint Proxy Statement/Prospectus) will comply as to form and content in all material respects with the provisions of applicable law. Notwithstanding the foregoing, Acquiror, on the one hand, and Company, on the other hand, make no representations or warranties with respect to any information that has been supplied in writing by the other, or the other's auditors, attorneys or financial advisors, specifically for use in the Registration Statement or the Joint Proxy Statement/Prospectus, or in any other documents to be filed with the SEC or any other regulatory agency expressly for use in connection with the transactions contemplated hereby.

(ii) *Stockholders Meetings.* Acquiror will take all action, to the extent necessary in accordance with applicable law, its articles of incorporation and by-laws to convene a special meeting of its shareholders (the "Acquiror Special Meeting"), as soon as reasonably practicable in order that its shareholders may consider and vote upon the Certificate Amendment and the issuance of the Shares in the Merger. Company will take all action, to the extent necessary in accordance with applicable law, its certificate of incorporation and by-laws to convene a special meeting of its stockholders (the "Company Special Meeting"), as soon as reasonably practicable in order that its stockholders may consider and vote upon the adoption of this Agreement and the approval of the Merger in accordance with the DGCL. Acquiror and Company shall mail the Joint Proxy Statement/Prospectus to their respective stockholders as soon as reasonably practicable. Subject to §5(h) below, the Joint Proxy Statement/Prospectus shall contain the affirmative unanimous recommendations of the Acquiror Board in favor of the Certificate Amendment and the issuance of the Shares in the Merger (the "Acquiror Recommendation") and of the Company Board in favor of the adoption of this Agreement and the approval of the Merger.

(d) *Operation of Acquiror's Business.* Except as set forth in §5(d) of the Acquiror Disclosure Letter or as otherwise expressly contemplated by this Agreement, Acquiror will not (and will not cause or permit any of its Subsidiaries to), without the written consent of Company, take any action or enter into any transaction other than in the ordinary course of business consistent with past practice. Without limiting the generality of the foregoing, except as expressly provided in this Agreement or §5(d) of the Acquiror Disclosure Letter, without the written consent of Company:

(i) none of Acquiror and its Subsidiaries will authorize or effect any change in its charter or by-laws or comparable organizational document;

(ii) none of Acquiror and its Subsidiaries will grant any Stock Rights or issue, sell, authorize or otherwise dispose of any of its capital stock, (x) except upon the conversion or exercise of Stock Rights outstanding as of the date of this Agreement and (y) except for stock options issued to employees of Acquiror and its Subsidiaries in a manner consistent with past

practice which (I) do not provide for the issuance of more than 20,000 Shares in any calendar quarter, (II) are issued only to new employees and employees promoted after the date hereof, (III) are issued at not less than the market price of the Shares on the date of grant as determined in accordance with the plan pursuant to which such options are issued, (IV) are not issued to any executive officer or director of Acquiror and (V) do not provide for accelerated vesting as a result of the Merger;

(iii) none of Acquiror and its Subsidiaries will sell, lease, encumber or otherwise dispose of, or otherwise agree to sell, lease, encumber or otherwise dispose of, any of its assets except in the ordinary course of business consistent with past practice; provided, however, Acquiror shall be permitted to sublease, or transfer, sell or otherwise dispose of its lease of, office space at 590 North Gulph Road, King of Prussia;

(iv) none of Acquiror and its Subsidiaries (other than wholly-owned Subsidiaries) will declare, set aside or pay any dividend or distribution with respect to its capital stock (whether in cash or in kind);

(v) none of Acquiror and its Subsidiaries will split, combine or reclassify any of its capital stock or redeem, repurchase or otherwise acquire any of its capital stock;

(vi) none of Acquiror and its Subsidiaries will acquire or agree to acquire by merger or consolidation with, or by purchasing a substantial equity interest in or a substantial portion of the assets of, or by any other manner, any business of any Person or division thereof or otherwise acquire or agree to acquire any assets (other than assets used in the operation of the business of Acquiror and its Subsidiaries in the ordinary course consistent with past practice);

(vii) none of Acquiror or its Subsidiaries will incur or commit to any capital expenditures other than capital expenditures incurred or committed to in the ordinary course of business consistent with past practice;

(viii) none of Acquiror or its Subsidiaries will (x) make any loans, advances or capital contributions to, or investments in, any other Person, other than by Acquiror or a Subsidiary of Acquiror to or in Acquiror or any wholly owned Subsidiary of Acquiror, (y) pay, discharge or satisfy any claims, liabilities or obligations (absolute, accrued, asserted or unasserted, contingent or otherwise), other than loans, advances, capital contributions, investments, payments, discharges or satisfactions incurred or committed to in the ordinary course of business consistent with past practice or (z) create, incur, assume or suffer to exist any indebtedness, issuance of debt securities, guarantees, Security Interests, loans or advances not in existence as of the date of this Agreement;

(ix) none of Acquiror and its Subsidiaries will make any change in employment terms for any of its directors, officers and employees other than (A) customary increases to employees whose total annual cash compensation is less than \$120,000 awarded in the ordinary course of business consistent with past practices, and (B) customary employee bonuses (including to employees who are officers) approved by the Acquiror Board and paid in the ordinary course of business consistent with past practices and (C) immaterial changes to Acquiror Benefit Plans;

(x) except as disclosed in the Acquiror Reports filed prior to the date of this Agreement, Acquiror will not change its methods of accounting in effect at December 31, 1999 in a manner materially affecting the consolidated assets, liabilities or results of operations of Acquiror, except as required by changes in GAAP as concurred in by Acquiror's independent auditors, and Acquiror will not (i) change its fiscal year or (ii) make any material tax election, other than in the ordinary course of business consistent with past practice;

(xi) none of Acquiror and its Subsidiaries shall take any action or fail to take any action which would result in any of the representations and warranties set forth in §3 hereof failing to be true and correct;

(xii) none of Acquiror and its Subsidiaries shall defer expenses, but rather shall incur expenses in the ordinary course of business; and

(xiii) none of Acquiror and its Subsidiaries will resolve or commit to any of the foregoing.

In the event Acquiror shall request Company to consent in writing to an action otherwise prohibited by this §5(d), Company shall use reasonable efforts to respond in a prompt and timely fashion (but in no event later than ten (10) business days following such request); Company's consent shall not unreasonably be withheld.

(e) *Operation of Company's Business.* Except as set forth in §5(e) of the Company Disclosure Letter or as otherwise contemplated by this Agreement, Company will not (and will not cause or permit any of its Subsidiaries to), without the written consent of Acquiror, take any action or enter into any transaction other than in the ordinary course of business consistent with past practice or according to a forecast previously delivered to Acquiror and agreed to by Acquiror (the "Company Forecast"). Without limiting the generality of the foregoing, except as expressly provided in this Agreement or §5(e) of the Company Disclosure Letter, without the written consent of Acquiror:

(i) none of Company and its Subsidiaries will authorize or effect any change in its charter or by-laws or comparable organizational document;

(ii) none of Company and its Subsidiaries will grant any Stock Rights or issue, sell, authorize or otherwise dispose of any of its capital stock, (x) except upon the conversion or exercise of Stock Rights outstanding as of the date of this Agreement and (y) except for stock options issued to employees of Company and its Subsidiaries in a manner consistent with past practice which (I) do not provide for the issuance of more than 150,000 Company Shares in any calendar quarter, (II) are issued only to new employees and employees promoted after the date hereof, (III) are issued at not less than the market price of the Company Shares on the date of grant as determined in accordance with the plan pursuant to which such options are issued, (IV) are not issued to any executive officer or director of Company and (V) do not provide for accelerated vesting as a result of the Merger;

(iii) none of Company and its Subsidiaries will sell, lease, encumber or otherwise dispose of, or otherwise agree to sell or otherwise dispose of, any of its assets which are material, individually or in the aggregate, to Company and its Subsidiaries taken as a whole except in the ordinary course of business consistent with past practice or according to the Company Forecast; *provided*, that, notwithstanding anything to the contrary contained in this Agreement, any Shares constituting Company Outstanding Shares not issued on the date hereof may be issued by Company prior to the Effective Time;

(iv) none of Company and its Subsidiaries (other than wholly owned Subsidiaries) will declare, set aside or pay any dividend or distribution with respect to its capital stock (whether in cash or in kind);

(v) none of Company and its Subsidiaries will split, combine or reclassify any of its capital stock or redeem, repurchase or otherwise acquire any of its capital stock;

(vi) none of Company and its Subsidiaries will acquire or agree to acquire by merger or consolidation with, or by purchasing a substantial equity interest in or a substantial portion of the assets of, or by any other manner, any business of any Person or division thereof or

otherwise acquire or agree to acquire any substantial assets in a single transaction or series of related transactions;

(vii) none of Company or its Subsidiaries will incur or commit to any capital expenditures other than capital expenditures incurred or committed to in the ordinary course of business consistent with past practice or in accordance with the Company Forecast;

(viii) none of Company or its Subsidiaries will (A) make any loans, advances or capital contributions to, or investments in, any other Person, other than by Company or a Subsidiary of Company to or in Company or any wholly-owned Subsidiary of Company; (B) pay, discharge or satisfy any claims, liabilities or obligations (absolute, accrued, asserted or unasserted, contingent or otherwise), other than loans, advances, capital contributions, investments, payments, discharges or satisfactions incurred or committed to in the ordinary course of business consistent with past practice or in accordance with the Company Forecast; or (C) create, incur, assume or suffer to exist any indebtedness, issuance of debt securities, guarantees, Security Interests, loans or advances not in existence as of the date of this Agreement except pursuant to the credit facilities, indentures and other arrangements in existence on the date of this Agreement and incurred in the ordinary course of business consistent with past practice or in accordance with the Company Forecast, and any other indebtedness existing on the date of this Agreement, in each case as such credit facilities, indentures, other arrangements and other existing indebtedness may be amended, extended, exchanged, modified, refunded, renewed or refinanced after the date of this Agreement, but only if the aggregate principal amount thereof is not increased thereby, the term thereof is not extended thereby and the other terms and conditions thereof, taken as a whole, are not less advantageous to Company and its Subsidiaries than those in existence as of the date of this Agreement;

(ix) none of Company and its Subsidiaries will make any change in employment terms for any of its directors, officers and employees other than (A) customary increases to employees whose total annual cash compensation is less than \$150,000 awarded in the ordinary course of business consistent with past practices, and (B) customary employee bonuses (including to employees who are officers) approved by the Company Board and paid in the ordinary course of business consistent with past practices and (C) immaterial changes to Company Benefit Plans;

(x) Company will not change its methods of accounting in effect at December 31, 1999 in a manner materially affecting the consolidated assets, liabilities or operating results of Company, except as required by changes in GAAP as concurred in by Company's independent auditors, and Company will not (i) change its fiscal year or (ii) make any material tax election, other than in the ordinary course of business consistent with past practice;

(xi) none of the Company or its Subsidiaries shall take any action or fail to take any action which would result in any of the representations and warranties set forth in § 4 hereof failing to be true and correct; and

(xii) none of Company and its Subsidiaries will resolve or commit to any of the foregoing.

In the event Company shall request Acquiror to consent in writing to an action otherwise prohibited by this § 5(e), Acquiror shall use reasonable efforts to respond in a prompt and timely fashion (but in no event later than ten (10) business days following such request); Acquiror's consent shall not unreasonably be withheld.

(f) *Access.* Each of Acquiror and Company will (and will cause each of its Subsidiaries to) permit representatives of the other party to have access at all reasonable times and in a manner so as not to materially interfere with the normal business operations of such party and its Subsidiaries

to all premises, properties, personnel, books, records (including without limitation tax and financial records), contracts and documents of or pertaining to such party, subject to any confidentiality obligations of such party to any third party. Each party and all of its respective representatives will treat and hold as such any Confidential Information it receives from the other party or any of its representatives in accordance with the Confidentiality Agreement.

(g) *Notice of Developments.* Each of Acquiror and Company will give prompt written notice to the other of any material adverse development causing a breach of any of its own representations and warranties in §3 and §4 above. No disclosure by any party pursuant to this §5(g), however, shall be deemed to amend or supplement the Acquiror Disclosure Letter or the Company Disclosure Letter or to prevent or cure any misrepresentation, breach of warranty or breach of covenant.

(h) *Acquiror Exclusivity.*

(i) Acquiror shall, and shall cause its Subsidiaries and Representatives to, immediately cease and terminate any existing solicitation, initiation, encouragement, activity, discussion or negotiation with any Persons conducted heretofore by Acquiror, its Subsidiaries or any of their respective Affiliates, officers, directors, employees, financial advisors, agents or representatives (each a “Representative”) with respect to any proposed, potential or contemplated Acquiror Acquisition Proposal.

(ii) From and after the date hereof, without the prior written consent of Company, Acquiror will not, and will not authorize or permit any of its Subsidiaries to, and shall cause any and all of its Representatives not to, directly or indirectly, (A) solicit, initiate, or encourage (including by way of furnishing information), or take any other action designed to facilitate, any inquiries or proposals that constitute, or could reasonably be expected to lead to, an Acquiror Acquisition Proposal, (B) engage in negotiations or discussions with any third party concerning, or provide any non-public information to any Person or entity relating to, an Acquiror Acquisition Proposal, (C) enter into any letter of intent, agreement in principle or any acquisition agreement or other similar agreement with respect to any Acquiror Acquisition Proposal (each, an “Acquiror Acquisition Agreement”) or (D) make or authorize any statement, recommendation or solicitation in support of any Acquiror Acquisition Proposal. If and only to the extent that (v) the Acquiror Special Meeting shall not have occurred, (w) the Acquiror Board determines in good faith, based upon the advice of outside counsel, that it is necessary to do so in order to act in a manner consistent with its fiduciary duties to the Acquiror Shareholders under applicable law, (x) the Acquiror Board concludes in good faith that such Acquiror Acquisition Proposal constitutes a Superior Proposal (as defined below), (y) such Acquiror Acquisition Proposal was not solicited by it and did not otherwise result from a breach of this §5(h), and (z) Acquiror provides prior written notice to Company of its decision to take such action (specifying in such notice the material terms and conditions of such Superior Proposal and identifying the Person making such Superior Proposal), Acquiror shall be permitted to (1) furnish information with respect to Acquiror and any of its Subsidiaries to such Person pursuant to a customary confidentiality agreement, (2) participate in discussions and negotiations with such Person, (3) subject to first paying all amounts due to Company pursuant to §7(b) hereof, terminate this agreement in accordance with §7(a)(v) hereof and enter into an Acquiror Acquisition Agreement and (4) effect a Change in the Acquiror Recommendation; *provided*, that at least three business days prior to taking any actions set forth in clause (3) or (4) above, the Acquiror Board provides Company written notice advising Company that the Acquiror Board is prepared to conclude that such Acquiror Acquisition Proposal constitutes a Superior Proposal and during such three business day period Acquiror and its Representatives shall have negotiated in good faith with Company to make adjustments in the terms and conditions of this Agreement such that such Acquiror

Acquisition Proposal would no longer constitute a Superior Proposal and following such negotiations, the Acquiror Board concludes in good faith that such Acquiror Acquisition Proposal is reasonably likely to result in a Superior Proposal.

(iii) For purposes of this Agreement, a “Superior Proposal” means any proposal made by a third party (including any Acquiror Acquisition Proposal made by a Person referenced in §5(h)(i) hereof) (A) to acquire, directly or indirectly, including pursuant to a tender offer, exchange offer, merger, consolidation, business combination, recapitalization, liquidation, sale, lease, exchange, transfer or other disposition (including a contribution to a joint venture), dissolution or similar transaction, for consideration consisting of cash and/or securities, 100% of the shares of Acquiror’s capital stock or 100% of the net revenues, net income or assets of Acquiror and its Subsidiaries, taken as a whole and (B) which is otherwise on terms which the Acquiror Board determines in its good faith judgment (based upon the advice of a financial advisor of nationally recognized reputation and outside counsel), taking into account, among other things, all legal, financial, regulatory and other aspects of the proposal and the Person making the proposal, that the proposal, (i) if consummated would result in a transaction that is more favorable to the Acquiror Shareholders from a financial point of view than the Merger and the other transactions contemplated hereby and (ii) is reasonably capable of being completed, including to the extent required, financing which is then committed or which, in the good faith judgment of the Acquiror Board, is reasonably capable of being obtained by such third party.

(iv) Except as expressly permitted by this §5(h), the Acquiror Board may not withdraw or modify, or propose to withdraw or modify, in a manner adverse to Company, the Acquiror Recommendation (collectively, a “Change in the Acquiror Recommendation”).

(v) In addition to the obligations of Acquiror set forth in paragraphs (i), (ii), (iv) and (v) of this §5(h), Acquiror shall immediately advise Company orally and in writing of any request for information or of any Acquiror Acquisition Proposal, the material terms and conditions of such request or Acquiror Acquisition Proposal and the identity of the Person making such request or Acquiror Acquisition Proposal. Acquiror will keep Company informed of the status and details (including amendments or proposed amendments) of any such request or Acquiror Acquisition Proposal.

(vi) Nothing contained in this § 5(h) shall prohibit Acquiror from taking and disclosing to its shareholders a position contemplated by Rule 14e-2(a) promulgated under the Exchange Act or from making any disclosure if, in the good faith judgment of the Acquiror Board, after consultation with outside counsel, failure so to disclose would be inconsistent with its obligations under applicable law; *provided, however*, any such disclosure relating to an Acquiror Acquisition Proposal shall be deemed to be a Change in the Acquiror Recommendation unless the Acquiror Board reaffirms the Acquiror Recommendation in such disclosure.

(i) *Company Exclusivity.*

(i) Company shall, and shall cause its Subsidiaries and Representatives to, immediately cease and terminate any existing solicitation, initiation, encouragement, activity, discussion or negotiation with any Persons conducted heretofore by Company, its Subsidiaries or any of its Representatives with respect to any proposed, potential or contemplated Company Acquisition Proposal.

(ii) Without the prior written consent of Acquiror, Company will not authorize or permit any of its Subsidiaries to, and shall cause any and all of its Representatives not to, directly or indirectly, (A) solicit, initiate, or encourage any inquiries or proposals that constitute, or could

reasonably be expected to lead to, a Company Acquisition Proposal, or (B) engage in negotiations or discussions with any third party concerning, or provide any nonpublic information to any Person or entity relating to, a Company Acquisition Proposal, or (C) enter into any letter of intent, agreement in principle or any acquisition agreement or other similar agreement with respect to any Company Acquisition Proposal.

(j) *Insurance and Indemnification of Officers and Directors.*

(i) Acquiror will provide each individual who served as a director or officer of Acquiror or Company at any time prior to the Effective Time with liability insurance for a period of six years after the Effective Time no less favorable in coverage and amount than any applicable insurance of Acquiror or Company, as the case may be, in effect immediately prior to the Effective Time; *provided, however*, that if the existing liability insurance expires, or is terminated or canceled by the insurance carrier during such six-year period, Acquiror will use its reasonable best efforts to obtain comparable insurance for the remainder of such period on a commercially reasonable basis; *provided further*, however, that in the event any claim or claims are asserted within such period, all rights to indemnification in respect of such claim or claims shall continue until the final disposition thereof;

(ii) After the Effective Time, Acquiror (A) will not take or permit to be taken any action to alter or impair any exculpatory or indemnification provisions now existing in the charter, by-laws or indemnification and employment agreements of Acquiror, Company or any of their respective Subsidiaries for the benefit of any individual who served as a director or officer of Acquiror, Company or any of their respective Subsidiaries (an "Indemnitee") at any time prior to the Effective Time (except as may be required by applicable law), and (B) shall, and shall cause the Surviving Corporation to, honor and fulfill such provisions until the date which is six years from the Effective Time (except as may be required by applicable law); *provided, however*, that in the event any claim or claims are asserted within such period, all rights to indemnification in respect of such claim or claims shall continue until the final disposition thereof.

(k) *Financial Statements.*

(i) As soon as they are made available to and reviewed by senior management of Acquiror, Acquiror shall make available to Company the internally generated monthly and quarterly condensed financial statements of Acquiror, consisting of consolidated balance sheets, and consolidated statements of operations and of cash flows.

(ii) As soon as they are made available to and reviewed by senior management of Company, Company shall make available to Acquiror the internally generated monthly and quarterly condensed financial statements, consisting of consolidated balance sheets, and consolidated statements of operations and of cash flows.

(iii) As soon as they are made available to Acquiror, Acquiror shall make available to Company Acquiror's audited financial statements to be included in the Acquiror 10-K for the fiscal year ended December 31, 2000 (the "Acquiror Audited Financial Statements").

(iv) As soon as they are made available to Company, Company shall make available to Acquiror Company's consolidated balance sheets as at December 31, 1999 and 2000 and its consolidated statements of operations, cash flows and stockholders' equity for the years ended December 31, 1999 and 2000, audited and reported on by KPMG Peat Marwick (the "Company Audited Financial Statements").

(l) *Rule 145 Affiliates.* Prior to the Closing Date, Company shall deliver to Acquiror a letter identifying all Persons who were, at the date of the Company Special Meeting, "affiliates" of

Company for purposes of Rule 145 under the Securities Act. Company shall use its reasonable efforts to cause each of its affiliates for purposes of Rule 145 to deliver to Acquiror on or prior to the Closing Date a written agreement substantially in the form attached as Exhibit E.

(m) *Nasdaq Listing.* Acquiror and Company shall use all reasonable efforts to cause the Shares to be issued in connection with the Merger and issuable under any Stock Rights of Company to be approved for listing on the Nasdaq Small Cap Market, subject to official notice of issuance, prior to the Closing Date.

(n) *Tax Free Treatment.* Acquiror and Company intend (i) the Merger to qualify as a reorganization under Section 368(a) of the Code and (ii) the transactions contemplated by this Agreement not to constitute a taxable event and not have any adverse tax consequences to any holders of Company Capital Stock under Canadian, Dutch or Israeli law. Each party shall use reasonable efforts, and shall undertake reasonable efforts to cause its Affiliates to use reasonable efforts, to (i) cause the Merger to so qualify and (ii) cause the transactions contemplated by this Agreement not to constitute a taxable event under, and not have any such adverse tax consequences under, Canadian, Dutch or Israeli law; *provided, however*, that neither party shall be required to take any material action, the result of which would alter any of the material provisions of, or otherwise be inconsistent with any of the material terms of, this Agreement or the consummation of the transactions contemplated hereby, or would otherwise change any material attribute or term of the transaction.

(o) *Stock Plans.*

(i) At the Effective Time, (A) Acquiror shall assume and become the sponsor of the Company Option Plan(s) (the “Assumed Option Plan(s)”), (B) the names of the Assumed Option Plan(s) shall be changed to reflect the Acquiror name and (C) each outstanding option to purchase Company Shares (a “Company Stock Option”) under the Company Option Plan(s), whether vested or unvested, shall be converted into an option (an “Acquiror Stock Option”) to purchase a number of Shares equal to the product obtained by multiplying (x) the number of Company Shares subject to such Company Stock Option by (y) the Exchange Ratio, rounding down to the nearest whole share, at an exercise price per Share equal to the quotient obtained by dividing (1) the per-share exercise price of such Company Stock Option by (2) the Exchange Ratio, rounding up to the nearest full cent. The Acquiror Stock Options shall continue to be subject to their original terms and conditions as set forth in the applicable Assumed Option Plan and the original option agreement, including but not limited to the vesting conditions set forth therein. Notwithstanding the foregoing, each Company Stock Option that is intended to be an “incentive stock option” within the meaning of Section 422 of the Code shall be converted in such a way as will comply with Section 424 of the Code.

(ii) As soon as practicable after the Effective Time, Acquiror shall deliver to the participants in the Company Option Plan(s) an appropriate notice setting forth such participants’ rights pursuant thereto and the grants pursuant to Company Option Plan(s) shall continue in effect on the same terms and conditions, except as set forth above.

(iii) Acquiror shall take all corporate action necessary at or prior to the Effective Time to reserve for issuance a sufficient number of Shares for delivery under the Assumed Option Plan(s).

(iv) Acquiror shall file a registration statement on Form S-8 (or any successor form) or another appropriate form, and use its reasonable best efforts to cause such Form S-8 to become effective at or as soon as practicable after the Effective Time, with respect to Shares subject to employee stock options included in the Assumed Option Plans and shall use reasonable efforts to maintain the effectiveness of such registration statement or registration

statements (and maintain the current status of the prospectus or prospectuses contained therein) for so long as such options remain outstanding. Acquiror shall promptly take any action required to be taken under state securities or blue sky laws in connection with the issuance of Shares in connection with employee options included in the Assumed Option Plans.

(v) To the extent necessary or appropriate, the Assumed Option Plans shall be amended so as to comply with Rule 16b-3 promulgated under the Securities Exchange Act.

(p) *Acquiror Board.* Immediately prior to the Effective Time, the number of members of the Acquiror Board shall be fixed at nine, three members of the Acquiror Board shall resign and Elliot Noss, Stanley Stern, Beny Steinmetz, Bob Young, Dennis Bennie, Eriz Gissen and Lee Feldman or such other persons designated by Company prior to the Effective Time shall be appointed to fill the vacancies so created. The two Continuing Directors shall be two of the following four individuals: Van Morris, Brian Segal, Howard Morgan and Lloyd Morrisett.

(q) *Registration Rights.* At or prior to the Effective Time, Acquiror shall enter into registration rights agreements with the Company Stockholders listed on Exhibit F hereto granting such Company Stockholders registration rights with respect to the Shares acquired by such Company Stockholders pursuant to this Agreement on terms no less favorable to such Company Stockholders than the registration rights such stockholders have at the date hereof with respect to shares of capital stock of Company.

(q) *Solicitation of Proxies.* Acquiror shall use its best efforts to solicit from the Acquiror Shareholders proxies in favor of the Certificate Amendment and the issuance of the Shares in the Merger and to secure the vote or consent of the Acquiror Stockholders in favor of the Certificate Amendment and such issuance. Company shall use its best efforts to solicit from the Company Stockholders proxies in favor of the adoption and approval of the Merger required by the DGCL.

(r) *Company Loan.* Within 30 days of execution of this Agreement, Acquiror will make available to Company a loan in the original principal amount of \$1,300,000 upon Company's execution of and compliance with the terms of the promissory note (the "Note") and security agreement attached hereto as Exhibit G.

(s) *Acquiror Outstanding Shares.* At the Effective Time, the number of Shares outstanding shall be equal to 12,574,406, increased only to the extent of the exercise of any Acquiror Stock Options outstanding as of the date hereof and the warrants and restricted stock program specifically set forth in §3(b) of the Acquiror Disclosure Letter.

(t) *Company Outstanding Shares.* At the Effective Time, the Company Outstanding Shares shall consist of (i) 3,000,000 Company Shares issued and outstanding as of the date hereof, (ii) 28,677,402 Company Shares issuable upon the conversion of all of the Company Preferred Shares issued and outstanding as of the date hereof, (iii) 474,683 Company Shares to be issued to the former owners of Eklektix Inc. pursuant to a stock purchase agreement, dated as of April 4, 2000, (iv) 25,329 Company Shares to be issued to Company Employees pursuant to the exercise of Company Stock Options prior to the date hereof (v) 3,953,609 Company Shares to be issued to certain holders of Company Shares and Company Preferred Shares pursuant to subscription agreements executed prior to the date hereof and (vi) any shares issued upon exercise of Company Stock Options pursuant to Company Option Plan(s) after the date hereof.

(u) *Employee Benefits Information.* As soon as practicable after the date hereof, each of Acquiror and Company will deliver to the other, with respect to each Acquiror Benefit Plan or Company Benefit Plan, as the case may be, true and complete copies of all summary plan descriptions and summaries of material modifications, the most recent IRS determination letters, the two most recently filed Forms 5500 and related reports, any trust agreements and insurance

contracts, and any material communications with Acquiror Employees or Company Employees, as the case may be, with respect to each such Acquiror Benefit Plan or Company Benefit Plan, as the case may be.

(v) *Tax Matters.* The parties hereto shall, and shall cause their Affiliates to, cooperate in good faith with respect to tax matters, including making personnel available and providing copies of requested tax related information. Acquiror shall undertake any restructuring steps (including forming new entities, liquidating existing entities, and incorporating existing entities) that are reasonably requested by Company to the extent such steps would not adversely affect Acquiror.

6. Conditions to Obligations to Close.

(a) *Conditions to Obligation of Company.* The obligation of Company to consummate the Merger is subject to satisfaction or waiver by Company of the following conditions at or prior to the Closing Date:

(i) The Requisite Stockholder Approvals shall have been obtained.

(ii) Acquiror and its Subsidiaries shall have obtained the Required Acquiror Consents, other than those Required Acquiror Consents the failure of which to obtain would not reasonably be expected to have an Acquiror Material Adverse Effect, and Company and its Subsidiaries shall have obtained the Required Company Consents, other than those Required Company Consents the failure of which to obtain would not reasonably be expected to have a Company Material Adverse Effect. All filings under the Hart-Scott-Rodino Act, if any are required, shall have been made and all waiting periods shall have expired.

(iii) The representations and warranties set forth in §3 above shall be true and correct in all material respects as of the date hereof and at and as of the Closing Date, except for those representations and warranties which address matters only as of a particular date (which shall have been true and correct as of such date).

(iv) Acquiror shall have performed and complied with all of its covenants hereunder in all material respects through the Closing.

(v) Neither any statute, rule, regulation, order, stipulation or injunction (each an “Order”) shall be enacted, promulgated, entered, enforced or deemed applicable to the Merger nor any other action shall have been taken by any Government Entity which: (A) prohibits the consummation of the transactions contemplated by the Merger; (B) prohibits the ownership or operation by Acquiror or the Surviving Corporation of all or any material portion of the business or assets of Company, or which compels Acquiror or the Surviving Corporation to dispose of or hold separate all or any material portion of Company’s business or assets as a result of the transactions contemplated by the Merger; (C) makes the Merger illegal; or (D) imposes material limitations on the ability of the parties to consummate the Merger.

(vi) Acquiror shall have delivered to Company a certificate of its Chief Executive Officer and Chief Financial Officer to the effect that each of the conditions specified above in §6(a)(i)-§6(a)(iv) is satisfied in all respects; *provided, however*, with respect to §6(a)(i), Acquiror shall only be required to certify that the Requisite Stockholder Approval of the Acquiror Shareholders has been obtained.

(vii) There shall not have occurred any event, occurrence or change that has had an Acquiror Material Adverse Effect.

(viii) The Registration Statement shall have been declared effective by the SEC under the Securities Act, and no stop order suspending the effectiveness of the Registration Statement

shall have been issued by the SEC and no proceedings for that purpose shall have been initiated or threatened by the SEC.

(ix) Company shall have received an opinion of Skadden, Arps, Slate, Meagher & Flom LLP dated as of the Closing Date to the effect that the Merger will qualify as a tax free reorganization under Section 368(a) of the Code, and for purposes of rendering such opinion, Skadden, Arps, Slate, Meagher & Flom LLP shall have received properly executed tax representations from Company, Acquiror and Sub in a form satisfactory to Skadden, Arps, Slate, Meagher & Flom LLP.

(x) Acquiror shall have entered into the Stockholders Agreement in substantially the form of Exhibit B hereto.

(b) *Conditions to Obligation of Acquiror.* The obligation of Acquiror to consummate the Merger is subject to satisfaction or waiver by Acquiror of the following conditions at or prior to the Closing Date:

(i) The Requisite Stockholder Approvals shall have been obtained.

(ii) Acquiror and its Subsidiaries shall have obtained the Required Acquiror Consents, other than those Required Acquiror Consents the failure of which to obtain would not reasonably be expected to have an Acquiror Material Adverse Effect, and Company and its Subsidiaries shall have obtained the Required Company Consents other than those Required Company Consents the failure of which to obtain would not reasonably be expected to have a Company Material Adverse Effect. All filings under the Hart-Scott-Rodino Act, if any are required, shall have been made and all waiting periods shall have expired.

(iii) The representations and warranties set forth in §4 above shall be true and correct in all material respects as of the date hereof and at and as of the Closing Date, except for those representations and warranties which address matters only as of a particular date (which shall have been true and correct as of such date).

(iv) Company shall have performed and complied with all of its covenants hereunder in all material respects through the Closing.

(v) Neither any Order shall be enacted, promulgated, entered, enforced or deemed applicable to the Merger nor any other action shall have been taken by any Government Entity (A) prohibits the consummation of the transactions contemplated by the Merger; (B) prohibits the ownership or operation by Acquiror or the Surviving Corporation of all or any material portion of the business or assets of Company, or which compels Acquiror or the Surviving Corporation to dispose of or hold separate all or any material portion of Company's business or assets as a result of the transactions contemplated by the Merger; (C) makes the Merger illegal; or (D) imposes material limitations on the ability of the parties to consummate the Merger.

(vi) Company shall have delivered to Acquiror a certificate of its Chief Executive Officer and Chief Financial Officer to the effect that each of the conditions specified above in §6(b)(i)-(iv) is satisfied in all respects; *provided, however*, with respect to §6(b)(i), Company shall only be required to certify that the Requisite Stockholder Approval of the Company Stockholders has been obtained.

(vii) There shall be no Dissenting Holders other than holders of up to an aggregate of 150,000 Company Shares.

(viii) There shall not have occurred any event, occurrence of change that has had a Company Material Adverse Effect.

(ix) All of Company's outstanding Stock Rights shall have been converted or exercised other than Company Stock Options.

(x) The Registration Statement shall have been declared effective by the SEC under the Securities Act, and no stop order suspending the effectiveness of the Registration Statement shall have been issued by the SEC and no proceedings for that purpose shall have been initiated or threatened by the SEC.

(xi) All Company Preferred Shares shall have been converted into Company Shares.

(xii) The agreements listed on §6(b)(xi) of the Company Disclosure Letter shall have been terminated or modified in the manner set forth on §6(b)(xi) of the Company Disclosure Letter.

7. Termination.

(a) *Termination of Agreement.* Acquiror and Company may terminate this Agreement with the prior authorization of their respective board of directors as provided below:

(i) Acquiror and Company may terminate this Agreement, and the Merger may be abandoned, by mutual written consent at any time prior to the Effective Time before or after the Requisite Stockholder Approvals have been obtained;

(ii) This Agreement may be terminated, and the Merger may be abandoned, by action of the Board of Directors of either Acquiror or Company, before or after the Requisite Stockholder Approvals have been obtained, (A) if the Effective Time shall not have occurred by August 31, 2001 (the "Outside Date") (unless the failure to consummate the Mergers by such date (x) is due to the action or failure to act of the party seeking to terminate, (y) is the result of delays in effectiveness of the Registration Statement on account of delays in SEC review or delays in obtaining other regulatory approvals or (z) in the case of Acquiror, is due to a delay by Acquiror in filing the Joint Proxy Statement/Prospectus and such delay was not the result of a failure of Company to supply Acquiror with required information to complete and file the Joint Proxy Statement/Prospectus) or (B) if any condition to the obligation of the terminating party to consummate the Merger shall have become incapable of being satisfied prior to the Outside Date as of a result of an Order that is final and non-appealable;

(iii) This Agreement may be terminated, and the Merger may be abandoned at any time prior to the Effective Time, before or after the Requisite Stockholder Approvals have been obtained, by action of the Acquiror Board, in the event that Company shall have breached any of its representations, warranties or covenants under this Agreement which breach (A) would give rise to the failure of a condition set forth in §6(b) above, and (B) cannot be or has not been cured within 30 days after the giving of written notice by Acquiror to Company of such breach;

(iv) This Agreement may be terminated, and the Merger may be abandoned at any time prior to the Effective Time, before or after the Requisite Stockholder Approvals have been obtained, by action of the Company Board, in the event that Acquiror shall have breached any of its representations, warranties or covenants under this Agreement which breach (A) would give rise to the failure of a condition set forth in §6(a) above, and (B) cannot be or has not been cured within 30 days after the giving of written notice by Company to Acquiror of such breach;

(v) This Agreement may be terminated by Acquiror, and the Merger may be abandoned if the Acquiror Board has received a Superior Proposal; *provided*, that in order for the termination of this Agreement pursuant to this § 7(a)(v) to be deemed effective, Acquiror shall have first complied with all provisions of §5(h)(ii), including the notice provisions

therein, and with applicable requirements, including the payment of the fee referred to in §7(b)(v);

(vi) Either Acquiror or Company may terminate this Agreement, and the Merger may be abandoned, by giving written notice to the other at any time after the Acquiror Special Meeting in the event that the Requisite Stockholder Approval of the Acquiror Shareholders is not obtained at the Acquiror Special Meeting;

(vii) This Agreement may be terminated by Company, and the Merger may be abandoned, if Acquiror shall have failed to make the Acquiror Recommendation in the Joint Proxy Statement/Prospectus or effected a Change in the Acquiror Recommendation (or resolved to take any such action), whether or not permitted by the terms hereof, or shall have breached its obligations under this Agreement by reason of a failure to call or convene the Acquiror Special Meeting in accordance with §5(c)(ii).

(viii) This Agreement may be terminated by Acquiror, and the Merger may be abandoned at any time during the five day period following the delivery of the Company Audited Financial Statements to Acquiror, if the Company Audited Financial Statements differ in any material respect from the Company Draft Financial Statements; and

(ix) This Agreement may be terminated by Company, and the Merger may be abandoned at any time prior to the Effective Time, during the five day period following the delivery of the Acquiror Audited Financial Statements to Company, if the Acquiror Audited Financial Statements differ in any material respect from the Acquiror Draft Financial Statements.

(b) *Effect of Termination.*

(i) Except as provided in §7(b)(ii), if any party terminates this Agreement pursuant to §7(a) above, all rights and obligations of the parties hereunder shall terminate without any liability of any party to any other party (except for any liability of any party then in breach); provided, however, that the provisions of the Confidentiality Agreement and this §7(b) shall survive any such termination.

(ii) In the event that this Agreement is terminated by Company pursuant to §7(a)(vii), then, within 60 days of such termination, Acquiror shall pay Company a fee equal to \$1,300,000 by wire transfer of same day funds.

(iii) In the event that (A) a Pre-Termination Acquisition Proposal Event (as defined below) shall occur after the date of this Agreement and thereafter this Agreement is terminated by either Acquiror or Company pursuant to § 7(a)(ii) and (B) prior to the date that is nine months after the date of such termination Acquiror enters into an Acquiror Acquisition Agreement with respect to such Pre-Termination Acquisition Proposal, then Acquiror shall promptly, but in no event later than two business days after the date such Acquiror Acquisition Agreement is entered into, pay Company a fee equal to the lesser of (i) \$1,000,000 plus fees and expenses incurred by Company in connection with this Agreement and the transactions contemplated hereby or (ii) \$1,300,000 by wire transfer of same day funds.

(iv) In the event that this Agreement is terminated by either Acquiror or Company pursuant to §7(a)(vi), then Acquiror shall not later than two business days after such termination, pay Company a fee equal to \$1,000,000 by wire transfer of the same day funds.

(v) In the event that this Agreement is terminated by Acquiror pursuant to §7(a)(v), then concurrently with such termination, Acquiror shall pay to Company a fee equal to \$1,300,000 by wire transfer of same day funds.

(vi) For purposes of this §7(b), a “Pre-Termination Acquisition Proposal Event” shall be deemed to occur if an Acquiror Acquisition Proposal shall have been made known to Acquiror or any of its Subsidiaries or has been made to the Acquiror Shareholders or any Person shall have publicly announced an intention (whether or not conditional) to make an Acquiror Acquisition Proposal. Acquiror acknowledges that the agreements contained in this §7(b) are an integral part of the transactions contemplated by this Agreement, and that, without these agreements, Company would not enter into this Agreement; accordingly, if Acquiror fails promptly to pay the amount due pursuant to this §7(b), and, in order to obtain such payment, Company commences a suit which results in a judgment against Acquiror for the fee set forth in this §7(b), Acquiror shall pay Company its costs and expenses (including attorneys’ fees and expenses) in connection with such suit, together with interest on the amount of the fee at the rate on six-month U.S. Treasury obligations plus 300 basis points in effect on the date such payment was required to be made.

(vii) Payment of any amount pursuant to this §7(b) shall be full compensation and liquidated damages for the loss suffered by Company as a result of the failure of the transactions contemplated by this Agreement to be consummated due to the occurrence of any of the events giving rise to such payment, unless there has been a breach of this Agreement by Acquiror.

(viii) Notwithstanding anything in this §7(b) to the contrary, in the event that Acquiror is required to pay, and has paid, any amount pursuant to paragraphs (ii), (iii) or (v) of this §7(b), and the fees and expenses incurred by Company in connection with this Agreement and the transactions contemplated hereby (as calculated in good faith by Company) are less than \$300,000, Company shall refund to Acquiror the amount by which such fees and expenses are less than \$300,000 by wire transfer of same day funds.

8. Miscellaneous.

(a) *Survival.* None of the representations, warranties and covenants of the parties (other than the provisions in §2 concerning payment of the Merger Consideration, the provisions in §5(j), §5(n) and §5(o)) shall survive the Effective Time.

(b) *Press Releases and Public Announcements.* Neither Acquiror nor Company shall issue any press release or make any public announcement relating to the subject matter of this Agreement without the prior written approval of the other; *provided, however*, that Acquiror may make any public disclosure it believes in good faith is required by applicable law or any listing or trading agreement concerning its publicly-traded securities (in which case Acquiror will use all reasonable efforts to advise Company prior to making the disclosure).

(c) *No Third-Party Beneficiaries.* This Agreement shall not confer any rights or remedies upon any Person other than the parties and their respective successors and permitted assigns; *provided, however*, that (i) the provisions in §2 above concerning payment of the Merger Consideration are intended for the benefit of the Company Stockholders and concerning the conversion of the stock options are intended for the benefit of the holders of such stock options and (ii) the provisions in §5(j) above concerning insurance and indemnification are intended for the benefit of the individuals specified therein and their respective legal representatives.

(c) *Entire Agreement.* This Agreement (together with the Confidentiality Agreement and the exhibits hereto) constitutes the entire agreement among the parties and supersedes any prior understandings, agreements or representations by or among the parties, written or oral, to the extent they related in any way to the subject matter hereof.

(d) *Binding Effect; Assignment.* This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and permitted assigns. Neither Acquiror nor

Company may assign or delegate either this Agreement or any of its rights, interests or obligations hereunder, by operation of law or otherwise, without the prior written approval of the other. Any purported assignment or delegation without such approval shall be void and of no effect.

(e) *Counterparts.* This Agreement may be executed (including by facsimile) in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

(f) *Headings.* The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

(g) *Notices.* All notices, requests, demands, claims and other communications hereunder shall be in writing. Any notice, request, demand, claim or other communication hereunder shall be deemed duly given if (and then two business days after) it is sent by registered or certified mail, return receipt requested, postage prepaid, reputable overnight courier and addressed to the intended recipient as set forth below:

If to Acquiror, Sub or the Surviving Corporation:

Infonautics, Inc.
590 North Gulph Road
King of Prussia, PA 19406
Attn: President and CEO; Vice President and General Counsel
Telephone: 610.971.8840
Facsimile: 610.971.8859

with a copy to:

Morgan, Lewis & Bockius LLP
1701 Market Street
Philadelphia, PA 19102-2921
Attn: Joanne R. Soslow
Telephone: 215.963.5000
Facsimile: 215.963.5299

If to Company:

Tucows Inc.
96 Mowat Avenue
Toronto, Ontario M6K 3M1
Canada
Attn: Elliot Noss and Graham Morris
Telephone: 416.535.0123
Facsimile: 416.531.5584

with a copy to:

Skadden, Arps, Slate, Meagher & Flom LLP
4 Times Square
New York, NY 10036
Attn: David Fox
Telephone: 212.735-3000
Facsimile: 212.735-2000

Any party may send any notice, request, demand, claim or other communication hereunder to the intended recipient at the address set forth above using personal delivery, expedited courier, messenger service, facsimile or ordinary mail, but no such notice, request, demand, claim or other

communication shall be deemed to have been duly given unless and until it actually is received by the intended recipient. Any party may change the address to which notices, requests, demands, claims and other communications hereunder are to be delivered by giving the other party notice in the manner set forth in this §8(g), provided that no such change of address shall be effective until it actually is received by the intended recipient.

(h) *GOVERNING LAW*. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE DOMESTIC LAWS OF THE STATE OF DELAWARE WITHOUT GIVING EFFECT TO ANY CHOICE OR CONFLICT OF LAW PROVISION OR RULE (WHETHER OF THE STATE OF DELAWARE OR ANY OTHER JURISDICTION) THAT WOULD CAUSE THE APPLICATION OF THE LAWS OF ANY JURISDICTION OTHER THAN THE STATE OF DELAWARE.

(i) *Amendments and Waivers*. Acquiror and Company may mutually amend any provision of this Agreement at any time prior to the Effective Time with the prior authorization of the Acquiror Board and the Company Board. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by Acquiror and Company. No waiver by any party of any default, misrepresentation or breach of warranty or covenant hereunder, whether intentional or not, shall be deemed to extend to any prior or subsequent default, misrepresentation or breach of warranty or covenant hereunder or affect in any way any rights arising by virtue of any prior or subsequent such occurrence.

(j) *Severability*. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

(k) *Expenses*. Save and except as outlined herein, each of the parties will bear its own costs and expenses (including legal fees and expenses) incurred in connection with this Agreement and the transactions contemplated hereby; provided that, if the Merger is not completed, Acquiror and Company shall split equally all printing and filing fees incurred by any party for preparation of the Registration Statement and the Joint Proxy Statement/Prospectus.

(l) *Construction*. Acquiror and Company have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by Acquiror and Company, and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement. Any reference to any federal, state, local or foreign statute or law shall be deemed also to refer to all rules and regulations promulgated thereunder, unless the context otherwise requires. The word “including” shall mean including without limitation. The phrase “business day” shall mean any day other than a day on which banks in the Commonwealth of Pennsylvania are required or authorized to be closed. Disclosure of any matter in the Acquiror Disclosure Letter or the Company Disclosure Letter shall not be deemed an admission that such matter is material. All references to dollar amounts or the symbol “\$” in this Agreement shall mean U.S. dollars unless otherwise specified.

(m) *Incorporation of Exhibits*. The Exhibits identified in this Agreement are incorporated herein by reference and made a part hereof.

(n) *Definition of Knowledge*. As used herein, the words “knowledge” or “known” shall mean (i) with respect to Acquiror, the actual knowledge of the corporate executive officers of Acquiror, in each case after such individuals have made due and diligent inquiry as to the matters which are the subject of the statements which are “known” by Acquiror or made to the “knowledge” of Acquiror, and (ii) with respect to Company, the actual knowledge of the corporate executive

officers of Company, in each case after such individuals have made due and diligent inquiry as to the matters which are the subject of the statements which are “known” by Company or made to the “knowledge” of Company.

(o) *WAIVER OF JURY TRIAL.* EACH OF ACQUIROR AND COMPANY, AND EACH INDEMNIFIED PARTY, HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ALL RIGHTS TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED UPON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OF THE TRANSACTIONS CONTEMPLATED HEREBY.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

INFONAUTICS, INC.

By: /s/ D. VAN R. MORRIS

Name: David Van Riper Morris

Title: Chief Executive Officer and President

TAC ACQUISITION CORP.

By: /s/ D. VAN R. MORRIS

Name: Van Morris

Title: CEO

TUCOWS INC.

By: /s/ ELLIOT NOSS

Name: Elliot Noss

Title: President, CEO

**SECOND AMENDED AND RESTATED
ARTICLES OF INCORPORATION
OF
INFONAUTICS, INC.**

The text of the Amended and Restated Articles of Incorporation, as amended, is hereby amended and restated to read herein as set forth in full:

ARTICLE 1. The name of the corporation is Infonautics, Inc.

ARTICLE 2. The registered office of the corporation shall be 590 North Gulph Road, King of Prussia, Pennsylvania 19406.

ARTICLE 3. A. The aggregate number of shares which the corporation shall have authority to issue is as follows: 251,250,000 shares, divided into (i) 250,000,000 shares of Common Stock, no par value and (iv) 1,250,000 shares of preferred stock. The corporation previously had authorized three classes of Common Stock, Class A Common Stock, Class B Common Stock and Class C Common Stock. Prior to the date of filing of these Second Amended and Restated Articles of Incorporation, there were no outstanding shares of either Class B Common Stock or Class C Common Stock. The three classes of Common Stock are hereby eliminated and stock certificates that indicated ownership of outstanding shares of Class A Common Stock will be recognized by the corporation as stock certificates indicating ownership of the same number of shares of the corporation's Common Stock.

B. Authority of Board to Fix Terms of Preferred Shares. The Preferred Stock authorized by these Second Amended and Restated Articles of Incorporation may be issued from time to time in one or more series. The Board of Directors of the corporation shall have the full authority permitted by law to establish one or more series and the number of shares constituting each such series and to fix by resolution full, limited, fractional, or no voting rights, and such designations, preferences, qualifications, privileges, limitations, restrictions, options, conversion rights and other special or relative rights of any series of the Preferred Stock that may be desired, subject to the limitation that no shares of Preferred Stock may have more than one vote per share with respect to any matter on which shares of Preferred Stock vote together with the corporation's Common Stock. Subject to the limitation on the total number of shares of Preferred Stock which the corporation has authority to issue hereunder, the Board of Directors is also authorized to increase or decrease the number of shares of any series, subsequent to the issue of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

C. Voting Rights of Common Stock. With respect to all matters upon which shareholders are entitled to vote or to which shareholders are entitled to give consent, every holder of the outstanding shares of the Common Stock shall be entitled to cast thereon one (1) vote in person or by proxy for each share of the Common Stock standing in such holder's name.

D. Cumulative Voting. Shareholders of the corporation shall not have the right to cumulate their votes with respect to the election of directors.

ARTICLE 4. The purpose or purposes of the corporation are: to have unlimited power to engage in and do any lawful act concerning any or all lawful business for which corporations may be incorporated under the Pennsylvania Business Corporation Law of 1988, as amended, including, without limitation thereto, the manufacture, purchase and sale of goods, wares and merchandise of every class and description.

ARTICLE 5. Subchapters E (Sections 2541 - 2548), G (Sections 2561 - 2568), H (Sections 2571 - 2576) and Section 2538 of Subchapter D, all of Chapter 25 of the Pennsylvania Business Corporation Law of 1988, as amended, shall not be applicable to the corporation.

ARTICLE 6. Subchapter F (Sections 2551 - 2556) of Chapter 25 of the Pennsylvania Business Corporation Law of 1988, as amended, shall be applicable to the corporation.

ARTICLE 7. The term of the corporation's existence is perpetual.

FORM OF SHAREHOLDER AGREEMENT

SHAREHOLDER AGREEMENT dated as of March , 2001, among the person(s) identified as Shareholder on the signature page hereof (“*Shareholder*”), Infonautics, Inc., a Pennsylvania corporation (the “*Company*”), and Tucows Inc., a Delaware corporation (“*Tucows*”).

WHEREAS, on or about the date of the execution and delivery of this Agreement, certain parties are entering into an Agreement and Plan of Merger (the “*Merger Agreement*”), which contemplates a business combination between Tucows and the Company in a merger transaction to be accomplished through, as currently contemplated and as may be modified by the parties thereto, (i) the formation of TAC Acquisition Corporation (“*TAC*”) and (ii) the merger of Tucows with and into TAC (the “*Merger*”);

WHEREAS, Shareholder is the beneficial owner of record of approximately 1,456,154 shares of Class A Common Stock of the Company (the “*Class A Shares*,” and any other shares of common stock or other voting equity securities of the Company held of record from time to time by the Shareholder, collectively the “*Subject Securities*”);

WHEREAS, as a condition to Tucows’ willingness to enter into the Merger Agreement, the Company and Tucows are obtaining this Agreement;

WHEREAS, the Shareholder deems it in the best interest of the Company for the Company to enter into the Merger Agreement; and

WHEREAS, in order to induce Tucows to enter into the Merger Agreement and to agree to the covenants and agreements set forth therein, Shareholder has agreed to enter into this Agreement.

NOW, THEREFORE, to induce Tucows to enter into, and in consideration of its entering into, the Merger Agreement, and for other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged by the parties, and in consideration of the premises and the representations, warranties and agreements herein contained, and intending to be legally bound, the parties agree as follows:

1. *Restriction on Transfer or Acquisition of Subject Securities.* Except as otherwise specified in Exhibit A hereto, Shareholder shall not (a) sell, transfer, pledge, assign or otherwise dispose of, or enter into any contract, option or other arrangement or understanding with respect to the direct or indirect sale, transfer, pledge, assignment or other disposition of, any of the Subject Securities to any person other than to Tucows, Company or any designee of Company, (b) deposit any of the Subject Securities into escrow, a voting trust or a voting agreement or grant a proxy with respect to any such Subject Securities, except as provided in this Agreement, or (c) acquire any additional securities of the Company without the prior written consent of Company.

2. *Voting Agreement.* Shareholder agrees that, at any annual or special meeting of the shareholders of the Company and in any action by written consent of the shareholders of the Company, Shareholder shall vote the Subject Securities (a) in favor of the Merger, the approval and adoption of the Merger Agreement and all agreements related to the transactions contemplated by the Merger Agreement, and any actions related thereto, and (b) against any action or agreement which would result in a breach of any representation, warranty or covenant of the Company in the Merger Agreement or which would otherwise frustrate the purposes of, impede, interfere with or attempt to discourage the Merger, including without limitation any other merger, consolidation, sale of assets, reorganization, recapitalization, liquidation or winding up of the Company or any other extraordinary transaction involving the Company or any matters related to or in connection therewith. On the date hereof, the Shareholder shall sign and deliver to Company the proxy in the form set forth in Exhibit B hereto (the “*Irrevocable Proxy*”) to permit the Company to implement the voting agreement set forth in this Section 2. The Shareholder shall,

upon request, execute and deliver any additional documents deemed by Company to be necessary or desirable to complete and effectuate the Irrevocable Proxy and the provisions of this Agreement.

3. *No Dissenters Rights.* The Shareholder agrees not to exercise any rights (including without limitation any rights that may exist under the Pennsylvania Business Corporation Law of 1988, as amended) to demand appraisal or dissenter's rights of any Subject Securities owned by the Shareholder with respect to the Merger or the other transactions contemplated by the Merger Agreement.

4. *Representations and Warranties of the Shareholder.* Shareholder hereby represents and warrants to Company as follows:

(a) *Authority.* This Agreement and the Irrevocable Proxy are valid and binding agreements of the Shareholder. If the Shareholder is married and the Class A Shares constitute community property under applicable laws, this Agreement and the Irrevocable Proxy have been duly authorized, executed and delivered by and constitute valid and binding agreements of, such Shareholder's spouse. If this Agreement is being executed in a representative or fiduciary capacity the person signing this Agreement has full power and authority to enter into and perform this Agreement and the Irrevocable Proxy.

(b) Shareholder owns beneficially all of the Class A Shares and has good and marketable title thereto, free and clear of any claims, liens, encumbrances or security interests whatsoever (other than any created hereby or made to Sovereign Bank prior to the date hereof). Shareholder does not beneficially own, or have any existing right to acquire, any securities of the Company other than the Class A Shares.

(c) Shareholder has the full and unrestricted legal power, authority and right to enter into, execute and deliver this Agreement and the Irrevocable Proxy without the consent or approval of any other person and has not entered into any voting agreement or granted any person any proxy (revocable or irrevocable) with respect to the Class A Shares (other than this Agreement and the Irrevocable Proxy).

6. *Representations and Warranties of the Company.* The Company hereby represents and warrants to Shareholder that the Company has all requisite corporate power and authority to enter into this Agreement and to consummate the transactions contemplated hereby and thereby, that this Agreement has been duly executed and delivered by the Company and this Agreement constitutes the valid and binding obligation of the Company.

7. *Termination.* This Agreement and the Irrevocable Proxy shall terminate upon the earlier to occur of (a) the effective time of the Merger or (b) the termination of the Merger Agreement; *provided, however,* that the term applicable to the transfer of Subject Securities specified on Exhibit A hereto shall terminate as specified in Exhibit A.

8. *No Brokers.* Except for Company's fairness opinion and related services fee payable to Janney Montgomery Scott, the Shareholder and the Company represent, as to themselves and their affiliates, that to the best of their knowledge no agent, broker, investment banker or other firm or person is or will be entitled to any broker's or finder's fees or any other commission or similar fee in connection with any of the transactions contemplated by this Agreement and respectively agree to indemnify and hold the others harmless from and against any and all claims, liabilities or obligations with respect to any such fees, commissions or expenses asserted by any person on the basis of any act or statement alleged to have occurred or been made by such party or any of its affiliates.

9. *Assignment.* Neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by either of the parties without the prior written consent of the other party. This Agreement will be binding upon, inure to the benefit of and be enforceable by the parties and their respective successors and assigns.

10. *General Provisions.*

(a) *Specific Performance.* The parties hereto agree that if for any reason any party hereto shall have failed to perform its obligations under this Agreement or the Irrevocable Proxy, then the party seeking to enforce this Agreement or the Irrevocable Proxy shall be entitled to specific performance and injunctive and other equitable relief, and the parties hereto further agree to waive any requirement for the securing or posting of any bond in connection with the obtaining of any such injunctive or other equitable relief. This provision is without prejudice to any other rights or remedies, whether at law or in equity, that any party hereto may have against any other party hereto for any failure to perform its obligations under this Agreement or the Irrevocable Proxy.

(b) *Expenses.* All costs and expenses incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such costs and expenses.

(c) *Amendments.* This Agreement may not be amended except by an instrument in writing signed by each of the parties hereto.

(d) *Notices.* All notices, requests, claims, demands and other communications hereunder shall be deemed to have been duly given when delivered in person, by facsimile, telegram or telex, or by registered or certified mail (postage prepaid, return receipt requested), if to the Company, to its address as set forth on the signature page hereof and, if to Shareholder, to the address set forth on the signature page hereof.

(e) *Descriptive Headings; Definitions.* The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. All capitalized terms used herein but not defined herein shall have the meaning ascribed to them in the Merger Agreement.

(f) *Counterparts.* This Agreement may be executed in two or more counterparts, all of which shall be considered one and the same agreement, and shall become effective when one or more of the counterparts have been signed by each of the parties and delivered to the other parties, it being understood that all parties need not sign the same counterpart.

(g) *Entire Agreement.* This Agreement (including the exhibits hereto) constitutes the entire agreement and supersedes all prior agreements and understandings, both written and oral, among the parties with respect to the subject matter hereof. This Agreement (including the documents and instruments referred to herein) is not intended to and shall not be deemed to confer upon any person other than the parties hereto any rights or remedies hereunder. If any provision of this Agreement or the Irrevocable Proxy shall be invalid or unenforceable under applicable law, such provision shall be ineffective to the extent of such invalidity or unenforceability only, without in any way affecting the remaining provisions of this Agreement or the Irrevocable Proxy.

(h) *Governing Law.* This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania, applicable to contracts made and to be performed in that Commonwealth.

IN WITNESS WHEREOF, the Company has caused this Agreement to be signed by its respective officer thereunto duly authorized, and Shareholder has signed this Agreement, all as of the date first written above.

INFONAUTICS, INC.

By: _____
Title: VP & General Counsel, Secretary

Address: 590 North Gulph Road
King of Prussia, PA 19406-2800 USA
610-971-8859 (fax)

TUCOWS INC.

By: _____
Title: _____
Address: 96 Mowat Avenue
Toronto, Ontario M6K 3M1 Canada
416-531-5584 (fax)

SHAREHOLDER:

Witness

Name: Marvin I. Weinberger

Witness

Name: Fran Solow Weinberger

Address: 630 Penfield Avenue
Havertown, PA 19083-4120

TRANSFERS OF SUBJECT SECURITIES

The Company agrees that the restrictions on transfer or acquisition of Subject Securities set forth in Section 1 of this Agreement shall not apply with respect to the following:

1. The sale of that number of shares of Class A Common Stock of the Company equal to fifty percent (50%) of the number of shares of Class A Common Stock of the Company eligible to be sold by the Shareholder pursuant to Rule 144 under the Securities Act of 1933 during the period commencing two business days following the public announcement by the Company (the "Release Date") of the execution of the Merger Agreement and terminating three months following the Release Date.

2. The sale of that number of shares of Class A Common Stock of the Company equal to seventy five percent (75%) of the number of shares of Class A Common Stock of the Company eligible to be sold by the Shareholder pursuant to Rule 144 under the Securities Act of 1933 during the period commencing three months following the Release Date and terminating six months following the Release Date.

The Shareholder agrees that any sale of shares of Class A Common Stock pursuant to Paragraphs 1 and 2 above shall be in compliance with Rule 144 and the Company's policy regarding insider trading. The Company agrees to use its best efforts to have all necessary clearances in order for the Shareholder to sell his shares of Class A Common Stock under Rule 144 made as soon as reasonably practicable after receipt by the Company, attention Vice President & General Counsel, Gerard J. Lewis, Jr., of duly executed and completed paperwork as may be required in order to complete such sale.

In addition, the Company agrees to use its best efforts to file a registration statement on Form S-3 with the Securities and Exchange Commission as soon as reasonably practicable upon Shareholder's written request after (a) consummation of the Merger or (b) any earlier termination of the Merger in accordance with Paragraph 7(b). Such registration statement shall provide for the registration of all shares of the Company owned by the Shareholder as a result of the Merger less any shares previously sold by the Shareholder ("Merger Shares"). If the Merger is terminated in accordance with Paragraph 7(b), such registration statement shall provide for the registration of all shares of Company owned by the Shareholder at the time of registration, less any shares previously sold by the Shareholder ("Company Shares"). The registration rights granted under this paragraph shall terminate when the Shareholder is eligible to sell all of the Merger Shares or Company Shares, as the case may be, pursuant to Rule 144(k).

IRREVOCABLE PROXY

EXECUTED March , 2001

Marvin I. Weinberger (“*Shareholder*”), being a holder of shares of Class A Common Stock of Infonautics, Inc. (the “*Company*”) (the “*Class A Shares*”), does hereby constitute and appoint such person or persons as the Company shall designate from time to time (the “*Proxy*”) the true and lawful attorney and proxy of Shareholder for him and in his name, place and stead, with full power of substitution, for a term (the “*Term*”) of one year from the date of execution hereof, to attend and to vote as the proxy of Shareholder, at any and all meetings of shareholders of the Company or any adjournments thereof, all of the Class A Shares eligible to vote which are held of record or beneficially, by Shareholder, on any and all matters, proposals and questions, whether benefiting the Proxy or Company or not, that may be lawfully considered there, and to execute any written consents of Shareholder which may be solicited during the Term, as fully and with the same number of votes and with the same effect as Shareholder could do if personally present thereat or if personally solicited to execute such written consents.

Shareholder hereby revokes all proxies heretofore made by him.

Shareholder hereby ratifies all that the Proxy may or shall lawfully do in voting the Class A Shares in accordance herewith at any such meeting or adjournment in respect of all matters, proposals and questions that may properly come before the shareholders for consideration and action.

Shareholder acknowledges that this proxy is coupled with an interest and is irrevocable.

Marvin I. Weinberger

Fran Solow Weinberger

**FORM OF
TUCOWS INC. STOCKHOLDER AGREEMENT**

THIS STOCKHOLDER AGREEMENT ("Agreement"), dated as of March , 2001, is by and between Infonautics, Inc., a Pennsylvania corporation ("Parent"), Tucows Inc., a Delaware corporation (the "Company") and the stockholder of the Company listed on the signature page hereof (the "Stockholder").

WITNESSETH:

WHEREAS, the Stockholder, as of the date hereof, is the beneficial owner (as defined in Rule 13d-3(a) under the Securities Exchange Act of 1934, as amended) of the number and class of shares of capital stock ("Stock") of the Company set forth below the name of the Stockholder on the signature page hereof (the "Shares");

WHEREAS, in reliance upon the execution and delivery of this Agreement, Parent and a wholly owned subsidiary of Parent ("Sub") will enter into an Agreement and Plan of Merger, dated as of the date hereof (the "Merger Agreement"), with the Company which provides, among other things, that upon the terms and subject to the conditions thereof, Sub will be merged with and into the Company, and the Company will become a wholly owned subsidiary of Parent (the "Merger"); and

WHEREAS, to induce Parent to enter into the Merger Agreement and to incur the obligations set forth therein, the Stockholder is entering into this Agreement pursuant to which the Stockholder agrees to vote in favor of the Merger and the approval of the Merger Agreement and, in the case of holders of the Company's Series A Convertible Preferred Stock, par value \$.001 per share (the "Preferred Shares"), to convert the Preferred Shares into shares of the Company's common stock, par value \$.001 per share ("Common Stock"), and to make certain agreements with respect to the Shares upon the terms and conditions set forth herein;

NOW THEREFORE, in consideration of the foregoing and of the mutual covenants and agreements set forth herein and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

Section 1. *Voting of Shares.* The Stockholder agrees that until the earlier of (i) the Effective Time (as defined in the Merger Agreement) or (ii) the date on which the Merger Agreement is terminated pursuant to its terms (the earliest thereof being hereinafter referred to as the "Expiration Date"), at every meeting of stockholders of the Company at which any of the following matters is considered or voted upon, and at every adjournment or postponement thereof, and on every action or approval by written consent of the stockholders of the Company with respect thereto, the Stockholder shall vote, or cause the holder of record to vote, all Shares beneficially owned by the Stockholder as of the date of such vote or consent, and which are entitled to vote as of the date of such vote or consent, (i) for adoption and approval of the Merger Agreement and in favor of the Merger and any other transaction contemplated by the Merger Agreement and (ii) against any Acquisition Proposal (as defined below) other than the Merger. Any such vote shall be cast or consent shall be given in accordance with such procedures relating thereto as shall ensure that it is duly counted for purposes of determining that a quorum is present and for purposes of recording the results of such vote or consent.

Section 2. *Covenants of the Stockholder.* The Stockholder covenants and agrees for the benefit of Parent that, until the Expiration Date, such Stockholder will:

(a) not, directly or indirectly, sell, transfer, pledge, hypothecate, encumber, assign, tender or otherwise dispose of, or enter into any contract, option or other arrangement or understanding with respect to the sale, transfer, pledge, hypothecation, encumbrance, assignment, tender or other disposition of, any of the Shares beneficially owned by the Stockholder or any interest therein, provided that this restriction shall not apply to any sale,

transfer, pledge, hypothecation, encumbrance, assignment, tender or disposition (or contract, option, arrangement or understanding with respect thereto) to any person who agrees to be bound by the terms of this Agreement;

(b) not grant any powers of attorney or proxies or consents in respect of any of the Shares beneficially owned by the Stockholder, deposit any of such Shares into a voting trust, enter into a voting agreement with respect to any of such Shares or otherwise restrict the ability of the holder of any of the Shares beneficially owned by the Stockholder freely to exercise all voting rights with respect thereto;

(c) not, and shall direct and cause the Stockholder's agents not to:

(i) initiate, solicit or seek, directly or indirectly, any inquiries or the making or implementation of any proposal or offer (including, without limitation, any proposal or offer to the Company's stockholders or any of them) with respect to a merger, acquisition, consolidation, recapitalization, liquidation, dissolution or similar transaction involving, or any purchase of all or any substantial portion of the assets or any equity securities of, the Company (an "Acquisition Proposal");

(ii) engage in any negotiations concerning an Acquisition Proposal, or provide any confidential information or data to, or have any substantive discussions with, any person relating to an Acquisition Proposal; or

(iii) otherwise cooperate in any effort or attempt to make, implement or accept an Acquisition Proposal;

(d) shall notify Parent immediately if any inquiries, proposals or offers related to an Acquisition Proposal are received by, any confidential information or data in connection with an Acquisition Proposal is requested from, or any negotiations or discussions related to an Acquisition Proposal are sought to be initiated or continued with, the Stockholder, and shall immediately cease and terminate any existing activities, including discussions or negotiations with any parties, conducted heretofore with respect to any of the foregoing and will take the necessary reasonable steps to inform his agents of the obligations undertaken in Section 2(c) above and this Section 2(d).

(e) take, or cause to be taken, all action, and do, or cause to be done, all reasonable things necessary or advisable in order to consummate and make effective the transactions contemplated by this Agreement.

Section 3. *Representations and Warranties of the Stockholder.* The Stockholder represents and warrants to Parent that: (a) the execution, delivery and performance by the Stockholder of this Agreement will not conflict with, require a consent, waiver or approval under, or result in a breach of or default under, any of the terms of any contract, commitment or other obligation (written or oral) to which the Stockholder is a party or by which any of the Stockholder's assets may be bound, and, if the Stockholder is a corporation or partnership, the organizational documents of such Stockholder; (b) this Agreement has been duly executed and delivered by the Stockholder and, if the Stockholder is a corporation or partnership, has been duly authorized by all requisite corporate or partnership action of such Stockholder, as the case may be, and upon its execution and delivery by Parent, will constitute a legal, valid and binding obligation of the Stockholder, enforceable against the Stockholder in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting or relating to creditors' rights generally, and the availability of injunctive relief and other equitable remedies; (c) the Stockholder is the sole owner of the Shares, and the Shares represent all shares of the Stock beneficially owned by the Stockholder at the date hereof, and the Stockholder does not have any right to acquire, nor is the Stockholder the beneficial owner of, any other shares of Stock or any securities convertible into or exchangeable or

exercisable for any shares of Stock (other than shares subject to options granted by the Company or issuable upon conversion of the Shares); (d) the Stockholder has full right, power and authority to execute and deliver this Agreement and to perform the Stockholder's obligations hereunder; and (e) the Stockholder owns the Shares free and clear of all liens, claims, pledges, charges, proxies, restrictions, encumbrances, proxies, voting trusts and voting agreements of any nature whatsoever other than as provided by this Agreement. The representations and warranties contained herein shall be made as of the date hereof and as of each day from the date hereof through and including the Effective Time (as defined in the Merger Agreement). If the Stockholder is an officer or director of the Company, the Stockholder represents and acknowledges that the Stockholder is executing this Agreement in such Stockholder's individual capacity, and not in his capacity as an officer or director of the Company.

Section 4. *Adjustments; Additional Shares.* In the event (a) of any stock dividend, stock split, merger (other than the Merger), recapitalization, reclassification, combination, exchange of shares or the like of the capital stock of the Company on, of or affecting the Shares or (b) that the Stockholder shall become the beneficial owner of any additional shares of Stock or other securities entitling the holder thereof to vote or give consent with respect to the matters set forth in Section 1 (including, without limitation, shares of Stock acquired upon the exercise of options), then the terms of this Agreement shall apply to the shares of capital stock or other instruments or documents held by the Stockholder immediately following the effectiveness of the events described in clause (a) or the Stockholder becoming the beneficial owner thereof as described in clause (b), as though, in either case, they were Shares hereunder.

Section 5. *Conversion of Preferred Shares.* Pursuant to Article 4(B)(5) of the Certificate of Incorporation of the Company, as amended, the Stockholder agrees prior to or at the Effective Time to convert all of the Preferred Shares to shares of the Company's Common Stock.

Section 6. *Legend.* Concurrently with the execution of this Agreement, the Stockholder is surrendering to the Company the certificates representing the Shares, and is hereby requesting that the following legend be placed on the certificates representing such Shares and shall request that such legend remain thereon until the Expiration Date: "The shares of capital stock represented by this certificate are subject to a Stockholder Agreement, dated as of March , 2001, among the holder of this Certificate, Infonautics, Inc. and Tucows Inc. which agreement, among other things, restricts the sale or transfer of such shares except in accordance therewith." In the event that the Stockholder shall become the beneficial owner of any additional shares of Stock or other securities entitling the holder thereof to vote or give consent with respect to the matters set forth in Section 1, the Stockholder shall, upon acquiring such beneficial ownership, surrender to the Company the certificates representing such shares or securities and request that the foregoing legend be placed on such certificates and remain thereon until the Expiration Date. The Stockholder shall provide Parent with satisfactory evidence of his compliance with this Section 6 on or prior to the date ten business days after the execution hereof.

Section 7. *Specific Performance.* The Stockholder acknowledges that the agreements contained in this Agreement are an integral part of the transactions contemplated by the Merger Agreement, and that, without these agreements, Parent would not enter into the Merger Agreement, and acknowledges that damages would be an inadequate remedy for any breach by the Stockholder of the provisions of this Agreement. Accordingly, the Stockholder, Parent and the Company each agree that the obligations of the parties hereunder shall be specifically enforceable and neither party shall take any action to impede the other from seeking to enforce such right of specific performance.

Section 8. *Notices.* All notices, requests, claims, demands and other communications hereunder shall be in writing and shall be deemed duly given (i) upon receipt, if delivered by hand, (ii) one day after deposit, if deposited with a nationally recognized courier service that guarantees next day delivery, or (iii) three business days after mailing, if mailed by registered or certified mail, postage prepaid,

return receipt requested, to the Stockholder at the address listed on the signature page hereof, to Parent at 590 North Gulph Road, King of Prussia, PA 19406, Attention: President and CEO, with a copy to Joanne R. Soslow, Esquire, Morgan, Lewis & Bockius LLP, 1701 Market Street, Philadelphia, PA 19102, and to the Company at 96 Mowat Avenue, Toronto, Ontario M6K 3M1, Canada, Attn: Elliot Noss and Graham Morris, with a copy to David Fox, Esquire, Skadden, Arps, Slate, Meagher & Flom LLP, 4 Times Square, New York, NY 10036, or to such other address as any party may have furnished to the other in writing in accordance herewith.

Section 9. *Binding Effect; Survival.* This Agreement shall become effective as of the date hereof and shall remain in effect until the Expiration Date. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, personal representatives, successors and assigns. Neither this Agreement nor any of the rights, interests or obligations of the parties hereto may be assigned without the prior written consent of the other party.

Section 10. *Governing Law; Consent to Jurisdiction and Service of Process.* This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware without giving effect to any principles of conflicts of law that would compel the application of the substantive laws of a jurisdiction other than Delaware. Each of the parties hereto hereby consents to the jurisdiction of any state or federal court located within the state of Delaware and irrevocably agrees that all actions or proceedings relating to this Agreement may be litigated in such courts. The parties hereto accept the nonexclusive jurisdiction of the aforesaid courts and waive any defense of forum non convenient, and irrevocably agree to be bound by any judgment rendered thereby (subject to any appeal available with respect to such judgment) in connection with this Agreement. The Stockholder hereby irrevocably appoints Company to serve as his, her or its agent, to receive on his, her or its behalf service of all process in any such proceeding in any such court, such service being hereby acknowledged by the Stockholder to be effective and binding service in every respect. The Stockholder hereby agrees that service upon the Stockholder by mail shall constitute sufficient notice and service of process. Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of Parent to bring proceedings or obtain or enforce judgments against the Stockholder in the courts of any other jurisdiction.

Section 11. *Counterparts.* This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one and the same agreement.

Section 12. *Effect of Headings.* The section headings herein are for convenience of reference only and shall not affect the construction hereof.

Section 13. *Additional Agreements; Further Assurance.* Subject to the terms and conditions herein provided, the Stockholder agrees to use all reasonable efforts to take, or cause to be taken, all action and to do, or cause to be done, all things necessary, proper or advisable to consummate and make effective the transactions contemplated by this Agreement. The Stockholder will provide Parent with all documents which may reasonably be requested by Parent and will take reasonable steps to enable Parent to obtain all rights and benefits provided it hereunder. The Stockholder hereby gives any consents or waivers that are reasonably required for the consummation of the Merger under the terms of any agreement to which the Stockholder is party or pursuant to any rights the Stockholder may have.

Section 14. *Amendment; Waiver.* No amendment or waiver of any provision of this Agreement or consent to departure therefrom shall be effective unless in writing and signed by Parent, the Stockholder and the Company, in the case of an amendment, or by the party which is the beneficiary of any such provision, in the case of a waiver or a consent to depart therefrom.

Section 15. *Severability.* If any term provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, then the remainder of the

terms, provisions, covenants and restrictions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

Section 16. *Effectiveness.* This Agreement shall not become effective unless Marvin I. Weinberger and Ms. Fran Solow Weinberger (the “Weinbergers”) shall have entered into a shareholders agreement among the Weinbergers, Parent and the Company containing substantially the same terms and conditions as contained herein.

Section 17. *Enforcement.* The Company will upon demand pay to Parent the amount of any and all reasonable expenses of Parent, including the reasonable fees and disbursements of its counsel, which Parent may incur in connection the enforcement of this Agreement by Parent.

Section 18. *Time.* Time is of the essence with respect to this Agreement.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement has been duly executed by the parties hereto all as of the day and year first above written.

INFONAUTICS, INC.

By: _____
Name:
Title:

TUCOWS INC.

By: _____
Name:
Title:

STOCKHOLDER

(Signature)

(Signature of Spouse)

Print Name of Stockholder

Address: _____

Number and Class of Shares: _____

March 26, 2001

Board of Directors
Infonautics, Inc.
590 North Gulph Road
King of Prussia, PA 19406

Dear Members of the Board:

Infonautics, Inc. (“Infonautics”) and Tucows Inc. (“Tucows”) propose to merge (“the Transaction”) pursuant to the Agreement and Plan of Merger (the “Agreement”). Under the terms of the Agreement, Infonautics’ shareholders will receive all the shares outstanding of Tucows (the “Merger Consideration”) for four times the shares outstanding of Infonautics common stock less 80,000. The terms and conditions of the Transaction are more fully set forth in the Agreement.

You have requested our opinion as to whether the Merger Consideration to be received pursuant to the Agreement is fair from a financial point of view to Infonautics shareholders.

In reaching our opinion, we (i) reviewed certain historical and projected financial information relating to Infonautics; (ii) reviewed selected financial information for Tucows and certain other publicly traded companies; (iii) reviewed the financial terms of certain recent business combinations; (iv) reviewed the terms of the Agreement and certain related documents in draft form; and (v) performed such other analyses, and considered such other factors, as we deemed appropriate. In addition, we held discussions with the management of Tucows as well as with the management of Infonautics regarding both companies business, operating results, financial condition and prospects.

In connection with our review, we have relied upon the accuracy and completeness of all information provided to us by Infonautics, its representatives and Tucows, and we have not attempted to independently verify any such information. We have also relied upon the assessment of the management of Infonautics and Tucows regarding both companies’ business and prospects, and assumed that the budgets and financial projections of both were prepared by management on the basis of reasonable assumptions and reflected the best currently available estimates and good faith judgments of the future financial performance of both companies. We have also assumed that the final terms of the Agreement and certain related documents reviewed by us in draft form will not vary materially from the drafts reviewed by us. We have not made an independent evaluation or appraisal of Infonautics’ or Tucows’ assets and liabilities. Our opinion is necessarily based on financial, market, economic and other conditions as they exist and can be evaluated as of the date of this letter. We undertake no obligation to update this opinion to reflect any developments occurring after the date hereof.

Janney Montgomery Scott LLC (“Janney”) is acting as financial advisor to Infonautics in connection with the Transaction and will receive customary fees in connection with, and upon completion of, the Transaction. In addition, Infonautics has agreed to indemnify Janney against certain liabilities arising out of the rendering of this opinion. Janney is a nationally recognized investment banking firm and, as part of its investment banking activities, is regularly engaged in the valuation of businesses and securities in connection with mergers and acquisitions, negotiated underwritings, secondary distributions of securities, private placements and valuations for corporate and other purposes.

It is understood that this letter is for the information of the Board of Directors of Infonautics in evaluating the Transaction. This opinion may not be used for any other purpose, and may not be quoted or referred to, in whole or in part, without our prior written consent. This opinion does not address the relative merits of the Transaction, any alternatives to the Transaction available to Infonautics or the underlying decision of Infonautics to proceed with the Transaction.

Board of Directors
Infonautics, Inc.
March 26, 2001
Page 2

Based upon the foregoing, we are of the opinion, as of the date hereof, that the Merger Consideration to be received pursuant to the Agreement is fair from a financial point of view to Infonautics shareholders.

Very truly yours,

/s/ JANNEY MONTGOMERY SCOTT LLC

JANNEY MONTGOMERY SCOTT LLC

DELAWARE GENERAL CORPORATION LAW

§ 262 APPRAISAL RIGHTS.

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger or consolidation nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a stock corporation and also a member of record of a nonstock corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words and also membership or membership interest of a member of a nonstock corporation; and the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in one or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository.

(b) Appraisal rights shall be available for the shares of any class or series of stock of a constituent corporation in a merger or consolidation to be effected pursuant to § 251 (other than a merger effected pursuant to § 251(g) of this title), § 252, § 254, § 257, §258, § 263 or § 264 of this title:

(1) Provided, however, that no appraisal rights under this section shall be available for the shares of any class or series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of and to vote at the meeting of stockholders to act upon the agreement of merger or consolidation, were either (i) listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in subsection (f) of § 251 of this title.

(2) Notwithstanding paragraph (1) of this subsection, appraisal rights under this section shall be available for the shares of any class or series of stock of a constituent corporation if the holders thereof are required by the terms of an agreement of merger or consolidation pursuant to §§ 251, 252, 254, 257, 258, 263 and 264 of this title to accept for such stock anything except:

a. Shares of stock of the corporation surviving or resulting from such merger or consolidation, or depository receipts in respect thereof;

b. Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger or consolidation will be either listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or held of record by more than 2,000 holders;

c. Cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a. and b. of this paragraph; or

d. Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a., b. and c. of this paragraph.

(3) In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under § 253 of this title is not owned by the parent corporation immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation or the sale of all or substantially all of the assets of the corporation. If the certificate of incorporation contains such a provision, the procedures of this section, including those set forth in subsections (d) and (e) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1) If a proposed merger or consolidation for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for such meeting with respect to shares for which appraisal rights are available pursuant to subsection (b) or (c) hereof that appraisal rights are available for any or all of the shares of the constituent corporations, and shall include in such notice a copy of this section. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger or consolidation, a written demand for appraisal of such stockholder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the merger or consolidation shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger or consolidation, the surviving or resulting corporation shall notify each stockholder of each constituent corporation who has complied with this subsection and has not voted in favor of or consented to the merger or consolidation of the date that the merger or consolidation has become effective; or

(2) If the merger or consolidation was approved pursuant to § 228 or § 253 of this title, each constituent corporation, either before the effective date of the merger or consolidation or within ten days thereafter, shall notify each of the holders of any class or series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or series of stock of such constituent corporation, and shall include in such notice a copy of this section; provided that, if the notice is given on or after the effective date of the merger or consolidation, such notice shall be given by the surviving or resulting corporation to all such holders of any class or series of stock of a constituent corporation that are entitled to appraisal rights. Such notice may, and, if given on or after the effective date of the merger or consolidation, shall, also notify such stockholders of the effective date of the merger or consolidation. Any stockholder entitled to appraisal rights may, within 20 days after the date of mailing of such notice, demand in writing from the surviving or resulting corporation the appraisal of such holder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger or consolidation, either (i) each such constituent corporation shall send a second notice before the effective date of the merger or consolidation notifying each of the holders of any class or series of stock of such constituent corporation that are entitled to appraisal rights of the effective date of the merger or consolidation or (ii) the surviving or resulting corporation shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice, such second notice need only be sent

to each stockholder who is entitled to appraisal rights and who has demanded appraisal of such holder's shares in accordance with this subsection. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation may fix, in advance, a record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger or consolidation, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the day next preceding the day on which the notice is given.

(e) Within 120 days after the effective date of the merger or consolidation, the surviving or resulting corporation or any stockholder who has complied with subsections (a) and (d) hereof and who is otherwise entitled to appraisal rights, may file a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger or consolidation, any stockholder shall have the right to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation. Within 120 days after the effective date of the merger or consolidation, any stockholder who has complied with the requirements of subsections (a) and (d) hereof, upon written request, shall be entitled to receive from the corporation surviving the merger or resulting from the consolidation a statement setting forth the aggregate number of shares not voted in favor of the merger or consolidation and with respect to which demands for appraisal have been received and the aggregate number of holders of such shares. Such written statement shall be mailed to the stockholder within 10 days after such stockholder's written request for such a statement is received by the surviving or resulting corporation or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) hereof, whichever is later.

(f) Upon the filing of any such petition by a stockholder, service of a copy thereof shall be made upon the surviving or resulting corporation, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all stockholders who have demanded payment for their shares and with whom agreements as to the value of their shares have not been reached by the surviving or resulting corporation. If the petition shall be filed by the surviving or resulting corporation, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving or resulting corporation and to the stockholders shown on the list at the addresses therein stated. Such notice shall also be given by 1 or more publications at least 1 week before the day of the hearing, in a newspaper of general circulation published in the City of Wilmington, Delaware or such publication as the Court deems advisable. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving or resulting corporation.

(g) At the hearing on such petition, the Court shall determine the stockholders who have complied with this section and who have become entitled to appraisal rights. The Court may require the stockholders who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with such direction, the Court may dismiss the proceedings as to such stockholder.

(h) After determining the stockholders entitled to an appraisal, the Court shall appraise the shares, determining their fair value exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with a fair rate of interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. In determining the fair rate of interest, the Court may consider all

relevant factors, including the rate of interest which the surviving or resulting corporation would have had to pay to borrow money during the pendency of the proceeding. Upon application by the surviving or resulting corporation or by any stockholder entitled to participate in the appraisal proceeding, the Court may, in its discretion, permit discovery or other pretrial proceedings and may proceed to trial upon the appraisal prior to the final determination of the stockholder entitled to an appraisal. Any stockholder whose name appears on the list filed by the surviving or resulting corporation pursuant to subsection (f) of this section and who has submitted such stockholder's certificates of stock to the Register in Chancery, if such is required, may participate fully in all proceedings until it is finally determined that such stockholder is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving or resulting corporation to the stockholders entitled thereto. Interest may be simple or compound, as the Court may direct. Payment shall be so made to each such stockholder, in the case of holders of uncertificated stock forthwith, and the case of holders of shares represented by certificates upon the surrender to the corporation of the certificates representing such stock. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving or resulting corporation be a corporation of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a stockholder, the Court may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal.

(k) From and after the effective date of the merger or consolidation, no stockholder who has demanded appraisal rights as provided in subsection (d) of this section shall be entitled to vote such stock for any purpose or to receive payment of dividends or other distributions on the stock (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger or consolidation); provided, however, that if no petition for an appraisal shall be filed within the time provided in subsection (e) of this section, or if such stockholder shall deliver to the surviving or resulting corporation a written withdrawal of such stockholder's demand for an appraisal and an acceptance of the merger or consolidation, either within 60 days after the effective date of the merger or consolidation as provided in subsection (e) of this section or thereafter with the written approval of the corporation, then the right of such stockholder to an appraisal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any stockholder without the approval of the Court, and such approval may be conditioned upon such terms as the Court deems just.

(l) The shares of the surviving or resulting corporation to which the shares of such objecting stockholders would have been converted had they assented to the merger or consolidation shall have the status of authorized and unissued shares of the surviving or resulting corporation.

INFONAUTICS, INC.

Charter of the Audit Committee of the Board of Directors

1. Audit Committee Purpose

The Audit Committee is appointed by the Board of Directors to assist the Board in fulfilling its oversight responsibilities. The Audit Committee's primary duties and responsibilities are to:

- Review financial information to be provided to stockholders and others.
- Monitor the integrity of the Company's financial reporting processing and systems of internal controls.
- Monitor the independence and performance of the Company's independent auditors.
- Provide an avenue of communication among the independent auditors, management, and the Board of Directors.

The Audit Committee has the authority to conduct any investigation appropriate to fulfilling its responsibilities, and it has direct access to the independent auditors as well as anyone in the Company. The Audit Committee may retain, at the Company's expense, special legal, accounting, or other consultants or experts it deems necessary in the performance of its duties.

2. Audit Committee Composition and Meetings

The Audit Committee shall be comprised of at least three directors, each of whom shall be independent, as determined by the Board of Directors and in accordance with the applicable provisions of the Marketplace Rules of the National Association of Securities Dealers, Inc. applicable to the Nasdaq Stock Market. Audit Committee members also shall satisfy the qualification requirements of the Nasdaq Stock Market for audit committee membership.

The Board of Directors shall appoint the members of the Audit Committee. If the Chairman of the Audit Committee is not designated or present, the members of the Committee may designate a Chairman by majority vote of the Committee membership.

The Audit Committee shall meet at least four times annually, or more frequently as circumstances dictate. The Audit Committee should meet privately in executive session at least annually with management, the independent auditors and as a committee to discuss any matters that the Audit Committee or each of these groups believe should be discussed. In addition, the Audit Committee should communicate with management and the independent auditors quarterly to review the Company's interim financial statements and any significant findings based upon the auditors' review procedures before the Company's Quarterly Report on Form 10-Q is filed with the Securities and Exchange Commission.

3. Audit Committee Responsibilities and Duties

Review Procedures

In fulfilling its responsibilities, the Audit Committee is expected to perform the following procedures:

1. Review and reassess the Charter of the Audit Committee at least annually and recommend to the Board of Directors, as appropriate, amendments to the Charter.

2. Review the Company's annual audited financial statements prior to filing or distribution. In conducting its review, the Audit Committee should discuss the following matters with management and the independent auditors:
 1. The independent auditors' audit of the financial statements and its report thereon.
 2. Any significant changes required in the independent auditors' audit plan.
 3. Any significant difficulties encountered during the course of the audit (including any restriction on the scope of work or access to required information).
 4. Any significant disagreement among management and the independent auditors in connection with preparation of the financial statements.
 5. Other matters related to the conduct of the audit which are communicated to the Audit Committee under generally accepted auditing standards.
3. In consultation with the management and the independent auditors, consider the integrity of the Company's financial reporting processes and controls. Discuss significant financial risk exposures and the steps management has taken to monitor, control and report such exposures. Review significant findings prepared by the independent auditors together with management's responses.
4. Review with financial management and the independent auditors the Company's quarterly financial results prior to the release of earnings and the Company's quarterly financial statements prior to filing or distribution. Discuss any significant changes to the Company's accounting principles and any items communicated by the independent auditors in accordance with Statement on Auditing Standards No. 61 (see Item 11). The Chairman of the Committee or a Committee member designated by the Chairman may represent the entire Audit Committee for purposes of this review.
5. Meet with the independent auditors and management in separate executive sessions to discuss any matters that the Audit Committee or these groups believe should be discussed privately with the Audit Committee.

Duties Relating to the Independent Auditors

The independent auditors are ultimately accountable to the Audit Committee and the Board of Directors, as representatives of the stockholders. Accordingly, the Audit Committee is expected to perform the following activities with, or as they relate to, the independent auditors:

6. Review the independence and performance of the auditors and annually recommend to the Board of Directors the appointment of the independent auditors or approve any discharge of auditors when circumstances warrant.
7. Approve the fees and other significant compensation to be paid to the independent auditors.
8. Review and approve requests for significant management consulting engagements to be performed by the independent auditors' firm and be advised of any other significant study undertaken at the request of management that is beyond the scope of the audit engagement letter.

9. On an annual basis, the Committee should review, and discuss with the independent auditors, all significant relationships the independent auditors have with the Company that could impair the auditors' independence. This review should include, without limitation, the following:
 1. Receiving a formal written statement from the independent auditor delineating all relationships between the auditor and the Company, consistent with Independence Standards Board Statement No. 1.
 2. Actively engaging in a dialog with the independent auditor with respect to any disclosed relationships or services that may have an impact on the objectivity and independence of the independent auditor.
10. Review the independent auditors audit plan. This review should include a discussion of scope, staffing, reliance upon management and general audit approach.
11. Prior to releasing the year-end earnings, discuss, out of the presence of management, the results of the audit with the independent auditors. The discussion should include the matters set forth in item 2, as well as the following:
 1. The adequacy of the Company's internal controls, including computerized information system controls and security.
 2. Any related significant findings and recommendations of the independent auditor together with management's responses to them.
 3. The independent auditor's judgment about the quality and appropriateness of the Company's accounting principles as applied in its financial reporting. Without limiting the foregoing, the Audit Committee is expected to inquire as to the independent auditors' views about whether management's choices of accounting principles appear reasonable from the perspective of income, asset and liability recognition, and whether those principles are common practices or are minority practices.

Other Audit Committee Responsibilities

12. Recommend to the Board of Directors whether the Company's audited financial statements should be included in the Company's Annual Report on Form 10-K for filing with the Securities and Exchange Commission.
13. Annually prepare a report to shareholders as required by the Securities and Exchange Commission. The report should be included in the Company's proxy statement relating to the annual meeting of stockholders.
14. Perform any other activities consistent with this Charter, the Company's by-laws, and governing law, as the Committee or the Board deems necessary or appropriate.
15. Maintain minutes of meetings and periodically report to the Board of Directors on its activities.
16. Periodically perform self-assessment of audit committee performance.
17. Discuss and address with the independent auditors any significant issues relative to overall board responsibility that, in the judgment of the independent auditors, have been communicated to management but have not been adequately resolved.
18. Periodically perform self-assessment of audit committee performance.
19. Discuss and address with the independent auditors any significant issues relative to overall board responsibility that, in the judgment of the independent auditors, have been communicated to management but have not been adequately resolved.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 20. Indemnification of Directors and Officers.

Chapter 17, Subchapter D of the Pennsylvania Business Corporation Law contains provisions permitting indemnification of officers and directors of a business corporation incorporated in Pennsylvania. Sections 1741 and 1742 of the Pennsylvania Business Corporation Law provide that a business corporation may indemnify any director or officer against liabilities and expenses he or she may incur in connection with a threatened, pending or completed civil, administrative or investigative proceeding by reason of the fact he or she is or was a representative of the corporation or was serving at the request of the corporation as a representative of another enterprise, provided that the person acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. In general, the power to indemnify under these sections does not exist in the case of actions against a director or officer by or in the right of the corporation if the person otherwise entitled to indemnification shall have been adjudged to be liable to the corporation unless it is judicially determined that, despite the adjudication of liability but in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnification for the expenses the court deems proper. Section 1743 of the Pennsylvania Business Corporation Law provides that the corporation is required to indemnify directors and officers against expenses they may incur in defending these actions if they are successful on the merits or otherwise in the defense of these actions.

Section 1746 of the Pennsylvania Business Corporation Law provides that indemnification under the other sections of Subchapter D is not exclusive of other rights that a person seeking indemnification may have under any bylaw, agreement, vote of shareholders or disinterested directors or otherwise, whether or not the corporation would have the power to indemnify the person under any other provision of law. However, Section 1746 prohibits indemnification in circumstances where the act or failure to act giving rise to the claim for indemnification is determined by a court to have constituted willful misconduct or recklessness.

Section 1747 of the Pennsylvania Business Corporation Law permits a corporation to purchase and maintain insurance on behalf of any person who is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a representative of another enterprise, against any liability asserted against that person and incurred by him or her in that capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify the person against the liability under Subchapter D.

Infonautics' amended and restated bylaws provide that a director shall not be personally liable for monetary damages for any action taken or failed to be taken unless the director has breached or failed to perform the duties of his office and such breach or failure to perform constitutes self-dealing, willful misconduct or recklessness. A director's criminal or tax liability is not limited by the foregoing provision.

Infonautics' amended and restated bylaws provide that Infonautics is obligated to indemnify directors and officers to the fullest extent not prohibited by law against any liability including any judgment, amount paid in settlement, fine, penalty, cost or expense (including, without limitation, attorneys' fees) actually and reasonably incurred in connection with any action, suit or proceeding if such proceeding was authorized by the board of directors.

In addition to the indemnification provided for in Infonautics amended and restated bylaws, Infonautics has entered into indemnification agreements with its principal executive officers and its directors to provide additional contractual assurances regarding the scope of indemnification and to provide additional procedural protections. Infonautics also has an insurance policy which insures the

directors and officers of Infonautics against certain liabilities which might be incurred in connection with the performance of their duties.

Item 21. Exhibits and Financial Statement Schedules.

(a) The following exhibits, as required by Item 601 of Regulation S-K, are filed as part of this registration statement:

- 2.1 Agreement and Plan of Merger by and among Infonautics, Inc., Tucows Inc. and TAC Merger Sub Corporation (included as annex 1 to the joint proxy statement/prospectus forming a part of this registration statement and incorporated herein by reference).
- 3.1(a) Form of Articles of Incorporation.(1)
- 3.1(b) Registrant's Proposed Second Amended and Restated Articles of Incorporation (included as annex 2 to the joint proxy statement/prospectus forming a part of this registration statement and incorporated herein by reference).
- 3.2* Registrant's Amended and Restated Bylaws.
- 5.1* Opinion of Morgan, Lewis & Bockius LLP regarding legality of the securities being registered.
- 8.1* Form of opinion of Skadden, Arps, Slate, Meagher & Flom LLP as to certain United States federal income tax consequences.
- 10.1 Amended and Restated 1994 Omnibus Stock Option Plan.(1)
- 10.2 1996 Equity Compensation Plan as amended and restated as of August 18, 1999.(2)
- 10.3 Form of Nonqualified Stock Option Agreement.(1)
- 10.4(a) Employment Agreement dated September 5, 1996 between Infonautics, Inc. and Van Morris.(1)
- 10.4(b) Amendment No. 1 to Employment Agreement dated as of November 4, 1996 between Infonautics, Inc. and Van Morris.(3)
- 10.5 Employment Agreement dated as of November 24, 1997 between Infonautics, Inc. and Gerard J. Lewis, Jr.(4)
- 10.6 Form of Indemnification Agreement.(1)
- 10.7 Consulting agreement effective as of March 1, 1993, as amended February 1, 1994 and February 1, 1996 between Infonautics, Inc. and Howard Morgan.(1)
- 10.8+ Master Transaction Agreement by and among Infonautics, Inc., Infonautics Corporation, Bell & Howell Company and BHIL dated July 8, 1999.(5)
- 10.9 First Amendment to the Master Transaction Agreement by and among Infonautics, Inc., Infonautics Corporation, Bell & Howell Company and BHIL dated September 28, 1999.(5)
- 10.10 Securities Purchase Agreement, dated as of February 11, 1999, between Infonautics, Inc. and RGC International Investors, LDC.(6)
- 10.11 Registration Rights Agreement, dated as of February 11, 1999, between Infonautics, Inc. and RGC International Investors, LDC.(6)

- 10.12 Letter dated November 2, 1998 from RGC International Investors, LDC waiving certain rights under the securities purchase and related agreements discussed in Note 6 of the Notes To Consolidated Financial Statements in the Company's Report on Form 10-Q for the quarterly period ended September 30, 1998 and in Item 2, Changes in Securities, in the same Report on Form 10-Q.(7)
- 10.13 Statement with Respect to Shares for Series A Convertible Preferred Stock of Infonautics, Inc. with RGC International Investors, LDC.(8)
- 10.14 Securities Purchase Agreement, dated as of July 22, 1998 between Infonautics, Inc. and RGC International Investors, LDC.(8)
- 10.15 Registration Rights Agreement dated as of July 22, 1998 between Infonautics, Inc. and RGC International Investors, LDC.(8)
- 10.16 Stockholders Agreement dated January 10, 2000 between the Company, bigchalk.com, inc., BHIL, TBG Information Investors LLC, Core Learning Group LLC, Core Learning Group—BC, LLC, APA Excelsior V, L.P., Patricof Private Investment Club II, L.P., Frank A. Bonsal, Jr., WS Investment Company 99B, Alan K. Austin, The San Domenico Trust, Timothy J. Sparks, and Daniel K. Yuen.(9)
- 10.17 Lease between American Baptist Churches USA and Infonautics Corporation.(10)
- 10.18 Amended and Restated Stockholders Agreement dated December 20, 2000 between the Company, bigchalk.com, inc., BHIL, TBG Information Investors LLC, Core Learning Group—BC, LLC, APA Excelsior V, L.P., Patricof Private Investment Club II, L.P., Frank A. Bonsal, Jr., Softbank Venture, Inc., IGSB LSP I, LLC, Oberndorf Family Partners, L.P., and others. (11)
- 10.19* Shareholder Agreement dated March 27, 2001, by and among Infonautics, Inc., Tucows Inc. and Marvin L. Weinberger and Fran Solow Weinberger.
- 10.20* Stockholder Agreement dated March 27, 2001, by and between Infonautics, Inc., Tucows Inc. and certain stockholders of Tucows listed on the signature page thereto.
- 10.21* Promissory Note dated April 26, 2001 from Tucows Inc. to Infonautics, Inc.
- 10.22* Employment Agreement dated May 4, 1999 between Tucows International Corp. and Elliot Noss.
- 10.23* Employment Agreement dated May 4, 1999 between Tucows.Com Inc. and Scott Swedorski.
- 10.24* Executive Compensation Agreement dated January 1, 2000 between Tucows International Corporation and Michael Cooperman.
- 10.25* Executive Compensation Agreement dated September 5, 2000 between Tucows International Corporation and Graham Morris.
- 10.26* Executive Compensation Agreement dated February 5, 2001 between Tucows International Corporation and Supriyo Sen.
- 23.1* Consent of Morgan, Lewis & Bockius LLP (included as part of its opinion incorporated by reference to exhibit 5.1).
- 23.2 Consent of PricewaterhouseCoopers LLP.
- 23.3 Consent of KPMG LLP with respect to bigchalk.com, inc.
- 23.4 Consent of KPMG LLP with respect to Tucows Inc. and the Tucows Division of Tucows Interactive Limited.

- 23.5* Consent of Skadden, Arps, Slate, Meagher & Flom LLP (included as part of its opinion incorporated by reference to exhibit 8.1).
- 23.6 Consent of Janney Montgomery Scott LLC.
- 24.1* Powers of Attorney.
- 99.1* Form of Proxy Card of Infonautics, Inc.
- 99.2* Form of Proxy Card of Tucows Inc.
- 99.3* Consent of Dennis Bennie to be named a director.
- 99.4* Consent of Erez Gissin to be named a director.
- 99.5* Consent of Elliot Noss to be named a director.
- 99.6* Consent of Stanley Stern to be named a director.
- 99.7* Consent of Robert F. Young to be named a director.
- 99.8* Consent of Alan Lipton to be named a director.
- 99.9* Consent of Tomer Kariv to be named a director.

+ Portions of this exhibit have been omitted based on a grant of confidential treatment by the Commission. The omitted portions of the exhibit have been filed separately with the Commission.

* Previously filed.

- (1) Incorporated by reference to exhibit filed with the registrant's Registration Statement on Form S-1 (File No. 333-2438) ("Form S-1 Registration Statement"), as filed with the Commission on March 14, 1996.
- (2) Incorporated by reference to exhibit filed with the registrant's Registration Statement on Form S-8 (File No. 333-30342), as filed with the Commission on February 14, 2000.
- (3) Incorporated by reference to exhibit filed with the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1996, as filed with the Commission on March 31, 1997.
- (4) Incorporated by reference to exhibit filed with the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1997 as filed with the Commission on March 30 1998.
- (5) Incorporated by reference to exhibit filed with the registrant's Report on Form 8-K/A, as filed with the Commission on October 4, 1999.
- (6) Incorporated by reference to exhibit filed with the registrant's Report on Form 8-K, as filed with the Commission on February 24, 1999.
- (7) Incorporated by reference to exhibit filed with the registrant's Report on Form 10-Q for the quarterly period ended September 30, 1998, as filed with the Commission on November 16, 1998.
- (8) Incorporated by reference to exhibit filed with the registrant's Report on Form 8-K, as filed with the Commission on July 23, 1998.
- (9) Incorporated by reference to exhibit filed with the registrant's Report on Form 10-Q for the quarterly period ended March 31, 2000, as filed with the Commission on May 15, 2000.
- (10) Incorporated by reference to exhibit filed with the registrant's Report on Form 10-Q for the quarterly period ended June 30, 2000, as filed with the Commission on August 14, 2000.

- (11) Incorporated by reference to exhibit filed with the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2000, as filed with the Commission on April 3, 2001.

Item 22. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment may be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That prior to any public reoffering of the securities registered hereunder through use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the issuer undertakes that such reoffering prospectus will contain the information called for by the applicable registration form with respect to reofferings by persons who may be deemed underwriters, in addition to the information called for by the other items of the applicable form.

(5) That every prospectus: (i) that is filed pursuant to paragraph (4) immediately preceding, or (ii) that purports to meet the requirements of Section 10(a)(3) of the Act and is used in connection

with an offering of securities subject to Rule 415, will be filed as a part of an amendment to the registration statement and will not be used until such amendment is effective, and that, for purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(6) To respond to requests for information that is incorporated by reference into the prospectus pursuant to Item 4, 10(b), 11, or 13 of this form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

(7) To supply by means of post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of King of Prussia, Commonwealth of Pennsylvania, on July 26, 2001.

INFONAUTICS, INC.

By: /s/ DAVID VAN RIPER MORRIS

Name: David Van Riper Morris

Title: President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933 this amendment to the registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ DAVID VAN RIPER MORRIS</u> David Van Riper Morris	President, Chief Executive Officer (Principal Executive Officer) and Director	July 26, 2001
<u>/s/ FREDERICA F. O'BRIEN</u> Frederica F. O'Brien	Chief Financial Officer (Principal Financial and Accounting Officer)	July 26, 2001
<u>*</u> Lloyd N. Morrisett	Director	July 26, 2001
<u>*</u> Israel J. Melman	Director	July 26, 2001
<u>*</u> Howard L. Morgan	Director	July 26, 2001
<u>*</u> Brian Segal	Director	July 26, 2001

*By: /s/ DAVID VAN RIPER MORRIS

David Van Riper Morris

Attorney-in-fact

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
23.2	Consent of PricewaterhouseCoopers LLP.
23.3	Consent of KPMG LLP with respect to bigchalk.com, inc.
23.4	Consent of KPMG LLP with respect to Tucows Inc. and the Tucows Division of Tucows Interactive Limited.
23.6	Consent of Janney Montgomery Scott LLC.