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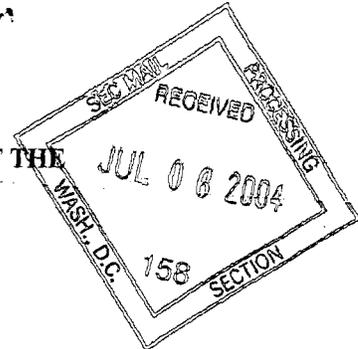
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-K *ARK*

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2003

Commission File Number: 000-26223



TUMBLEWEED COMMUNICATIONS CORP.

(Exact name of registrant as specified in its charter)

Delaware
(State of other jurisdiction of incorporation or organization)

94-3336053
(I.R.S. Employer Identification No.)

700 Saginaw Drive
Redwood City, CA 94063
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code
(650) 216-2000

Securities registered pursuant to Section 12(b) of the Act:
None

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, \$0.001 par value per share



Indicate by check mark whether the Registrant (1) has filed all reports required by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes No

The approximate aggregate market value of the Common Stock held by non-affiliates of the Registrant, based upon the last sale price of the Common Stock reported on the Nasdaq National Market on June 30, 2003, was approximately \$66,751,479. Shares held by each officer, director, and holder of 5% or more of the outstanding Common Stock have been excluded in that such persons may be deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares of common stock outstanding as of February 13, 2004 was 42,498,577.

SPECIAL NOTE ON FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, which are subject to the "safe harbor" created by those sections. The forward-looking statements are based on our current expectations and projections about future events, including, but not limited to:

- any projections of revenues, earnings, synergies or other financial items;
- any statements of the plans, strategies and objectives of management for future operations;
- any statements regarding future economic conditions or performance;
- implementing our business strategy;
- attracting and retaining customers;
- obtaining and expanding market acceptance of the products and services we offer;
- forecasts of Internet usage and the size and growth of relevant markets;
- rapid technological changes in our industry and relevant markets;
- the future business, financial condition and results of operations;
- competition in our market;
- any statements relating to integration or restructuring plans; and
- any statements of assumptions underlying any of the foregoing.

Discussions containing such forward-looking statements may be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations." In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "could," "predicts," "projects," "potential," "continue," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates," or the negative of these terms and other comparable terminology. These forward-looking statements are only predictions, not historical facts. These forward-looking statements involve certain risks and uncertainties, as well as assumptions, that could cause actual results, levels of activity, performance, achievements and events to differ materially from those stated, anticipated or implied by such forward-looking statements. Factors that could cause or contribute to such differences include those discussed under the caption "Risks and Uncertainties" contained herein, as well as those discussed elsewhere herein. These forward-looking statements are made as of the date of this Annual Report on Form 10-K. Tumbleweed disclaims any obligation to update or alter these forward-looking statements, whether as a result of new information, future events or otherwise.

**TUMBLEWEED COMMUNICATIONS CORP.
2003 FORM 10-K ANNUAL REPORT**

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TRADEMARKS

Our registered trademarks include Tumbleweed®, Tumbleweed Communications®, Secure Envelope®, Secure Inbox®, Tumbleweed IME Integrated Messaging Exchange®, WorldSecure® and Worldtalk®. Additional trademarks belonging to us include Tumbleweed Secure Guardian™, Tumbleweed Secure Policy Gateway™, Tumbleweed Secure Staging Server™, Tumbleweed Staging Server™, Tumbleweed Secure Mail™, Tumbleweed Secure Redirect™, Tumbleweed Secure Public Network™, Tumbleweed SPN™, Tumbleweed Secure Archive™, Tumbleweed Secure Web™, Tumbleweed Secure CRM™, Tumbleweed Secure Messenger™, Tumbleweed Secure Statements™, Tumbleweed My Copy™, Tumbleweed L2i™, Tumbleweed IME Developer™, Tumbleweed IME Personalize™, WorldSecure/Mail™ and Tumbleweed IME Alert™.

PART I

Item 1—Business.

Overview

Tumbleweed Communications Corp. (“Tumbleweed” or “we”) is a leading provider of secure Internet messaging software products for enterprises and government. Our solutions are used by companies when email, file transfer or Web communications are mission-critical. By making Internet communications secure, reliable and automated, our products help customers significantly reduce their cost of doing business.

We have more than 700 enterprise customers who use our products to connect with over ten thousand corporations and millions of end-users. Tumbleweed’s market focus is in the financial services, healthcare and insurance, government and enterprise markets. Our customers include ABN Amro Bank, Catholic Healthcare West, Bank of America Securities, JP Morgan Chase & Co., The Regence Group (Blue Cross/Blue Shield), Society for Worldwide Interbank Financial Telecommunication (SWIFT), St. Luke’s Episcopal Healthcare System, the US Food and Drug Administration, and the US Navy and Marine Corps.

Our software solutions are:

- **Email Firewall and Dynamic Anti-Spam Service** to protect companies from “spam” junk email, viruses, and to implement content filtering for regulatory compliance
- **Secure File Transfer** for automating the transfer of payments files, Electronic Data Interchange (“EDI”) files, check images and other business-critical information between corporations, banks and processors
- **Secure Email and Document Delivery** for protecting confidential information such as patient records and financial statements
- **Identity Validation** to authorize users to access secure computing systems and to digitally sign files and transactions

Industry Background

The use of corporate email systems, customer service applications and web services has grown as enterprises increasingly rely on these applications to communicate with their customers, business partners and suppliers. Enterprises seek communications applications that integrate business processes and associated data with email and web applications and transform how they communicate and conduct business with their customers and partners. The volume of corporate Internet communications has grown significantly over the past several years in both the business and consumer markets. However, these systems are increasingly challenged by the threats of hackers, viruses, spam overload, email spoofing and phishing attacks.

To fully leverage the power of communicating using the Internet and email, businesses must first address the issues of security, centralized management, automation, legacy integration and end-user behavior, as well as potential adoption issues. The policies and management protocols traditionally applied to paper or voice-based processes within a company in many cases are now being applied, appropriately, to email communications. The adoption of these policies and protocols is critical to establish compliance with regulatory requirements and to provide enterprises the same audit trail and confidentiality protections that paper processes supply. End-users are also interested in easily accessible online services and communications from the companies with which they do business.

With comprehensive communication security solutions, businesses can deploy policies enterprise-wide, provide critical management of communications, and leverage the investment they have made in their existing systems in order to maximize business conducted on the Internet.

Tumbleweed's Secure Internet Messaging Applications and Services

We offer a comprehensive family of secure messaging software applications that enable enterprises to leverage the cost-efficiencies and productivity of Internet communications. In addition, all of our solutions are designed to integrate with existing business and email systems, requiring no significant change in existing firewall or system infrastructures. Our applications can be purchased independently or together to create a secure Internet communications solution for businesses. All of our solutions offer multi-level security using industry standards, universal access, and proven scalability for high volume message traffic.

Tumbleweed Email Firewall and Dynamic Anti-Spam Service

The Tumbleweed Email Firewall (formerly called Tumbleweed MMS) allows enterprises to apply anti-spam filtering, anti-virus scanning, encryption and content policy to inbound and outbound email communications, at the email gateway. The Tumbleweed Email Firewall enables companies to centrally control, manage and monitor their Internet email communications stream. This allows our customers to improve their capability to comply with their internal corporate policies as well as government regulations.

Tumbleweed's Dynamic Anti-Spam Service (DAS) provides daily updates of anti-spam filtering rules including URL block lists, heuristic filter data and blacklisted domain listings. The DAS service ensures that the Email Firewall adapts to the changing nature of unwanted spam messages, thereby providing effective blocking of spam email at the email gateway without requiring tuning by the customer.

The Email Firewall features a Secure Policy Gateway for centralized policy enforcement, and a suite of software process managers and optional applications that can be quickly configured to define and enforce the policies appropriate to a particular business. The Email Firewall Content Manager scans messages and attachments for specific words or strings of words. When a policy violation is detected, Tumbleweed Email Firewall can take a number of actions, such as block, quarantine, archive, or defer delivery. With the Email Firewall Access Manager, companies can set policies that restrict access of email communications from certain senders or those sent to certain recipients. For example, policies can block inbound messages from known problem or spam domains, or prevent confidential information from being sent to an unwanted domain.

The Email Firewall Virus Manager uses integrated server-based anti-virus software from Network Associates to detect and optionally clean or strip infected attachments in both incoming and outgoing messages. This provides a first-layer of anti-virus defense, by filtering viruses out before they enter a corporation's network and email servers.

The Email Firewall can encrypt and digitally sign email messages as they are sent from the server, allowing companies to secure their email communications with other companies who are using S/MIME-compliant email products (S/MIME is an industry standard for encrypted email). The Email Firewall also decrypts incoming emails and verifies digital signatures on incoming emails. Content policies can be configured by companies so that signed emails from customers or partners bypass the anti-spam filters, thereby giving a higher level of assurance that emails will be delivered securely and reliably between trusted business partners. For communicating with end-users who do not have S/MIME compliant email software, the Email Firewall can integrate with the Tumbleweed Secure Redirect product for secure Web-based email delivery.

Tumbleweed Secure File Transfer

The Tumbleweed SecureTransport product family is file transfer software for sending and receiving business files over the Internet securely and reliably. SecureTransport is used by companies to communicate with their customers, partners and suppliers. SecureTransport can be used to send small business-critical messages, as well as to reliably deliver very large files that can exceed one gigabyte in size.

The Tumbleweed SecureTransport product family includes server software, client software, and toolkits for customization and integration into business systems. SecureTransport allows file transfers to be initiated interactively by users who access the server with a standard Web browser or an interactive client software. SecureTransport also allows transfers to be initiated automatically, according to schedules or driven by back-office enterprise systems. Incoming and outgoing files can be connected to existing back-office systems through a Java-based Transaction Manager.

SecureTransport is used by enterprises to send EDI files to suppliers in their supply chain. It is also used extensively in the financial services markets to send and receive corporate payment messages, check images, reports, and other kinds of financial messages. Because SecureTransport is compliant with the Internet security requirements of the U.S. Healthcare Information Portability and Accountability Act ("HIPAA"), it is used extensively in the insurance and healthcare markets to move patient records, billing information and EDI files.

Tumbleweed Secure Email and Document Delivery

Tumbleweed Secure Redirect is server-based software that enables any Internet email server to send and receive email and documents securely. Companies use Secure Redirect to securely communicate over the Internet with individuals or companies, without requiring those end-users to have any kind of secure email software. Recipients of messages only need an e-mail program and a web browser to receive encrypted messages.

Tumbleweed Secure Redirect can scan the content of outgoing messages originating from groupware applications or web-based email applications and then encrypt those communications for delivery depending upon a company's policies. Recipients can be authenticated by a variety of methods, using known information about the recipient or by tying into an internal authentication database or system existing within the company (lightweight directory access protocol, directory, single sign-on directory, etc.). Tumbleweed Secure Redirect also allows enterprises to apply security to emails originating from an internal customer relationship management system.

The advantages of Tumbleweed Secure Redirect include:

- complements rather than replaces existing groupware applications and information technology systems;
- universal coverage and ubiquitous reach (all groupware communications can be automatically managed and secured, any e-mail client and/or web browser can accept the encrypted messages);
- based on open standards, so that it works with whatever software and hardware a particular partner is using;
- applies security automatically at the server level, without requiring end users to replace the client software they are already familiar with;
- expedited training (end users need not learn new procedures or new software tools); and
- cost-effective (no expenses for end user training or distributing, installing, or maintaining new desktop software).

Tumbleweed Secure Redirect is used in the insurance and healthcare markets to communicate between patients, doctors, hospitals and pharmacies. It is used in financial services to send bank and brokerage statements to customers securely. The manufacturing and logistics industries use Secure Redirect to encrypt email communications across their supply chains.

Tumbleweed Identity Validation

Tumbleweed Valicert Validation Authority is a family of client and server software for validating the identity of users on the Internet in real-time. The Validation Authority allows digital certificate credentials to be used to authenticate users to computers and software applications, sign documents and encrypt email.

The process of digital certificate validation is similar to the process used to authorize credit card transactions. To begin with, a relying party, which is client or server software that checks signed data using another private key, verifies that the certificate has not been revoked, as part of the run-time use of digital certificates. Then a certificate chain should be constructed, up to a trusted root. Each certificate can then be verified to determine that it has not been revoked.

The Validation Authority can validate a certificate issued by any Certificate Authority (CA). The Enterprise Validation Authority is a robust, fourth generation server that provides online validation support using industry standards. It integrates with major Certificate Authority (CA) products and services including those from Baltimore Unicert, Entrust PKI, Microsoft CA, AOL/Netscape CMS and SunValidation Authority (VA) and delivers a comprehensive, scalable, and reliable framework for validating digital certificates in real time.

The Tumbleweed Valicert Validation Authority product family is comprised of the Enterprise Validation Authority server, Server Validator, Validator Toolkit, and Desktop Validator. The product family is used by financial institutions to authenticate the identity of banks, payment networks and business customers for high-value communications and transactions. In the government sector, the Tumbleweed Valicert Validation Authority product family is used in the Department of Defense for authentication to computers and applications, and for verifying the identity of email senders.

Tumbleweed Professional Services

The following are examples of the professional services we offer:

- Support and maintenance, which assists customers in managing Tumbleweed products they have deployed.
- Integration consulting, which allows our customers to integrate our solutions with existing technology infrastructure, including legacy systems, customer databases, support systems, and billing systems.
- Technical training, which provides the customer with formal training in the administration and operation of our products and use of Tumbleweed application programming interfaces, or APIs.

Our products are generally deployed in business-critical environments, where highly responsive customer support is critical to the continuing success of the deployed solution. We maintain a centralized technical support group that is responsible for first-line and second-line customer support as well as distribution of products and documentation updates. This group works closely with our professional services and product development organizations in order to ensure continuity in the areas of problem resolution and priority response.

We also offer extended customer assistance 24 hours a day, 7 days a week, for those customers requiring around the clock support. Pricing for such support is negotiated separately and is in addition to our standard fees.

Professional services are performed for an additional fee and are offered in conjunction with the licensing or deployment of our products.

Strategy

Our objective is to be the leading provider of secure Internet messaging software products for enterprises and government. Key elements of our strategy are:

- Growing our existing position in the financial services, healthcare, and government industries and expanding into the retail and manufacturing industries.
- Expanding our distribution channels, including our reseller channel, to increase sales to the mid-sized enterprise market.

- Expanding our international sales presence.
- Leveraging our security core competency and intellectual property to increase our market share and mind share in the email hygiene and secure messaging markets including anti-spam and anti-phishing.
- Expanding the breadth of our market share, primarily through our email firewall and dynamic anti-spam service products, and increasing the depth of our market share by upselling customers to our secure file transfer, secure email and document delivery, and identity validation products.

Customers

The following is a list of each of our business customers that in 2003 entered into a contract to pay us \$50,000 or more.

Advanced Micro Devices, Inc.	Data Connection Ltd
Aetna Inc.	Deere & Company
Affiliated Computer Services, Inc.	Dell Computer Corporation
AIM Management Group Inc.	DHL International, Ltd.
Air Academy Federal Credit Union	Diners Club International Ltd.
Alere Medical, Inc.	e-Japan, Ltd.
ALLTEL Corporation	Empire HealthChoice Assurance, Inc.
American Fidelity Assurance Company	EMSource, LLC
American Healthways, Inc.	Federal Reserve Bank
Ameritrade, Inc.	First Tennessee National Corporation
AmSouth Bank	Freddie Mac
Aon Corporation	General Motors Corporation
Arkansas Blue Cross and Blue Shield	Gilead Sciences, Inc.
Automatic Data Processing, Inc.	GlaxoSmithKline plc
Availity, LLC	Great Lakes Education Loan Services, Inc.
AXA Financial, Inc.	Group Health Cooperative
Bank of America Corporation	Harrah's Entertainment, Inc.
BJC HealthCare	Health Net, Inc.
Blue Cross and Blue Shield of Kansas City	Healthcare Services Group, Inc.
Blue Cross and Blue Shield of Nebraska	Hewitt Associates LLC
BlueCross BlueShield of North Dakota	Hibernia Corporation
Boehringer Ingelheim GmbH	Horizon Blue Cross Blue Shield of New Jersey
Cadwalader, Wickersham & Taft LLP	Huntington Bancshares Incorporated
Canada Post Corporation	Independence Blue Cross
Capital BlueCross	IndyMac Bancorp, Inc.
CapitalOne Financial Corporation	Insurance Services Office, Inc.
Catholic Healthcare West	J.P. Morgan Chase & Co.
Certegy Inc.	j2 Global Communications, Inc.
ChevronTexaco Corporation	Janus International Holding LLC
Children's Hospital Boston	John Hancock Financial Services Inc.
Childrens Hospital Los Angeles	Keystone Mercy Health Plan
CIGNA Corporation	LabOne, Inc.
Clarica Life Insurance Company	Lam Research Corporation
Cleary, Gottlieb, Steen, and Hamilton	Lehman Brothers
Community Foundation of Northwest Indiana, Inc.	Long & Foster Companies
Conexant Systems, Inc.	Manufacturers and Traders Trust Company
Conseco Services, LLC	Massachusetts Financial Services Company
Countrywide Home Loans, Inc.	Massachusetts Mutual Life Insurance Company
Credit Suisse First Boston LLC	McKesson Corporation

Medco Health Solutions, Inc.
Medimpact Healthcare Systems, Inc.
Memorial Sloan-Kettering Cancer Center
Merck & Co., Inc.
Metropolitan Life Insurance Company
Mi8 Corporation Inc.
Mount Sinai NYU Health
MultiCare Health System
National City Corporation
National Semiconductor Corporation
New Century Mortgage Corporation
Nexen Inc.
Novo Nordisk A/S
ntl Group Limited
OMD The Worldwide Media Network
OmniStep Inc.
Operational Research Consultants, Inc.
Oregon Health & Sciences University
Oxford Health Plans, Inc.
Pacific Life Insurance Company
Palmetto Health
Perot Systems Corporation
Pitt County Memorial Hospital
Premera Blue Cross
Primerica
ProBusiness Services, Inc.
Prudential Financial, Inc.
Raytheon Company

Republic Mortgage Insurance Company
Robert Half International Company
Royal Bank of Canada
Safeway Inc.
Shaw's Supermarkets, Inc.
St. Joseph Health System
Stanford Hospital & Clinics
State Street Corporation
Takeda Chemical Industries, Ltd.
TD Waterhouse Group, Inc.
Tenet Healthcare Corporation
The Cleveland Clinic
The Regence Group
Time Warner Inc.
Travelers Property Casualty Corp.
Trinity Health Corporation
U.S. Bancorp
UBS Warburg
University of North Carolina Health Care System
Verizon Communications Inc.
Vision Service Plan
Wal-Mart Stores, Inc.
Washington Mutual, Inc.
Wells Fargo Bank
WesCorp Federal Credit Union
Winchester Hospital
Xcel Energy Inc.

For 2003, 2002 and 2001, five customers comprised approximately 16%, 23%, and 17%, respectively, of our revenue. The loss of one or more of our major customers, the failure to attract new customers on a timely basis or a reduction in usage and revenue associated with the existing or proposed customers would harm our business and prospects. For the years ended December 31, 2003, 2002 and 2001, respectively, no single customer comprised 10% or more of our revenue.

Backlog

Our backlog consists of deferred revenue as well as contractual agreements with customers for which future installments to be billed and received from the customer that are not yet currently due and payable or for which the software has not yet been shipped to the customer. Our backlog excludes all items relating to consulting services. Backlog was \$15.3 million and \$8.0 million at December 31, 2003, and 2002, respectively. We believe that \$12.3 million of the backlog at December 31, 2003 will be recognized as revenue in 2004. In addition, we will also recognize \$672,000 of consulting revenue in 2004 as a result of a prepaid consulting contract that has an expiration clause that will require full revenue recognition in 2004 for the portion of that contract that is in deferred revenue at December 31, 2003.

Sales

We maintain a direct sales force that focuses on signing key enterprise customers as well as further penetrating existing accounts by selling them new or expanded applications. Our sales force consists of a total of 49 employees as of December 31, 2003. Sales offices in the U.S. currently include Redwood City, California; Herndon, Virginia; New York, New York; and Oakbrook Terrace, Illinois. Our sales force includes field sales

engineers and inside sales personnel who support the account executives. Field sales engineers assist our account executives with technical presentations, customer requirements analysis and initial solution designs. Our inside sales personnel assist the account executives in managing their customer relationships and qualifying new accounts. Our sales effort is augmented by the sales forces of our channel partners. The typical sales cycle can range from one to nine months, but may be longer for large contracts.

Marketing

Our marketing efforts are organized around three primary areas: product marketing, product management and corporate marketing. Product marketing identifies target markets and customer opportunities, then develops the positioning, programs and materials to reach customers and support sales activities. Product management translates customer and market requirements into product plans and works with engineering to ensure completion. Product management also trains salespeople on product information. Corporate marketing drives overall market awareness of Tumbleweed as a company and our products through analyst and investor relations, media, events, and speaking engagements. Corporate marketing is also responsible for branding, corporate identity, and the Tumbleweed website. Both product marketing and corporate marketing work closely with direct sales and channel sales partners to focus programs more effectively and guide product research and development.

Governmental Regulation

All of our products are subject to U.S. export control laws and applicable foreign government import, export and/or use requirements. Minimal U.S. export restrictions apply to all products, whether or not they perform encryption functions.

The Export Administration Regulations of the U.S. Department of Commerce regulate the export of most commercial products with encryption features. Under regulations issued by the Department of Commerce in January 2000, encryption products of any key length, may be exported, after a one-time technical review, to non-governmental end-users around the world, except for embargoed countries and specific prohibited end-users. Encryption products may be exported to governmental end-users under special Encryption Licensing Arrangements or individual export licenses that may be issued at the discretion of the Department of Commerce. In October 2000, the Department of Commerce further revised the Export Administration Regulations to relax some reporting requirements and to remove the export licensing requirement for shipments to governmental end-users in 23 countries, including most of the United States' major trading partners. In June 2002, the Department of Commerce amended the encryption regulations again to conform them to the control lists implemented by other countries that are also members of the Wassenaar Arrangement. We believe that we have completed the necessary technical reviews of the products and services we currently export, but new products that we acquire or develop may require technical review before we can export them. For the export of some of our products, we are subject to various post-shipment reporting requirements.

The changes to the export regulations allow our products to be exported more quickly and at stronger strength and, therefore, be more competitive with products from foreign producers. However, the export regulations may be modified at any time. In light of the ongoing discussions regarding anti-terrorism legislation in the U.S. Congress, there may be an increased risk that export regulations may be modified in the future. Modifications to the export regulations could reduce or eliminate our ability to export some or all of our products from the U.S. without a license in the future, which could put us at a disadvantage in competing for international sales compared to companies located outside of the U.S. that would not be subject to these restrictions.

Intellectual Property

We own 18 U.S. patents issued by the U.S. Patent and Trademark Office—17 utility patents and one design patent. We have filed an additional 23 utility patent applications that are now pending in the U.S. Patent and

Trademark Office, and also have 19 patent applications now pending in foreign jurisdictions. In addition, we currently have 22 registered trademarks worldwide, including the mark Tumbleweed, and are pursuing other key trademarks and service marks in the U.S. and internationally.

Competition

The markets in which we compete are intensely competitive and rapidly changing. We believe there is no single competitor that offers the complete package of secure messaging applications that we sell. We are aware of competitors that exist for each of our product lines and for combined components of our solution sets.

Our principal competition for email firewall solutions are companies that offer various e-mail content filtering and anti-spam products. Companies that sell products that compete with some of the features within our products include Clearswift Technologies, CipherTrust, Brightmail, Postini and Trend Micro.

Our principal competition in the secure file transfer market comes from software and service providers that include Sterling Commerce (a division of SBC Communications), Cyclone Commerce, Btrade and Standard Networks.

Our principal competition in the identity validation market comes primarily from software providers including Core Street, Systrust and Alacris.

Our principal competition in the secure email messaging market area comes from providers with offerings that are intended to compete directly with our products or that could be used as alternatives to our products. Examples of some of these providers are PostX, Sigaba, and Zix.

In addition to the competitors listed above, companies with which we do not presently directly compete may become competitors in the future, either through the expansion of our products or through their product development in the area of secure online communication services. These companies could include International Business Machines/Lotus Development, and Microsoft.

Employees

As of December 31, 2003, we employed 250 people worldwide, including 138 in engineering, 49 in sales, 27 in professional services, 11 in marketing, and 25 combined in corporate management, finance, human resources, information technology, legal, and other administration. Our employees are not represented by any collective bargaining organization. We have never experienced a work stoppage and consider our relations with our employees to be good.

Our Executive Officers

Listed below are our executive officers as of March 15, 2004. There are no family relationships between any of the executive officers and there is no arrangement or understanding between any executive officer and any other person pursuant to which the executive officer was selected. At the annual meeting of our board of directors, which follows the annual meeting of stockholders, executive officers are appointed by the board to hold office until their earlier resignation or removal.

Name	Title	Age
Jeffrey C. Smith	Chairman and Chief Executive Officer	37
John Vigouroux	President and Chief Operating Officer	44
Timothy G. Conley	Vice President—Finance and Chief Financial Officer	55

Jeffrey C. Smith, Chairman of the Board of Directors and Chief Executive Officer, is responsible for strategic planning and business development. Before founding Tumbleweed in June 1993, Mr. Smith held various senior positions in research and development with the following firms: Frame Technology from January 1991 to June 1993; Aion Corp. from January 1990 to January 1991; Hewlett-Packard from June 1988 to June 1989; and IBM Scientific Research Center in Palo Alto from June 1987 to June 1988. Mr. Smith served as a lecturer in Software Engineering at Stanford University in 1988 and 1989. Mr. Smith holds a B.S. in Computer Science from Stanford University.

John Vigouroux, President and Chief Operating Officer, is responsible for worldwide operations, including marketing, professional services, research and development, and sales. Prior to joining Tumbleweed in June 2003, Mr. Vigouroux was the President and Chief Executive Officer of Valicert, Inc. from October 2002 to June 2003. Mr. Vigouroux also was Valicert's President of Field Operations from July 2002 to October 2002. Prior to joining Valicert, Mr. Vigouroux co-founded TaraSoft, which specializes in solutions that shorten the software development cycle, and served as their Chief Executive Officer from November 2001 until July 2002. Prior to co-founding TaraSoft, Mr. Vigouroux served as President of AuctionWatch, a company providing sales management software and services for on-line business auctions, from July 2000 to October 2001. Prior to joining AuctionWatch, Mr. Vigouroux served as the Senior Vice President of Sales, Marketing and International Operations and the Vice President of Corporate Development at Beyond.com, which provided products and services for corporations and government agencies to conduct electronic commerce, from October 1998 to July 2000. Prior to joining Beyond.com, Mr. Vigouroux served as Vice President of Business Development at NetObjects, a software company providing tools for website developers and designers, from May 1997 to October 1998. In addition, Mr. Vigouroux has previously held senior level positions with Cisco Systems and Adobe Systems. Mr. Vigouroux holds a B.A. degree in Organizational Behavior and Development from Averett University.

Timothy G. Conley, Vice President of Finance and Chief Financial Officer, is responsible for finance and administration. Prior to joining Tumbleweed in July 2003, Mr. Conley served as Vice President, Finance and Chief Financial Officer for Valicert, Inc. from January 2000 through June 2003. Prior to joining Valicert, Mr. Conley was Vice President of Finance and Chief Financial Officer of Longboard, Inc., a provider of telecommunications systems, from September 1998 to January 2000. Prior to joining Longboard, Mr. Conley served as Vice President of Finance and Chief Financial Officer of Logicvision, a provider of intellectual property for use in the design and testing of semiconductor devices, from June 1997 to August 1998. Previously, Mr. Conley was Vice President of Finance and Chief Financial Officer of Verilink Corporation, a manufacturer of network access equipment, from November 1989 to May 1997. Mr. Conley holds a B.S. degree in Business Administration from Wisconsin State University.

Available Information

Our Internet address is www.tumbleweed.com. Information contained on our website is not part of this annual report on Form 10-K. We make available free of charge on www.tumbleweed.com our annual report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Statements of changes in beneficial ownership of our securities on Form 4 by our executive officers and directors are made available on our web site by the end of the business day following the submission of such filings to the SEC.

The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-732-0330. The SEC maintains an Internet site (<http://www.sec.gov>) that contains reports, proxy and information statements, and other information regarding us.

In addition, a copy of these filings, excluding exhibits, may be requested at no cost by writing or telephoning the following address or telephone number:

MKR Group
88 North Fair Oaks Avenue
Suite 202
Pasadena, CA 91103
Telephone: (626) 395-9500

Item 2—Properties.

In June 1999, we entered into an operating lease covering approximately 40,000 square feet of office space in Redwood City, California that was scheduled to expire in November 2004. During the three months ended September 30, 2003, we renewed this lease in advance of the scheduled termination date at a lower monthly rent cost in exchange for an extension of the lease term. The renewed lease expires in July 2008 with current monthly rent payments of approximately \$73,000. In September 2000, we leased an additional 42,000 square feet in an adjacent building with a term of five years and subleased this space. We terminated this second lease as of December 31, 2001 and made a lease settlement payment of \$2.3 million, using lease deposits, in the first quarter of 2002 as a part of the lease termination agreement.

We also maintain domestic sales offices in Herndon, Virginia with a lease term expiring in 2004; New York, New York with a lease term expiring in 2005; and Oakbrook Terrace, Illinois with a lease term expiring in 2005. In February 2004, we entered into an agreement to sublease a portion of the space in New York beginning in March 2004 for the remainder of the lease term. Other offices we maintain include Ann Arbor, Michigan, Bulgaria, India, Switzerland, and the United Kingdom. The Ann Arbor, Michigan lease has a term expiring in 2004 and this office was subleased to a third party beginning in March 2003 for the remainder of the lease term. The Bulgaria, India, and Switzerland leases all have terms expiring in 2004. As a result of the Interface acquisition, we assumed an operating lease in Slough, United Kingdom. The lease is for a term ending in 2020 with current quarterly rent payments of approximately \$65,000. We subleased this office space to a tenant who was providing us with quarterly rent payments of approximately \$65,000 until the sublease was terminated effective July 2003. Anticipated future sublease rental income is not expected to cover the rent expense due to a weak office rental market in and around Slough. In 2003 we recognized a charge of \$996,000 related to potential losses on this lease that was included in our consolidated statement of operations as Merger-related and other costs. We are currently attempting to find a new sublessee.

Other than our office space in Redwood City, California, none of our offices individually exceed 13,000 square feet in size. Other than the facility space that we have subleased or are attempting to sublease as described above, we are currently utilizing all of our leased facility space.

Item 3—Legal Proceedings.

On July 7, 2000, three complaints were filed by David H. Zimmer, Congressional Securities, Inc. and others against Interface Systems, Inc. (a company we acquired in 2000) and various additional defendants, including Interface's prior president and chief executive officer, Robert A. Nero. Plaintiff's most recent complaint sought compensatory damages for losses resulting from not selling their Interface stock from March 14, 2000 to the end of March 2000 and for losses from purchases of Interface stock from March 14, 2000 through April 12, 2000. In March 2003, the court dismissed all claims against Interface and dismissed all claims against Mr. Nero, except a breach of fiduciary duty claim to the extent that claim arises from Michigan common law. In April 2003, Mr. Nero filed an answer and a counterclaim against Mr. Zimmer and Congressional Securities, Inc. seeking contribution and indemnity. The parties remaining in this case agreed to settle the matter, and the Court dismissed the case with prejudice in February 2004.

In December 2001, certain plaintiffs filed a class action lawsuit in the United States District Court for the Southern District of New York on behalf of purchasers of the common stock of Valicert, Inc. (a company we

acquired in June 2003), alleging violations of federal securities laws. In re Valicert, Inc. Initial Public Offering Securities Litigation, No. 01-CV-10889 (SAS) (S.D.N.Y.), related to In re Initial Public Offering Securities Litigation, No. 21 MC 92 (SAS). The operative amended complaint is brought on purported behalf of all persons who purchased Valicert common stock from the date of its July 27, 2000 initial public offering through December 6, 2000. It names as defendants Valicert, its former chief executive officer, its chief financial officer (the "Valicert Defendants"), as well as an investment banking firm that served as an underwriter for the IPO. The complaint alleges liability under Sections 11 and 15 of the Securities Act of 1933 and Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, on the grounds that the registration statement for the IPO did not disclose that: (1) the underwriter agreed to allow certain customers to purchase shares in the IPO in exchange for excess commissions to be paid to the underwriter; and (2) the underwriter arranged for certain customers to purchase additional shares in the aftermarket at predetermined prices. The complaint also appears to allege that false or misleading analyst reports were issued. The complaint does not claim any specific amount of damages. Similar allegations have been made in lawsuits relating to more than 300 other initial public offerings conducted in 1999 and 2000, all of which have been consolidated for pretrial purposes. In February 2003, the Court issued a ruling on all defendants' motions to dismiss, denying Valicert's motion to dismiss the claims under the Securities Act of 1933, but granting Valicert's motion to dismiss the claims under the Securities Exchange Act of 1934.

In June 2003, Valicert accepted a settlement proposal presented to all issuer defendants in this case. Under the proposed settlement, the plaintiffs will dismiss and release all claims against the Valicert Defendants in exchange for a contingent payment guaranty by the insurance companies collectively responsible for insuring the issuers in all the consolidated cases, and the assignment or surrender of control to the plaintiffs of certain claims the issuer defendants may have against the underwriters. Under the guaranty, the insurers will be required to pay the amount, if any, by which \$1 billion exceeds the aggregate amount ultimately collected by the plaintiffs from the underwriter defendants in all of the cases. If the plaintiffs fail to recover \$1 billion and payment is required under the guaranty, Valicert would be responsible to pay its pro rata portion of the shortfall, up to the amount of the deductible retention under its insurance policy, which is \$500,000. The timing and amount of payments that Valicert could be required to make under the proposed settlement will depend on several factors, principally the timing and amount of any payment required by the insurers pursuant to the \$1 billion guaranty. The proposed settlement is subject to approval of the Court, which cannot be assured. The accompanying consolidated financial statements do not include a reserve for any potential loss, as we do not consider a loss to be probable at this time.

In May 2002, Tumbleweed sued PayPal, Inc. alleging infringement of our U.S. Patent No. 5,790,790 and our U.S. Patent No. 6,192,407. In May 2002 PayPal filed an answer and counterclaims denying our allegations and seeking declarations from the court that our patents are not infringed and are invalid. In September 2002, we filed a First Amended Complaint that added eBay, Inc. as a defendant. Both PayPal and eBay filed an answer and counterclaims to the First Amended Complaint denying our allegations and seeking declarations from the court that our patents are not infringed and are invalid. In January 2003, we filed a Second Amended Complaint that added a cause of action against each of PayPal and eBay for infringement of our U.S. Patent No. 6,487,599, which the U.S. Patent and Trademark Office granted to us after we had filed the First Amended Complaint. Both PayPal and eBay filed an answer and counterclaims to the Second Amended Complaint denying our allegations and seeking declarations from the court that our patents are not infringed and are invalid. In December 2003, the parties executed a settlement agreement and dismissed this lawsuit.

In September 2002, we received a letter from Entrust, Inc. indicating that we may be interested in licensing the technology covered by U.S. Patent No. 6,393,568, Encryption and Decryption System and Method with Content Analysis Provision, issued to Entrust. In October 2002, we sent a letter to Entrust indicating that Entrust may be interested in licensing the technology covered by four patents issued to us. In February 2003, we received a letter from Entrust indicating that we may have an interest in three additional patents issued to Entrust. In April 2003, Tumbleweed filed with the U.S. Patent and Trademark Office a request for interference with Entrust's Patent No. 6,393,568. In January 2004, we entered into a cross license agreement with Entrust covering the aforementioned patents and selected others, as well as patents issuing from certain patent applications that have been filed or that may be filed by either company over the next three years. As part of the agreement, the

companies resolved the patent interference proceeding, and Entrust assigned to us U.S. Patent No. 6,393,568 in return for a financial consideration.

In February 2003, we sued Ticketmaster alleging infringement of three of our U.S. Patents, Nos. 5,790,790, 6,192,407, and 6,487,599. In March 2003, Ticketmaster filed an answer to our complaint denying our allegations and seeking declarations from the court that our patents are not infringed and are invalid. In March 2004, the parties executed a settlement agreement and agreed to dismiss this lawsuit.

In June 2003, we were served with a summons and first amended complaint, captioned *Liu v. Credit Suisse First Boston, et alia*, alleging the violation of federal and state securities laws, purportedly on behalf of persons who acquired our common stock (other than purchasers of our initial public offering) from August 6, 1999 to October 18, 2000. The case is now pending in the United States District Court for the Southern District of New York, where the Court held a status conference in September 2003. At the status conference we pointed out, and plaintiffs' counsel conceded, that the named plaintiffs lacked standing to pursue the action because they had not purchased any shares of any of the issuer defendants then in the case. In October 2003, plaintiffs filed a motion for leave to file a second amended complaint, which we have opposed. An adverse outcome could harm our business and operating results. Moreover, the costs in defending this lawsuit could harm future operating results. The accompanying consolidated financial statements do not include a reserve for any potential loss, as we do not consider a loss to be probable at this time.

Item 4—Submission of Matters to a Vote of Security Holders.

No matters were submitted to a vote of our shareholders during the fourth quarter of 2003.

PART II

Item 5—Market for Registrant’s Common Equity and Related Stockholder Matters.

Our common stock is listed and quoted on The Nasdaq National Market under the symbol “TMWD.” The following table sets forth, for the calendar quarters indicated, the high and low trading prices per share for our common stock, as reported on the Nasdaq National Market.

	Tumbleweed Common Stock Prices	
	High	Low
2003 Year		
First Quarter Ended March 31	\$1.70	\$1.20
Second Quarter Ended June 30	\$2.80	\$1.19
Third Quarter Ended September 30	\$6.85	\$2.42
Fourth Quarter December 31	\$8.57	\$5.43
2002 Year		
First Quarter Ended March 31	\$5.65	\$3.31
Second Quarter Ended June 30	\$3.60	\$1.41
Third Quarter Ended September 30	\$1.76	\$0.85
Fourth Quarter December 31	\$1.80	\$0.75

As of February 13, 2004, there were approximately 594 holders of record of our common stock. This does not include the number of persons whose stock is in nominee or “street name” accounts through brokers.

Tumbleweed Dividend Policy

We have not declared or paid any cash dividends on our common stock during any period for which financial information is provided in this report. We currently intend to retain future earnings, if any, to fund the development and growth of our business and do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Tumbleweed Equity Compensation Plan Information

The following table sets forth, as of December 31, 2003, our outstanding warrants and the number of stock options outstanding under its stock option plans, the weighted average exercise price of the stock options and warrants, and the number of stock options available for grant under our plans.

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights</u>	<u>Weighted average exercise price of outstanding options, warrants and rights</u>	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</u>
	(a)	(b)	(c)
Stock option plans approved by stockholders	6,361,472	\$4.91	1,400,030
Warrants and stock option plans not approved by stockholders	<u>5,617,689</u>	\$6.25	<u>1,931,472</u>
Total	<u><u>11,979,161</u></u>	\$5.54	<u><u>3,331,502</u></u>

The 1999 Omnibus Stock Incentive Plan and the Valicert 1998 Stock Option Plan provide for an automatic annual increase, without the approval of stockholders, in the number of stock options available for grant of 5% and 5%, respectively, of the number of our shares that are issued and outstanding.

The following table summarizes information about stock options outstanding as of December 31, 2003:

<u>Exercise Prices</u>	<u>Number Outstanding</u>	<u>Weighted Average Exercise Price</u>	<u>Average Remaining Contractual Life (Years)</u>	<u>Number Exercisable</u>	<u>Weighted Average Exercise Price</u>
\$0.39-\$ 0.75	272,737	\$ 0.69	8.1	192,778	\$ 0.67
0.77-1.35	2,799,196	1.01	8.8	689,547	1.01
1.39-2.99	4,430,667	2.35	9.0	880,743	2.23
3.03-3.25	863,146	3.14	7.3	536,564	3.14
3.31-3.76	1,158,576	3.49	7.9	556,724	3.53
3.86-25.32	1,345,089	11.97	7.0	988,032	13.12
30.77-38.56	283,955	32.27	6.3	261,389	32.28
42.63-56.63	40,818	47.70	6.5	36,291	47.50
118.44	50,000	118.44	6.2	49,156	118.44
<u>\$0.39-\$118.44</u>	<u>11,244,184</u>	<u>\$ 4.75</u>	<u>8.4</u>	<u>4,191,224</u>	<u>\$ 8.44</u>

In conjunction with various financing arrangements and employment recruitment services provided to us in 1994, 1995, 1998, 1999, and 2001, we issued warrants to purchase an aggregate of approximately 583,113 shares of common stock. Additional warrants to purchase an aggregate of 289,789 shares of common stock were assumed in 2003 as a result of the merger with Valicert. As of December 31, 2003 and 2002, 734,977 and 526,613 warrants to purchase common stock remain outstanding, respectively. Of the warrants that remain outstanding at December 31, 2003, 77,000 expire in June 2004 with an exercise price of \$7.58; 11,858 expire in December 2004 with an exercise price of \$2.53; 855 expire in April 2005 with an exercise price of \$46.75; 433,330 expire in July 2006 with an exercise price of \$26.93; 139,089 expire in November 2006 with an exercise price of \$9.08; 3,830 expire in January 2007 with an exercise price of \$15.66; 21,129 expire in April 2008 with an exercise price of \$4.91; 10,266 expire in April 2008 with an exercise price of \$5.84; 2,566 expire in February 2010 with an exercise price of \$49.09; 1,283 expire in February 2010 with an exercise price of \$49.09; and the remaining 33,771 expire in June 2011 with an exercise price of \$6.66.

Item 6—Selected Financial Data.

TUMBLEWEED SELECTED HISTORICAL FINANCIAL DATA

Our selected consolidated financial data set forth below should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and notes to the consolidated financial statements included elsewhere in this report. The selected consolidated statements of operations data for the years ended December 31, 2003, 2002 and 2001 and the selected consolidated balance sheet data as of December 31, 2003 and 2002 are derived from our audited consolidated financial statements contained elsewhere in this report. The consolidated statements of operations data for the years ended December 31, 2000 and 1999 and the consolidated balance sheet data as of December 31, 2001, 2000, and 1999 are derived from our audited consolidated financial statements not included or incorporated by reference in this report.

	Year Ended December 31,				
	2003	2002	2001	2000	1999
	(in thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenue from continuing product lines	\$30,595	\$ 25,525	\$ 29,048	\$ 37,338	\$ 15,284
Revenue from discontinued product lines	—	—	—	—	1,472
Gross profit(1),(2)	24,924	18,457	16,773	24,221	11,853
Operating expenses(3),(4)	34,834	38,468	129,475	97,061	37,900
Operating loss	(9,910)	(20,011)	(112,702)	(72,840)	(26,047)
Net loss(4)	(9,187)	(20,866)	(114,165)	(69,829)	(24,222)
Net loss per share—basic and diluted	\$ (0.26)	\$ (0.68)	\$ (3.78)	\$ (2.51)	\$ (1.65)
Shares used in calculating basic and diluted loss per share	36,007	30,589	30,171	27,829	14,650

	December 31,				
	2003	2002	2001	2000	1999
	(in thousands, except per share data)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$25,351	\$ 29,210	\$ 41,067	\$ 73,568	\$ 60,544
Total assets	56,346	37,809	65,310	178,900	75,683
Long-term debt, excluding current installments	467	—	9	497	1,017
Total stockholders’ equity	32,595	21,831	43,095	153,612	61,713

- (1) Includes gross profit from product lines we discontinued prior to January 1, 2000.
- (2) Includes stock compensation expense of \$27, \$10, \$317 and \$150 for the years ended December 31, 2003, 2002, 2001, and 2000, respectively.
- (3) Includes stock compensation expense (credit) of \$139, (\$311), \$2,811, \$5,821, and \$3,536 for the years ended December 31, 2003, 2002, 2001, 2000, and 1999, respectively.
- (4) Includes the impairment of goodwill and intangible assets of \$5,713 and \$50,983 for the years ended December 31, 2002 and 2001, respectively. We adopted Statement of Financial Accounting Standards (“SFAS”) 142, *Goodwill and Other Intangible Assets* (“SFAS 142”), on January 1, 2002. Under SFAS 142, goodwill is no longer amortized but is tested for impairment at least annually. As a result of the adoption of SFAS 142, Tumbleweed recorded a transitional impairment loss of \$974 which was recognized as a cumulative effect of change in accounting principle in 2002.

Selected Quarterly Financial Data (Unaudited)

All necessary adjustments, which consisted only of normal recurring adjustments, have been included in the amounts stated below to present fairly the results of such periods when read in conjunction with the consolidated financial statements and notes to the consolidated financial statements included elsewhere in this report.

	Quarters Ended			
	December 31	September 30	June 30	March 31
(in thousands, except per share data)				
Fiscal 2003				
Revenue:				
Product revenue	\$ 5,369	\$ 5,067	\$ 3,277	\$ 2,629
Service revenue	4,008	3,154	2,615	2,871
Intellectual property and other revenue	670	404	250	281
Total revenue	<u>10,047</u>	<u>8,625</u>	<u>6,142</u>	<u>5,781</u>
Cost of revenue:				
Cost of product and service revenue	918	1,334	1,229	1,413
Amortization of intangible assets	216	217	317	—
Total cost of revenue (1)	<u>1,134</u>	<u>1,551</u>	<u>1,546</u>	<u>1,413</u>
Gross profit	8,913	7,074	4,596	4,368
Operating expenses:				
Research and development(2)	2,554	2,560	2,050	1,963
Sales and marketing(3)	4,730	4,425	3,261	3,441
General and administrative(4)	1,681	1,551	1,516	1,422
Stock-based compensation	42	75	15	34
Amortization of intangible assets	306	206	20	—
Write-off of in-process research and development	—	—	100	—
Merger-related and other costs	473	549	1,887	—
Total operating expenses	<u>9,786</u>	<u>9,366</u>	<u>8,849</u>	<u>6,860</u>
Operating loss	(873)	(2,292)	(4,253)	(2,492)
Other income, net	175	512	51	14
Loss before taxes	<u>(698)</u>	<u>(1,780)</u>	<u>(4,202)</u>	<u>(2,478)</u>
Provision for taxes	5	17	3	4
Net loss	<u>(703)</u>	<u>(1,797)</u>	<u>(4,205)</u>	<u>(2,482)</u>
Other comprehensive income (loss)— translation adjustments	11	19	(96)	157
Comprehensive loss	<u>\$ (692)</u>	<u>\$ (1,778)</u>	<u>\$ (4,301)</u>	<u>\$ (2,325)</u>
Net loss per share—basic and diluted	<u>\$ (0.02)</u>	<u>\$ (0.04)</u>	<u>\$ (0.13)</u>	<u>\$ (0.08)</u>
Weighted average shares—basic and diluted	<u>42,006</u>	<u>40,541</u>	<u>31,279</u>	<u>30,494</u>

- (1) Exclusive of stock-based compensation expense of \$6, \$8, \$5, and \$8 for the quarters ended December 31, September 30, June 30, and March 31, 2003, respectively.
- (2) Exclusive of stock-based compensation expense of \$13, \$20, \$1, and \$5 for the quarters ended December 31, September 30, June 30, and March 31, 2003, respectively.
- (3) Exclusive of stock-based compensation expense of \$24, \$41, \$4, and \$11 for the quarters ended December 31, September 30, June 30, and March 31, 2003, respectively.
- (4) Exclusive of stock-based compensation expense (credit) of \$(1), \$6, \$5, and \$10 for the quarters ended December 31, September 30, June 30, and March 31, 2003, respectively.

	Quarters Ended			
	December 31	September 30	June 30	March 31
	(in thousands, except per share data)			
Fiscal 2002				
Revenue:				
Product revenue	\$ 2,284	\$ 3,109	\$ 3,312	\$ 4,612
Service revenue	2,533	2,167	2,575	2,570
Intellectual property and other revenue	1,101	275	75	912
Total revenue	5,918	5,551	5,962	8,094
Cost of revenue(1)	1,428	1,596	1,851	2,183
Gross profit	4,490	3,955	4,111	5,911
Operating expenses:				
Research and development(2)	2,153	2,286	2,408	3,208
Sales and marketing(3)	3,607	3,944	5,242	5,616
General and administrative(4)	1,292	909	798	1,603
Stock-based compensation	(21)	(175)	(367)	262
Impairment of goodwill	—	—	5,713	—
Total operating expenses	7,031	6,964	13,794	10,689
Operating loss	(2,541)	(3,009)	(9,683)	(4,778)
Impairment of investments	—	(455)	(88)	—
Other income (expense), net	(43)	25	327	407
Total other income (expense), net	(43)	(430)	235	407
Net loss before provision for taxes and cumulative effect of change in accounting principle	(2,584)	(3,439)	(9,444)	(4,371)
Provision for taxes	46	2	2	4
Net loss before cumulative effect of change in accounting principle	(2,630)	(3,441)	(9,446)	(4,375)
Cumulative effect of change in accounting principle	—	—	—	974
Net loss	(2,630)	(3,441)	(9,446)	(5,349)
Other comprehensive income (loss)—translation adjustments	(45)	(19)	(30)	3
Other comprehensive income (loss)—unrealized gain (loss) on investments	—	(122)	122	—
Comprehensive loss	\$ (2,675)	\$ (3,582)	\$ (9,354)	\$ (5,346)
Net loss per share before cumulative effect of change in accounting principle—basic and diluted	\$ (0.09)	\$ (0.11)	\$ (0.31)	\$ (0.14)
Cumulative effect of change in accounting principle per share—basic and diluted	—	—	—	(0.04)
Net loss per share—basic and diluted	\$ (0.09)	\$ (0.11)	\$ (0.31)	\$ (0.18)
Weighted average shares—basic and diluted	30,469	30,682	30,749	30,527

- (1) Exclusive of stock-based compensation expense (credit) of \$8, \$(85), \$10, and \$77 for the quarters ended December 31, September 30, June 30, and March 31, 2002, respectively.
- (2) Exclusive of stock-based compensation expense (credit) of \$3, \$(1), \$6, and \$23 for the quarters ended December 31, September 30, June 30, and March 31, 2002, respectively.
- (3) Exclusive of stock-based compensation expense (credit) of \$(42), \$(99), \$(395), and \$131 for the quarters ended December 31, September 30, June 30, and March 31, 2002, respectively.
- (4) Exclusive of stock-based compensation expense of \$10, \$10, \$12, and \$31 for the quarters ended December 31, September 30, June 30, and March 31, 2002, respectively.

Item 7—Management’s Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion should be read in conjunction with the consolidated financial statements and notes to the consolidated financial statements included elsewhere in this report. The following discussion contains forward-looking statements that reflect Tumbleweed’s plans, estimates and beliefs. Tumbleweed’s actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include, but are not limited to, those discussed below and those listed under “Risks and Uncertainties.”

Overview

We are a leading provider of secure Internet messaging software products for enterprises and government. Our solutions are used by companies when email, file transfer or Web communications are mission-critical. By making Internet communications secure, reliable and automated, our products help customers significantly reduce their cost of doing business.

Overview of 2003

Our operating results during 2003 showed improvement relative to 2002 in revenue, deferred revenue, expenses, net loss, and cash flow. Our growth in both revenue and deferred revenue was driven by a number of factors including increased customer adoption of our email firewall products including the successful introduction of our dynamic anti-spam service, revenues from the secure file transfer and identity validation products we acquired in the Valicert, Inc. (“Valicert”) acquisition, and growth in our targeted customer sectors in the financial services, health care, and government industries. Our reduction in expenses was attributable to our continuing focus on generating cost efficiencies including our development centers in Bulgaria and India which have allowed us to augment our research and development and services offerings at a relatively lower cost structure. Our net loss was reduced due to our growth in revenues and reduction in expenses. Finally, our net cash used decreased due to the improvement in our overall results and increased proceeds from stock option exercises under our stock option plans. We had positive cash flow from operations in the fourth quarter of 2003.

Key Performance Indicators

Our key performance indicators are bookings and sales pipeline. We measure bookings as the dollar value of contractual agreements entered into with customers in the period that result in either revenue in the period, deferred revenue at the end of the period, or future installments to be billed and received from the customer that are not due and payable at the end of the period or for which the software has not yet been shipped to the customer at the end of the period. In addition to measuring the level of bookings in total in each period, we track bookings for each of our software solutions, bookings by customer industry, bookings by geographical region, and bookings by distribution channel. Generally, an increase in our bookings will result in an increase in our revenues. We measure sales pipeline as the size of the forecasted dollar value of the sales opportunities we are addressing in current and future fiscal quarters. In addition to measuring the size of our sales pipeline in total, we track the sales pipeline for each of our software solutions and the sales pipeline for each geographic region. We also track how our individual sales opportunities advance through the sales pipeline towards a contract with a customer. Generally an increase in our sales pipeline will result in an increase in our future bookings and future revenues.

Outlook

We believe that our success in 2004 will depend particularly on our ability to increase customer adoption of our email firewall, secure file transfer, and identity validation products, our ability to successfully integrate the Valicert acquisition, and our ability to maintain tight control over expenses and cash. We believe that key risks include overall economic conditions and the overall level of information technology spending; economic and

business conditions within our target customer sectors in the financial services, health care, and government industries; growing our sales channels in Europe and Japan; and competitive factors in our rapidly changing industry. Our prospects must be considered in light of the risks, expenses and difficulties encountered by companies at an early stage of development, particularly given that we operate in new and rapidly evolving markets, have completed several acquisitions and face an uncertain economic environment. We may not be successful in addressing such risks and difficulties. Please refer to the "Risks and Uncertainties" section for additional information.

Other Recent Events

On June 23, 2003, we completed the acquisition of Valicert. The purchase price of \$17.0 million consisted of an exchange of 9,713,634 shares of our common stock with a fair value of \$13.0 million, assumed stock options with a fair value of \$1.7 million, severances for former Valicert employees of \$276,000, and other acquisition-related costs of \$2.0 million consisting primarily of payments for legal fees, investment banking fees, financial printing fees, accounting fees, and proxy mailing fees.

In August 2002, our Board of Directors approved a program to repurchase up to \$10.0 million of our common stock. During 2002, we repurchased 717,500 shares of our common stock for \$796,000. We did not repurchase any shares of our common stock during 2003. The repurchase program was terminated in August 2003.

During 2002, we transitioned from direct sales operations to indirect sales operations in Europe due to sustained declines in the operating results of that region. We have signed a reseller agreement with a distributor to sell our products and provide technical support to our customers in Europe.

During the six months ended June 30, 2002, our Japanese subsidiary, Tumbleweed Communications KK ("TKK"), experienced a sustained decline in operations. As a result, we reevaluated our future prospects in Japan and decided to transition to an indirect sales distribution model in Japan. During the three months ended September 30, 2002, we began the liquidation of TKK. TKK ceased operations in August 2002 and formally declared bankruptcy in December 2002.

During the three months ended March 31, 2001, Tumbleweed performed an impairment assessment of the identifiable intangible assets and goodwill recorded in connection with the acquisition of Interface Systems, Inc. ("Interface"). The assessment was performed primarily due to changes in the economy, the overall decline in the industry growth rates, and our lower actual and projected operating results including that of the business acquired from Interface. Our assessment was supported by the significant sustained decline in our stock price since the valuation date of the shares issued in the Interface acquisition, which resulted in the net book value of our assets prior to the impairment charge significantly exceeding our market capitalization. As a result of our review, we recorded a \$51.0 million impairment charge to reduce goodwill and other intangible assets. The charge was determined based upon our estimated discounted cash flows over the remaining estimated useful life of the goodwill using a discount rate of 15%. The assumptions supporting the cash flows including the discount rate were determined using our estimates as of March 31, 2001. The remaining intangible assets were amortized in full over their remaining useful life in 2001.

In January 2001, our Board of Directors approved a restructuring program. This restructuring program was intended to align our cost structures with our company-wide focus on customer service, sales, and research and development. The restructuring involved consolidating our facilities in the U.S. and closing sales offices in Paris, France; Chatsworth, Australia; and Stockholm, Sweden, realigning our professional services organization, and reducing headcount in most areas of our business. The reduction in force involved approximately 100 employees and total charges incurred as a result of the restructuring were \$4.7 million during 2001, which includes charges related to vacating leased facilities domestically and abroad. As of December 31, 2003, we had no remaining liabilities relating to the restructuring expenses we recorded in 2001.

Results of Operations

The following table sets forth the consolidated statements of operations for the periods indicated (in thousands, except per share data). These statements have been derived from the consolidated financial statements contained in this Annual Report. The operating results for any period should not be considered indicative of results for any future period. This information should be read in conjunction with the consolidated financial statements and notes to the consolidated financial statements included elsewhere in this report.

	Years Ended December 31,		
	2003	2002	2001
Revenue:			
Product revenue	\$16,342	\$ 13,317	\$ 17,241
Service revenue	12,648	9,845	10,657
Intellectual property and other revenue	1,605	2,363	1,150
Total revenue	<u>30,595</u>	<u>25,525</u>	<u>29,048</u>
Cost of revenue:			
Cost of product revenue	959	893	1,100
Cost of service revenue (inclusive of stock-based compensation expense of \$27, \$10, and \$317 in 2003, 2002, and 2001, respectively)	3,962	6,175	11,175
Amortization of intangible assets	750	—	—
Total cost of revenue	<u>5,671</u>	<u>7,068</u>	<u>12,275</u>
Gross profit	24,924	18,457	16,773
Operating expenses:			
Research and development (inclusive of stock-based compensation expense of \$39, \$31, and \$667 in 2003, 2002, and 2001, respectively)	9,166	10,086	15,886
Sales and marketing (inclusive of stock-based compensation expense (credit) of \$80, (\$405), and \$1,812 in 2003, 2002, and 2001, respectively)	15,937	18,004	36,446
General and administrative (inclusive of stock-based compensation expense of \$20, \$63, and \$668, in 2003, 2002, and 2001, respectively)	6,190	4,665	9,266
Amortization of goodwill	—	—	9,668
Amortization of intangible assets	532	—	2,552
Write-off of in-process research and development	100	—	—
Merger-related and other costs	2,909	—	—
Restructuring expenses (inclusive of stock-based compensation credit of (\$336) in 2001)	—	—	4,674
Impairment of goodwill and intangible assets	—	5,713	50,983
Total operating expenses	<u>34,834</u>	<u>38,468</u>	<u>129,475</u>
Operating loss	(9,910)	(20,011)	(112,702)
Impairment of investments	—	(543)	(3,434)
Other income, net	752	716	2,124
Net loss before provision for taxes and cumulative effect of change in accounting principle	(9,158)	(19,838)	(114,012)
Provision for income taxes	29	54	153
Net loss before cumulative effect of change in accounting principle	(9,187)	(19,892)	(114,165)
Cumulative effect of change in accounting principle	—	974	—
Net loss	<u>\$ (9,187)</u>	<u>\$ (20,866)</u>	<u>\$ (114,165)</u>
Net loss per share before cumulative effect of change in accounting principle—basic and diluted	\$ (0.26)	\$ (0.65)	\$ (3.78)
Cumulative effect of change in accounting principle per share—basic and diluted	—	(0.03)	—
Net loss per share—basic and diluted	<u>\$ (0.26)</u>	<u>\$ (0.68)</u>	<u>\$ (3.78)</u>
Weighted average shares—basic and diluted	<u>36,007</u>	<u>30,589</u>	<u>30,171</u>

Years ended December 31, 2003 and 2002

Revenue. Revenue, which consists of product revenue, service revenue and intellectual property and other revenue, results from new contracts and backlog. We define backlog as deferred revenue, contractual commitments that are not due and payable as of the balance sheet date, or for which collectibility is in doubt, and/or for which the product or service has not yet been delivered. Product revenue consists of license fees, subscription-based license fees, and transaction-based license fees. Service revenue includes support and maintenance fees, consulting fees, and training fees. Intellectual property and other revenue consists of patent license agreement fees and the sale of distribution rights. Total revenue increased to \$30.6 million in 2003 from \$25.5 million in 2002. The increase in total revenue was primarily due to a \$3.0 million increase in product revenue and a \$2.8 million increase in service revenue, partially offset by a \$758,000 decrease in intellectual property and other revenue. During 2003, we focused our sales efforts on our Email Firewall and Dynamic Anti-Spam Service, Secure File Transfer, Secure Email and Document Delivery, and Identity Validation products, and placed less emphasis on our other, non-core product lines. As a result, revenue from our non-core product lines decreased in 2003 relative to 2002. We expect revenue from our non-core product lines to continue to decrease in 2004 as we maintain our sales focus on our Email Firewall and Dynamic Anti-Spam Service, Secure File Transfer, Secure Email and Document Delivery, and Identity Validation products.

Product revenue increased to \$16.3 million in 2003 from \$13.3 million in 2002. The increase in product revenue was due to a \$5.5 million increase in license revenue offset by a \$2.0 million decrease in transaction-based license revenue and a \$433,000 decrease in subscription-based license revenue. License revenue increased by \$5.5 million primarily due to sales of the secure file transfer and identity validation products that we acquired in the Valicert acquisition with no comparable revenue in 2002. Transaction-based license revenue and subscription-based license revenue both decreased in 2003 due to our continued transition away from those selling models and towards selling perpetual licenses and associated support and maintenance contracts. We expect transaction-based license revenue and subscription-based license revenue to decrease in the 2004 as a result of our continued transition away from those selling models.

Service revenue increased to \$12.6 million in 2003 from \$9.8 million in 2002. The increase in service revenue was primarily due to a \$3.5 million increase in support and maintenance revenue due to growth in our installed customer base, an expansion of our customer base due to the Valicert acquisition, and the successful customer acceptance of our dynamic anti-spam service which was released during the three months ended June 30, 2003 and is sold on a subscription service fee basis. This was partially offset by a \$701,000 decrease in consulting revenue. During 2002, we transitioned our consulting services from secure messaging consulting services to enterprises that used both Tumbleweed and non-Tumbleweed products to consulting services, that are focused on installation, implementation and data migration for only Tumbleweed products. As a result, we reduced the number of consulting projects for which we bid. We decided to make this transition to improve consumer satisfaction through shortened deployment cycles and to improve our operating margin. As a result, we reduced the number of revenue-generating projects and revenue generating consultants throughout 2002 and 2003.

Intellectual property and other revenue decreased to \$1.6 million in 2003 from \$2.4 million in 2002. The decrease was due to greater revenue from patent license agreements in 2002 than in 2003.

Cost of Revenue. Cost of revenue is comprised of product costs, service costs and the amortization of core/developed technology and intangible assets relating to the Valicert acquisition. Product cost is primarily comprised of royalties paid to third parties for software licensed by us for inclusion in our products. Service costs are comprised primarily of employee and employee-related costs for customer support and consulting and contract development projects with third parties. Amortization of intangible assets is comprised of the amortization of intangible assets related to the acquisition of Valicert and attributable to license purchase orders and core/developed technology. Total cost of revenue decreased to \$5.6 million in 2003 from \$7.1 million in 2002. Total cost of revenue decreased due to a decrease of \$2.2 million in service costs, partially offset by

\$750,000 of amortization of intangible assets related to the acquisition of Valicert. There was no amortization of intangible assets in cost of revenue in 2002.

Cost of product revenue increased to \$959,000 in 2003 from \$893,000 in 2002 due primarily to costs for a maintenance contract assumed during the acquisition of Valicert. Cost of service revenue decreased to \$4.0 million in 2003 from \$6.2 million in 2002. Cost of service revenue decreased due to decreases in employee-related costs, allocated overhead charges, and depreciation expense. Employee-related costs decreased by \$1.4 million due to our transition from direct sales operations to indirect sales operations in Europe and Japan, which eliminated our customer support and consulting employees in those regions, as well as our employment of a portion of our customer support and consulting employees in India, which has a relatively low cost structure. Allocated overhead charges decreased by \$497,000 due to a reduction in our allocable cost base caused by our reduction in information technology spending and our reduction in facility costs. Depreciation expense decreased by \$307,000 due to certain of our assets becoming fully depreciated in 2003 and 2002, and lower capital expenditures in 2003 and 2002 as compared to 2001 and 2000.

Research and Development Expenses. Research and development expenses are comprised of employee and employee-related costs and other costs required for the development and quality assurance of our products. Research and development expenses decreased to \$9.2 million in 2003 from \$10.1 million in 2002, primarily due to a \$1.3 million decrease in allocated overhead charges, partially offset by a combined increase of \$320,000 in consulting expenses, legal expenses, facilities expenses, and travel expenses. Consulting expenses increased due to increased outsourced development of non-core products in the first half of 2003, prior to the conversion of certain former contract engineers to employees in our research and development center in Bulgaria during the three months ended September 30, 2003. Facilities expenses increased due to costs associated with our research and development centers in Bulgaria and India in 2003, with no comparable expenses in 2002. Legal expenses increased due to costs associated with the creation of our Bulgarian research and development center subsidiary. Travel expenses increased due to increased geographical dispersion of our engineering workforce. We expect research and development costs to increase in 2004 due to an increase in employee-related and non-employee-related costs to broaden and upgrade our products, as well as the inclusion of a full year of engineering costs related to employees that joined Tumbleweed in the Valicert acquisition.

Sales and Marketing Expenses. Sales and marketing expenses are comprised of salaries, commissions, travel expenses, other related employee costs, and costs associated with marketing programs. Sales and marketing expenses decreased to \$15.9 million in 2003 from \$18.0 million in 2002 primarily due to decreases in facilities expenses, travel expenses, and reseller fees as well as reduced allocated overhead charges of \$893,000, and a \$377,000 expense in 2002 related to the write-off of our 80% equity position in TKK, partially offset by an increase in employee-related costs. Facilities expenses decreased by \$917,000 primarily due to the decrease in the number of sales offices in Europe and Japan due to the transition from direct sales operations to indirect sales operations in those regions. Travel expenses decreased by \$354,000 primarily due to a decrease in the number of sales and marketing employees, prior to the acquisition of Valicert, as well as the transition from direct sales operations to indirect sales operations in Europe and Japan, which reduced the need to travel to those regions. Reseller fees decreased by \$162,000 due to a large reseller fee in Europe in 2002. Employee-related costs increased by \$708,000 due to headcount growth in the second half of the year as a result of the acquisition of Valicert as well as an increase in commissions due to our growth in revenue. We expect sales and marketing expense to increase in 2004 due to an increase in employee-related costs driven by the expansion of our sales and marketing headcount.

General and Administrative Expenses. General and administrative expenses consist primarily of employee and employee-related and support costs for our administrative, finance, legal, and human resources departments as well as public reporting costs, bad debt expense, and professional fees including intellectual property enforcement and protection costs. General and administrative expenses increased to \$6.2 million in 2003 from \$4.7 million in 2002. The increase in general and administrative expenses was primarily due to a \$1.0 million increase in legal expenses, and a combined \$272,000 increase in contract labor expenses, directors

and officers insurance expenses, and investor relations expenses, SEC reporting expenses, and NASDAQ expenses. Legal expenses increased due to increased intellectual property enforcement efforts. Contract labor increased due to usage of contract labor as opposed to hiring employees to meet increased workflow needs. Directors and officers insurance expenses increased due to an increase in our premiums. Investor relations expenses increased due to increased use of third-party investor relations professionals. SEC reporting expenses increased due to an increase in SEC financial reporting requirements. NASDAQ expenses increased due to an increase in the number of our common stock shares outstanding as a result of the acquisition of Valicert. We believe that the enforcement and protection of our intellectual property is important to our business and we expect to continue to incur costs related to the enforcement and protection of our intellectual property in 2004. However, we expect intellectual property-related legal costs, and general and administrative expenses overall, to decrease in 2004 due to the settlement of our lawsuit and signing of a cross-license agreement with eBay in the fourth quarter of 2003.

Amortization of intangible assets and write-off of in-process research and development.

Amortization of intangible assets was \$1.3 million for 2003. Write-off of in-process research and development was \$100,000 for 2003. Amortization of intangible assets and write-off of in-process research and development resulted from the acquisition of Valicert during 2003, and the conversion of certain former contract engineers to employees in our research and development center in Bulgaria during 2003. In-process research and development was fully written off during the three months ended June 30, 2003. The remaining intangible assets will be amortized over their estimated useful lives of one to five years. No similar intangible asset amortization charges or write-off of in-process research and development was recorded in 2002. We expect amortization of intangible assets to increase in 2004, due to having a full year of amortization of intangible assets related to the Valicert acquisition.

Merger-related and other costs. Merger-related and other costs of \$2.9 million for 2003, consist primarily of \$1.1 million of severance costs for Tumbleweed employees terminated in connection with the Valicert acquisition, \$596,000 of merger-related marketing programs, \$174,000 of other merger-related costs, and a \$996,000 charge related to anticipated losses on an operating lease. The operating lease was assumed during the acquisition of Interface, Inc. in 2000 and covers approximately 13,000 square feet of office space in Slough, United Kingdom. There were no merger-related and other costs in 2002.

Impairment of Goodwill. In connection with the adoption of SFAS 142 on January 1, 2002, we recognized a transitional goodwill impairment loss of \$974,000 as the cumulative effect of a change in accounting principle in our consolidated statement of operations. During the six months ended June 30, 2002, Tumbleweed Communications KK experienced a sustained decline in operations. As of June 30, 2002, we determined that our goodwill was impaired and wrote-off the \$5.7 million remainder of the goodwill balance. No similar impairment charges were recorded in 2003.

Impairment of Investments. During 2000, we made investments in two privately-held companies of \$977,000 and \$3.0 million, respectively. The investments were carried at cost on our balance sheet as we hold less than 20% of the voting equity and do not have the ability to exercise significant influence. We monitored these investments for other-than-temporary impairment and made appropriate reductions in carrying values when necessary, including a \$3.4 million impairment charge in 2001. We recorded other-than-temporary impairment charges of \$543,000 in 2002 to write-off our investment balances in these two companies. As of December 31, 2003, and 2002, respectively, we had no remaining assets on our balance sheet relating to these investments.

Other Income, Net. Other income, net, is primarily comprised of interest income earned on investment securities and the sale in 2003, net of related commissions, of an intellectual property asset acquired during the acquisition of Valicert. Other income, net, increased to \$752,000 in 2003 from \$716,000 in 2002. The increase in other income, net, was due to a \$527,000 gain on the sale in 2003, net of related commissions, of an intellectual property asset acquired during the acquisition of Valicert. This gain was offset by a decrease in interest income of \$305,000 due to a decline in interest rates and a reduction in Tumbleweed's cash balances relative to the year-

earlier period as well as a \$62,000 increase in interest expense due to debt assumed during the acquisition of Valicert.

Years ended December 31, 2002 and 2001

Revenue. Total revenue decreased to \$25.5 million in 2002 from \$29.0 million in 2001. The decrease in total revenue was due to decreases in revenue from our international regions in Europe and Asia, which decreased to \$1.6 million from \$4.4 million and to \$0.4 million from \$2.6 million, respectively. The decrease in revenue in Europe and Asia was due to the tight discretionary spending of our international installed customer base which led to limited product expansion and maintenance and support revenues within that customer base. As a result, we decided to transition from direct sales operations to indirect sales operations in Europe and Japan. As we identified and developed partners for indirect sales, we experienced a further decline in revenue from Europe and Asia in 2002.

Product revenue decreased to \$13.3 million in 2002 from \$17.2 million in 2001. The decrease in product revenue was due to a decrease in product revenue from our international regions in Europe and Asia, as well as a decrease in North America transaction-based license revenue, partially offset by an increase in North America license revenue. Product revenue in Europe and Japan decreased to \$1.1 million from \$2.8 million and to \$0.3 million from \$1.6 million, respectively. North America transaction-based license revenue decreased by \$1.6 million due to our shift, beginning in 2001, from a transaction-based license model to a perpetual license model with associated support and maintenance contracts. North America license revenue increased by \$611,000, mainly due to many of our former transaction-based customers purchasing perpetual licenses.

Service revenue decreased to \$9.8 million in 2002 from \$10.7 million in 2001. The decrease in service revenue was due to a decrease in consulting services revenue, partially offset by an increase in maintenance and support revenue. Consulting revenue decreased to \$2.5 million in 2002 from \$6.3 million in 2001. We decided to make this transition to improve consumer satisfaction through shortened deployment cycles and to improve our operating margin. During 2002, we transitioned our consulting services from secure messaging consulting services to enterprises that used both Tumbleweed and non-Tumbleweed products to consulting services, that are focused on installation, implementation and data migration for only Tumbleweed products. As a result, we reduced the number of consulting projects for which we bid. We decided to make this transition to improve consumer satisfaction through shortened deployment cycles and to reduce consulting costs. As a result, we reduced the number of revenue-generating projects and revenue generating consultants throughout 2002 when compared to 2001. The decrease in consulting revenue was partially offset by an increase in maintenance and support revenue to \$7.2 million in 2002 from \$4.3 million in 2001. The increase was primarily due to the increase in the number of customers under maintenance and support contracts.

Intellectual property and other revenue decreased to \$2.4 million in 2002 from \$1.2 million in 2001. The increase was due to a larger number of patent license agreements signed in 2002.

Cost of Revenue. Total cost of revenue decreased to \$7.1 million in 2002 from \$12.3 million in 2001. Cost of product revenue decreased to \$893,000 in 2002 from \$1.1 million in 2001 due to the decrease in our product revenues that require us to pay third party royalty fees. Cost of service revenue decreased to \$6.2 million in 2002 from \$11.2 million in 2001. Cost of service revenue decreased primarily due to a decrease in employees and related employee costs, including the elimination of bonuses and salary reductions; a reduction in allocated overhead charges; a decrease in depreciation expense and a decrease in stock-based compensation expense. The decrease in employees was driven by our increased focus regarding the direct implementation and development of our core products, and the transition from direct sales operations to indirect sales operations in Europe and Japan which reduced our professional services headcount in those regions to zero. Overall, employee-related costs decreased by \$2.7 million. Allocated overhead charges decreased by \$575,000 due to a reduction in our allocable cost base caused by our reduction in information technology spending and our reduction in facility costs. Depreciation expense decreased by \$453,000 due to some of our assets becoming fully depreciated in

2002, and lower capital expenditures in 2002 as compared to 2001 and 2000. Stock-based compensation expense decreased by \$307,000 due to credits resulting from the termination of certain employees whose options had not yet vested, in excess of continued amortization.

Research and Development Expenses. Research and development expenses decreased to \$10.1 million in 2002 from \$15.9 million in 2001. The decrease in research and development expenses was primarily due to a decrease of 13 employees and related employee costs, including the elimination of bonuses and salary reductions; a reduction in allocated overhead charges of \$1.9 million; a decrease in stock-based compensation expense of \$636,000 and a decrease in depreciation expense of \$399,000. The decrease of employees is due to our decision to reduce the number of our product offerings and outsource development for non-core product offerings. As a result, employee-related costs decreased by \$2.5 million.

Sales and Marketing Expenses. Sales and marketing expenses decreased to \$18.0 million in 2002 from \$36.4 million in 2001. The decrease in sales and marketing expenses was primarily due to decreased employees and related employee costs, including the elimination of bonuses and salary reductions; a stock-based compensation credit of (\$405,000) in 2002 as opposed to stock-based compensation expense of \$1.8 million in 2001; lower marketing program expenses, and a reduction in allocated overhead charges of \$1.9 million. The decrease in employees was due to a shift in our sales focus towards large accounts in target industries which allowed us to reduce the number of direct sales representatives and sales support employees in North America by 19, and the transition from direct sales operations to indirect sales operations in Europe and Asia, which reduced the number of employees by 50. This decline in employees decreased employee-related costs by \$7.4 million. Marketing programs expenses decreased by \$3.4 million due to more focused marketing efforts. The remainder of the decrease in sales and marketing expenses was due to reductions in employee travel, employee recruiting fees, sales office expenses, telecommunications expenses and depreciation expense.

General and Administrative Expenses. General and administrative expenses decreased to \$4.7 million in 2002 from \$9.3 million in 2001. The decrease in general and administrative expenses was primarily due to a decrease in employees and related employee costs, including the elimination of bonuses and salary reductions; lower bad debt expense and a decrease in stock-based compensation expense of \$605,000. The reduction in employees was due to the reduction in the overall size of our business and resulted in a decrease in employee-related costs of \$2.0 million. Bad debt expense decreased by \$1.4 million due to a decrease in the size of our accounts receivable balance, increased collections efforts and more centralized operations in the United States, and improved geographic and industry mix of our customers. The remainder of the decrease in general and administrative expenses was due to a reduction in expenses with application service providers due to bringing administration for our enterprise software systems in-house.

Amortization of Goodwill and Intangible Assets. Goodwill and other intangible assets resulted from our purchase of Interface and, to a lesser extent, our increase in ownership of Tumbleweed Communications KK from 50% to 80% during 2000. In July 2001, the FASB issued SFAS 142, *Goodwill and Other Intangible Assets* (SFAS 142). SFAS 142 requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but instead tested for impairment at least annually in accordance with the provisions of SFAS 142. SFAS 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. We adopted the provisions of SFAS 142 effective January 1, 2002. Prior to our adoption of SFAS 142, goodwill and intangible assets were amortized over their respective lives, generally one to five years. Amortization of goodwill and intangible assets decreased to zero in 2002 from \$12.2 million in 2001 as a result of the adoption of SFAS 142 and the intangible assets becoming fully amortized in September 2001.

Restructuring Expenses. In January 2001, our Board of Directors approved a restructuring program intended to align our cost structures with our company-wide focus on customer service, sales, and research and development. The restructuring involved consolidating our facilities in the United States and closing international

sales office locations in Paris, France; Chatsworth, Australia; and Stockholm, Sweden. The restructuring program also realigned our professional services organization and reduced headcount in most areas of our business. The reduction in force involved approximately 100 employees and total charges incurred as a result of the restructuring were \$4.7 million in 2001, which included charges related to vacating leased facilities domestically and abroad. As of December 31, 2003 and 2002, respectively, we had no remaining liabilities relating to the restructuring expenses we recorded in 2001.

Impairment of Goodwill and Intangible Assets. During the three months ended March 31, 2001, we performed an impairment assessment of the identifiable intangibles and goodwill recorded in connection with the acquisition of Interface. The assessment was performed primarily due to changes in the economy, the overall decline in the industry growth rate, and our lower actual and projected operating results including that of the business acquired from Interface. Our assessment was supported by the significant sustained decline in our stock price since the valuation date of the shares issued in the Interface acquisition. As a result of the assessment, we recorded a \$51.0 million impairment charge to reduce goodwill and other intangible assets to their estimated fair value. The charge was based upon the estimated discounted cash flows over the remaining useful life of the goodwill and other intangible assets using a discount rate of 15%. The assumptions supporting the cash flows, including the discount rate, were determined using our best estimates as of March 31, 2001. The remaining intangible assets were amortized in full over their remaining useful life during 2001.

As discussed in the footnotes to the consolidated financial statements, during 2002, a transitional impairment loss of \$974,000 on goodwill related to TKK was recognized as the cumulative effect of a change in accounting principle in the consolidated statement of operations associated with the adoption of SFAS 142. We also wrote off \$5.7 million of goodwill related to TKK during 2002. As of December 31, 2003 and 2002, respectively, we had no remaining goodwill or intangible assets related to TKK.

Impairment of Investments. During 2000, we made investments in two non-publicly traded companies of \$977,000 and \$3.0 million, respectively. The investments were carried at cost on our balance sheet as we hold less than 20% of the voting equity and do not have the ability to exercise significant influence. We monitored these investments for other-than-temporary impairment and made appropriate reductions in carrying values when necessary, including a \$3.4 million impairment charge in 2001. We recorded other-than-temporary impairment charges of \$543,000 in 2002 to write-off our investment balances in these two companies. As of December 31, 2003, and 2002, respectively, we had no remaining assets on our balance sheet relating to these investments.

Other Income, Net. Other income, net, decreased to \$716,000 in 2002 from \$2.1 million in 2001. The decrease in other income, net, was due to the decline in interest rates and a reduction in our cash balances relative to the year-earlier period as well as a \$181,000 loss on the sale of short-term investments in 2002.

Related Party Transactions

From time to time we have entered into related party transactions and we expect that we may continue to do so in the future. These transactions are described in the footnotes to our consolidated financial statements as well as in our proxy statement under the caption "Certain Relationships and Related Transactions."

Liquidity and Capital Resources

Since inception, we have financed our operations primarily through the issuance of equity securities. As of December 31, 2003, we had \$25.4 million in cash and cash equivalents.

Net cash used in operating activities decreased to \$8.1 million in 2003 from \$11.3 million in 2002. Net cash used in operating activities was primarily the result of our net loss of \$9.2 million and adjustments to reconcile net loss to net cash used in operating activities, including increases to cash flow from a \$4.4 million increase in deferred revenue, net of the effect of the acquisition of Valicert, \$2.7 million of depreciation and amortization, a

\$1.3 million decrease in current and other assets, net of the effect of the acquisition of Valicert, and a \$1.2 million increase in accrued merger-related and other expenses. These increases to cash flow were largely offset by a \$4.6 million decrease in accounts payable, accrued liabilities, and other long-term liabilities, net of the effect of the acquisition of Valicert, and an increase in accounts receivable, net of the effect of the acquisition of Valicert, of \$4.5 million. The decrease in net cash used in operating activities was primarily due to a reduction in our net loss which decreased to \$9.2 million in 2003 from \$20.9 million in 2002. Net cash used in operating activities decreased by a lower amount than the decrease in net loss primarily due to a decrease in non-cash expenses in 2003 relative to 2002. Our 2002 net loss included a \$5.7 million goodwill impairment charge, a SFAS 142 transitional goodwill impairment loss of \$974,000 recognized as the cumulative effect of a change in accounting principle, and a \$543,000 impairment of investments charge, all of which were non-cash expenses. Additionally, non-cash charges for depreciation and amortization expense and bad debt expense decreased by \$494,000 and \$400,000, respectively from 2002 to 2003.

Net cash used in investing activities was \$256,000 in 2003. Net cash provided by investing activities was \$201,000 in 2002. Net cash used in investing activities in 2003 consists of purchases of property and equipment of \$1.1 million, partially offset by \$836,000 for the acquisition of Valicert, net of cash acquired. Net cash provided by investing activities in 2002 was driven by proceeds of \$555,000 from the sale of short-term investments acquired in 2002. There were no sales of short-term investments in 2003.

Net cash provided by financing activities was \$4.4 million in 2003. Net cash used in financing activities was \$666,000 in 2002. Net cash provided by financing activities in 2003 was primarily the result of proceeds from the issuance of equity securities, reduced by payments of borrowings. Proceeds from the issuance of equity securities increased to \$4.4 million in 2003 from \$790,000 in 2002 due to an increase in our stock price which resulted in an increase in stock option exercises under our stock option plans. Net cash used in financing activities in 2002 was comprised of 717,500 shares of our common stock that we repurchased for \$796,000 and repayments of borrowings, offset by proceeds from the issuance of equity securities under our stock option and employee stock purchase plans. We did not repurchase any shares of our common stock during 2003 and our repurchase program was terminated in August 2003.

As of December 31, 2003, our principal commitments consisted of obligations related to outstanding operating leases, a bank loan, and unconditional purchase obligations. We do not anticipate a substantial increase in operating lease obligations in the immediate future.

In June 1999, we entered into an operating lease covering approximately 40,000 square feet of office space in Redwood City, California that was scheduled to expire in November 2004. During the three months ended September 30, 2003 we renewed this lease in advance of the scheduled termination date at a lower monthly rent cost in exchange for an extension of the lease term. The renewed lease expires in July 2008 with current monthly rent payments of approximately \$73,000. In September 2000, we leased an additional 42,000 square feet in an adjacent building with a term of five years and subleased this space. We terminated this second lease as of December 31, 2001 and made a lease settlement payment of \$2.3 million, using lease deposits, in the first quarter of 2002 as a part of the lease termination agreement.

As a result of the Interface acquisition, we assumed an operating lease in Slough, United Kingdom. The lease is for a term ending in 2020 with current quarterly rent payments of approximately \$65,000. We subleased this office space to a tenant who was providing us with quarterly rent payments of approximately \$65,000 until the sublease was terminated effective July 2003. Anticipated future sublease rental income is not expected to cover the rent expense due to a weak office rental market in and around Slough. In 2003 we recognized a charge of \$996,000 related to potential losses on this lease that was included in our consolidated statement of operations as Merger-related and other costs. We are currently attempting to find a new sublessee.

In July 1998, we entered into a debt agreement with a bank, which includes a \$750,000 equipment loan facility. In June 1999, we obtained a second equipment loan facility in the amount of \$1.0 million with the same

bank. The first equipment loan in the amount of \$750,000 expired in December 2001 and the second equipment loan in the amount of \$1.0 million expired in December 2002. Borrowings under both equipment loan facilities bore interest at prime rate plus 0.75%, were due and payable in 36 equal monthly installments and were secured by certain of our assets. The weighted average interest rate for the equipment loans was 5.48% and 8.21% for 2002 and 2001, respectively. The equipment loan was paid in full in January 2003.

In the acquisition of Valicert, we assumed debt of \$855,000 resulting from equipment leases with two financing companies. During the three months ended September 30, 2003 this debt was refinanced with an \$800,000 loan from the same bank from whom we previously had obtained equipment loan facilities. The new debt bears interest at prime rate plus 0.63%, is due and payable in 36 equal monthly installments, and is secured by certain of our assets. The weighted average interest rate for the loan was 4.63% for 2003.

Our capital requirements depend on numerous factors, including revenue generated from operations and market acceptance of our products and services, the resources devoted to the development of our products and services and the resources devoted to sales and marketing. We have decreased our spending on capital expenditures in recent quarters and do not anticipate significant increases in capital expenditures in the immediate future. We believe that our existing capital resources should enable us to maintain our current and planned operations for at least the next 12 months. Our current cash reserves, however, may be insufficient if we experience either lower than expected revenues or extraordinary or unexpected cash expenses, or for other reasons. Funding, if pursued, may not be available on acceptable terms or at all. If adequate funds are not available, we may be required to curtail significantly or defer one or more of our operating goals or programs, or take other steps that could harm our business or future operating results.

We will continue to consider future financing alternatives, which may include the incurrence of indebtedness, additional public or private equity offerings or an equity investment by a strategic partner; however, we have no present commitments or arrangements assuring us of any future equity or debt financing. Additionally, equity or debt financing may not be available to us on favorable terms, if at all.

We regularly evaluate acquisition candidates that have products, technologies, or customers that may complement our own, and expect to continue this practice.

In August 2002, our Board of Directors approved a program to repurchase up to \$10.0 million of our common stock. This program expired in August 2003. During the year ended December 31, 2002 we repurchased 717,500 shares of our common stock for \$796,000. We did not repurchase any shares of our common stock during 2003. The repurchase program was terminated in August 2003.

Contractual Obligations and Commercial Commitments

Future cash payments for contractual obligations and commercial commitments as of December 31, 2003, are as follows (in thousands):

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>After 2008</u>	<u>Total</u>
Debt	\$ 295	\$ 283	\$ 204	\$—	\$—	\$ —	\$ 782
Operating leases	1,591	984	895	917	931	3,120	8,438
Unconditional purchase obligations ...	274	359	—	—	—	—	633
Total	\$2,160	\$1,626	\$1,099	\$917	\$931	\$3,120	\$9,853

The amounts above will be offset by sublease payments of \$104,000 in 2004.

Recent Accounting Pronouncements

In June 2001, the FASB issued SFAS 143, *Accounting for Asset Retirement Obligations*, which addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. The standard applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development, or normal use of the asset. SFAS 143 requires that the fair value of a liability for an asset retirement obligation be recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. We adopted SFAS 143 as of January 1, 2003. The adoption of SFAS 143 did not have a material impact on our financial position or results of operations.

In June 2002, the FASB issued SFAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*, which addresses financial accounting and reporting for costs associated with an exit or disposal activity. SFAS 146 nullifies Emerging Issues Task Force (EITF) Issue 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. SFAS 146 requires that a liability be recognized for those costs only when the liability is incurred, that is, when it meets the definition of a liability in the FASB's conceptual framework. In contrast, under EITF Issue 94-3, a company recognized a liability for an exit cost when it committed to an exit plan. SFAS 146 also established fair value as the objective for initial measurement of liabilities related to exit or disposal activities. We adopted the provisions of SFAS 146 as of January 1, 2003. The adoption of SFAS 146 did not have a material impact on our financial position or results of operations.

In November 2002, the EITF reached a consensus on Issue 00-21 (EITF 00-21), *Revenue Arrangements with Multiple Deliverables*. EITF 00-21 addresses certain aspects of the accounting by a vendor for arrangements under which the vendor will perform multiple revenue-generating activities. We are required to adopt the provisions of EITF 00-21 as of January 1, 2004. We do not expect the adoption of EITF 00-21 to have a material impact on our financial position or results of operations.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments in determining the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We regularly evaluate our estimates, including those related to revenue recognition, customer arrangements, collectibility of accounts receivable, valuation of assets, and contingencies and litigation. When making estimates, we consider our historical experience, our knowledge of economic and market factors and various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

We believe that the following critical accounting policies represent areas where significant judgments and estimates have been used in the preparation of our consolidated financial statements.

Revenue Recognition

We derive our revenue from three sources: (i) product revenue, which includes license fees, subscription-based license fees, transaction-based license fees, and hosting arrangements; (ii) service revenue, which includes support and maintenance fees, consulting fees, and training fees; and (iii) intellectual property and other revenue which includes patent license agreement fees and the sale of distribution rights. As described below, significant management judgments and estimates must be made and used in connection with the revenue recognized in any accounting period. Material differences may result in the amount and timing of our revenue for any period if our management made different judgments or utilized different estimates.

We recognize revenue in accordance with Statement of Position (“SOP”)97-2, *Software Revenue Recognition* (“SOP 97-2”), as amended by SOP 98-9, *Modification of SOP 97-2, “Software Revenue Recognition” With Respect to Certain Transactions* (“SOP 98-9”). We make significant judgments related to revenue recognition. Specifically, in connection with each transaction involving our products, we must evaluate whether: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred, (iii) our fee is fixed or determinable, and (iv) collectibility is probable. We apply these criteria as discussed below.

- **Persuasive Evidence of an Arrangement Exists.** We require a written contract, signed by both the customer and us, or a purchase order from those customers that have previously negotiated a standard end-user license arrangement or volume purchase agreement with us prior to recognizing revenue on an arrangement.
- **Delivery Has Occurred.** We deliver software to our customers physically or electronically. For physical deliveries, our standard transfer terms are typically FOB shipping point. For electronic deliveries, delivery occurs when we provide the customer access codes or “keys” that allow the customer to take immediate possession of the software on its hardware.
- **The Fee is Fixed or Determinable.** Our determination that an arrangement fee is fixed or determinable depends principally on the arrangement’s payment terms. Our standard payment terms require the arrangement fee to be paid within 90 days. Where these terms apply, we regard the fee as fixed or determinable, and we recognize revenue upon delivery (assuming other revenue recognition criteria are met). If the payment terms do not meet this standard, which we refer to as “extended payment terms,” we do not consider the fee to be fixed or determinable and generally recognize revenue when customer installments are due and payable.
- **Collectibility is Probable.** To recognize revenue, we must judge collectibility of the arrangement fees, which we do on a customer-by-customer basis pursuant to our credit review policy. We typically sell to customers with whom we have a history of successful collection. For new customers, we evaluate the customer’s financial position and ability to pay. If we determine at any time that collectibility is not probable based upon our credit review process or the customer’s payment history, we recognize revenue when cash is collected.

We allocate revenue on software transactions (referred to as an “arrangement” in the accounting literature) involving multiple elements to each element based on the relative fair values of the elements. Our determination of fair value of each element in multiple element arrangements is based on vendor-specific objective evidence (VSOE). We limit our assessment of VSOE for each element to the price charged when the same element is sold separately.

Valuation of Allowance for Doubtful Accounts

We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. A considerable amount of judgment is required when we assess the realization of receivables, including assessing the probability of collection and the current credit-worthiness of each customer. We must make estimates of the collectibility of our accounts receivables. We specifically analyze accounts receivable, including review of historical bad debts, customer concentrations, customer credit-worthiness, current economic trends, aging of the balance and estimated collectibility percentages for different aging ranges, geographic and industry mix, and changes in our customer payment terms when evaluating the adequacy of the allowance for doubtful accounts. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required which would result in an additional general and administrative expense in the period such determination is made.

Valuation of Long-Lived Assets and Goodwill

We assess the impairment of identifiable intangibles, long-lived assets and goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important, which could trigger an impairment review, include the following:

- significant underperformance relative to expected historical or projected future operating results;
- significant changes in the manner or our use of the acquired assets or the strategy for our overall business;
- significant negative industry or economic trends;
- significant decline in our stock price for a sustained period; and
- our market capitalization relative to net book value.

When we determine that the carrying value of long-lived assets, and goodwill prior to the adoption of SFAS 142, may not be recoverable upon the existence of one or more of the above indicators of impairment, and such carrying value is less than projected undiscounted cash flows attributed to the asset, we measure any impairment based on the amount by which the carrying amount of the assets exceeds the fair value of the assets.

We evaluate goodwill on a quarterly basis for indications of impairment based on our fair value as determined by our market capitalization in accordance with SFAS 142, *Goodwill and Other Intangible Assets*. If this evaluation indicates that the value of the goodwill may be impaired, we make an assessment of the impairment of the goodwill using the two-step method prescribed by SFAS 142. Any such impairment charge could be significant and have a material adverse effect on our reported financial statements. We did not record any impairment charges on our goodwill during 2003. As of December 31, 2003, we had goodwill of \$13.3 million.

Risks and Uncertainties

We have a history of losses and may experience losses in the future.

Our prospects must be considered in light of the risks, expenses, delays and difficulties frequently encountered by companies engaged in new and rapidly evolving technology markets like ours. We incurred net losses of \$9.2 million, \$20.9 million, and \$114.2 million in 2003, 2002, and 2001, respectively. As of December 31, 2003, we had incurred cumulative net losses of \$279.3 million.

Our success may depend in large part upon the adoption and utilization of our products and technology, as well as our ability to effectively maintain existing relationships and develop new relationships with customers and strategic partners. If we do not succeed in doing so, we may not achieve or maintain profitability on a timely basis or at all. In particular, we intend to expend significant financial and management resources on product development, sales and marketing, strategic relationships, technology and operating infrastructure. As a result, we may incur additional losses and continued negative cash flow from operations for the foreseeable future and may not achieve or maintain profitability.

If we do not successfully optimize our marketing and distribution capacity, our business could be harmed.

If we do not optimize our methods of marketing and selling our products, it could significantly limit our ability to compete successfully against current and future competitors. The markets in which we compete are intensely competitive and rapidly changing, in part because third parties (such as hackers and spammers) whose timing and methods are somewhat unpredictable can have a significant impact on customer demand. Vendors in our markets use different methods of marketing and distribution in order to meet expected customer demand. For example, our competitors in the anti-spam market include multiple software-only vendors, appliance-only

vendors, and service providers, as well as vendors that offer a combination of some or all of the foregoing. Moreover, vendors' offerings range from single-function point products and services to more sophisticated and scalable multi-functional offerings. In addition, pricing and other terms and conditions of sales contracts also vary considerably among our competition. Because it is difficult to predict demand in our rapidly changing markets, we may not be able to manage our marketing and sales efforts in an optimal way, which may disadvantage our business in comparison to competitors.

Additional competitive factors in our industry include product performance and integration, platform coverage, worldwide sales infrastructure and global technical support. Some of our competitors have greater financial, technical, sales, marketing and other resources than we do, as well as greater name recognition and a larger installed customer base. Additionally, some of these competitors have research and development capabilities that may allow them to develop new or improved products that may compete with product lines we market and distribute.

We expect that the market for secure Internet messaging software products will become more consolidated with larger companies being better positioned to compete in such an environment in the long term. As this market continues to develop, a number of companies with greater resources than ours could attempt to increase their presence in this market by acquiring or forming strategic alliances with our competitors or business partners.

Our success will depend on our ability to adapt to these competing forces, to develop more effective products more rapidly and less expensively than our competitors, and to educate potential customers as to the benefits of licensing our products rather than developing their own products. Competitors could introduce products with superior features, scalability and functionality at lower prices than our products and could also bundle existing or new products with other more established products in order to compete with us. In addition, because there are relatively low barriers to entry for the software market, we expect additional competition from other established and emerging companies. Increased competition is likely to result in price reductions, reduced gross margins and loss of market share, any of which could harm our business.

Our success depends on our ability to grow and develop our indirect distribution channels and the inability to do so could adversely affect future operating results.

Our failure to increase the number of our indirect distribution channels could have a material adverse effect on our business, operating results, and financial condition. We must increase the number of strategic and other third-party relationships with vendors of Internet-related systems and application software, resellers and systems integrators. Our existing or future channel partners may choose to devote greater resources to marketing and supporting the products of other companies.

The volume of spam may not continue to grow rapidly, which may adversely affect the market for anti-spam solutions.

Although the volume of spam has grown rapidly during the last several years, it may not continue to do so because of recently enacted anti-spam legislation, enforcement efforts under that legislation, and collaborative efforts by leaders of the email provider industry, as well as the potential development of new and successful anti-spam technologies. Accordingly, the market for anti-spam solutions may not continue to grow rapidly and may in fact decline, which may adversely affect our business.

Contractual issues may arise during the negotiation of license agreements that may delay the anticipated closure of a transaction and our ability to recognize revenue as anticipated.

Because we focus on selling enterprise-wide software products to enterprises and government entities, the process of contractual negotiation is critical and may be lengthy. Additionally, several factors may require us to

defer recognition of license revenue for a significant period of time after entering into a license agreement, including instances where we are required to deliver either unspecified additional products or specified upgrades for which we do not have vendor-specific objective evidence of fair value. Although we have a standard software license agreement that provides for revenue recognition to the extent that (i) delivery has taken place, (ii) collectibility from the customer is reasonably assured, and (iii) no significant future obligations or customer acceptance rights exist, customer negotiations and revisions to these terms could impact our ability to recognize revenues at the time of delivery.

Many enterprise customers negotiate software licenses near the end of each quarter. In part, this is because enterprise customers are able, or believe that they are able, to negotiate lower prices and more favorable terms at that time. Our reliance on a large portion of software license revenue occurring at the end of the quarter and the increase in the dollar value of transactions that occur at the end of a quarter can result in increased uncertainty relating to quarterly revenues. Due to end-of-period variances, forecasts may not be achieved, either because expected sales do not occur or because they occur at lower prices or on terms that are less favorable to us.

Our success depends on our ability to grow and develop our indirect distribution channels and the inability to do so could adversely affect future operating results.

Our failure to increase the number of our indirect distribution channels could have a material adverse effect on our business, operating results and financial condition. We must increase the number of strategic and other third-party relationships with vendors of Internet-related systems and application software, resellers and systems integrators. Our existing or future channel partners may choose to devote greater resources to marketing and supporting the products of other companies.

A limited number of customers account for a high percentage of our revenue, and the failure to maintain or expand these relationships could adversely affect our future revenue.

The loss of one or more of our major customers, the failure to attract new customers on a timely basis or a reduction in revenue associated with existing or proposed customers would harm our future revenue and prospects. During 2003 and 2002, five customers comprised approximately 16% and 23% of our revenue, respectively.

Fluctuations in our quarterly operating results may not be predictable and may result in significant volatility in our stock price.

Our product revenue has fluctuated and our quarterly operating results will continue to fluctuate based on, among other things, the timing of the execution and termination of customer agreements in a given quarter. In addition, we have experienced, and expect to continue to experience, fluctuations in revenue and operating results from quarter to quarter for other reasons, including, but not limited to:

- target customers electing to adopt and implement our technology;
- the substantial decrease in information technology spending in general, and among our target customers in particular;
- customers choosing to delay their purchase commitments or purchase in smaller amounts than expected due to a general downturn in the economy;
- our ability to continue to license its patents, the timing of such licenses, and the costs necessary to defend its patents;
- the amount and timing of operating costs and capital expenditures relating to our business, operations and infrastructure;
- our ability to accurately estimate and control costs;

- our ability to timely collect fees owed by customers;
- the announcement or introduction of new or enhanced products and services in the secure content management, content security, secure online communications, or document delivery markets; and
- acquisitions that we complete or proposes.

As a result of these factors, we believe that quarter-to-quarter comparisons of our revenue and operating results are not necessarily meaningful, and that these comparisons may not be accurate indicators of future performance. We may not be able to accurately forecast our revenue or expenses. Because our staffing and operating expenses are based on anticipated revenue levels, and because a high percentage of our costs are fixed, small variations in the timing of the recognition of specific revenue could cause significant variations in operating results from quarter to quarter. In addition, many of our customers delay purchases of our products until the end of each quarter. If we are unable to adjust spending in a timely manner to compensate for any unexpected revenue shortfall, any significant revenue shortfall would likely have an immediate negative effect on our operating results. Moreover, we believe the challenges and difficulties that we face, as outlined above with respect to financial forecasts, also apply to securities analysts that may publish estimates of our financial results. Our operating results in one or more future quarters may fail to meet the expectations of securities analysts or investors due to any of a wide variety of factors, including fluctuations in financial ratios or other metrics used to measure our performance. If this occurs, we would expect to experience an immediate and significant decline in the trading price of our stock.

We have a lengthy sales and implementation cycle, which increases the cost of completing sales and renders completion of sales less predictable.

If we are unable to license our services to new customers on a timely basis or if our existing and proposed customers and their end-users suffer delays in the implementation and adoption of its services, our revenue may be limited and business and prospects may be harmed. Our customers must evaluate our technology and integrate our products and services into the products and services they provide. In addition, our customers may need to adopt a comprehensive sales, marketing and training program in order to effectively implement some of our products. Finally, we must coordinate with our customers using our product for third-party communications in order to assist end-users in the adoption of our products. For these and other reasons, the cycle associated with establishing licenses and implementing our products can be lengthy. This cycle is also subject to a number of significant delays over which we have little or no control. Forecasts about license revenue may be inaccurate as a result of any or all of these factors, and inaccurate forecasts may cause our business, or market valuation, to suffer.

Economic conditions could adversely affect our ability to maintain and increase revenue.

The revenue and profitability or loss of our business depends on the overall demand for our products, our intellectual property, and our services, particularly within the industries in which we offer specific versions of our products. Because our sales are primarily to customers in the financial services, health care, and government industries, our business depends on the overall economic conditions and the economic and business conditions within these industries. Any weakening of the global economy, the information technology industry in particular, and the weakening of the business conditions within the above industries could cause a decrease in our license revenues. A softening of demand for information technology spending caused by a continued weakening of the economy, domestically or internationally, may result in a decrease in revenues and continued losses.

In addition, the financial, political, economic and other uncertainties following the terrorist attacks upon the United States and the United States involvement in Iraq have led to a further weakening of the global economy, and have created an uncertain economic environment. We cannot predict the impact of these events, any subsequent terrorist acts or of any related military action, on our customers or business. Subsequent terrorist acts and/or the threat of future outbreak or continued escalation of hostilities involving the United States or other

countries could adversely affect spending on information technology and on our software license revenue, as well as have an adverse effect on our business, financial condition or results of operations.

The terms of any financing we may obtain could result in substantial dilution to existing stockholders.

In the future, we may be required or elect to seek additional financing to fund our operations. Factors such as the commercial success of our existing products and services, the timing and success of any new products and services, the progress of our research and development efforts, our results of operations, the status of competitive products and services, and the timing and success of potential strategic alliances or potential opportunities to acquire or sell technologies or assets may require us to seek additional funding sooner than we expect. In the event that we require additional cash, we may not be able to secure additional financing on terms that are acceptable to us, especially in light of the uncertainty in the current market environment, and we may not be successful in implementing or negotiating such other arrangements to improve our cash position. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders would be reduced and the securities we issues might have rights, preferences and privileges senior to those of our current stockholders. If adequate funds were not available on acceptable terms or at all, our ability to achieve or sustain positive cash flows, maintain current operations, fund any potential expansion, take advantage of new opportunities, develop or enhance products or services, or otherwise respond to competitive pressures could be significantly limited.

We expect to continue making strategic investments and acquisitions, which may involve substantial costs, may substantially dilute our existing investors, and may fail to yield anticipated benefits.

We are continuously evaluating investments in complementary technologies and businesses. Acquisitions of companies, divisions of companies, or products, including our acquisition of Valicert, entail numerous risks, including:

- potential inability to successfully integrate acquired operations and products or to realize cost savings or other anticipated benefits from integration;
- diversion of management's attention;
- loss of key employees of acquired operations;
- coordinating sales and pricing efforts to effectively communicate the value and capabilities of the combined company;
- the difficulty of assimilating geographically dispersed operations and personnel of the acquired companies;
- the potential disruption of our ongoing business;
- expenses related to such integration;
- the correct assessment of the relative percentages of in-process research and development expense that can be immediately written off as compared to the amount which must be amortized over the appropriate life of the asset;
- the impairment of relationships with employees and customers of either an acquired company or our business;
- the potential unknown liabilities associated with acquired business; and
- inability to recover strategic investments in development stage entities.

As a result of acquisitions, we may acquire significant assets that include goodwill and other purchased intangibles. The testing of these intangibles under established accounting guidelines for impairment requires

significant use of judgment and assumptions. Changes in business conditions could require adjustments to the valuation of these assets. In this regard, we wrote off substantially all of its investment in Interface Systems subsequent to the completion of that acquisition.

Our certificate of incorporation and bylaws contain provisions that could discourage or prevent an acquisition of us, which could depress our stock price.

Our certificate of incorporation and bylaws may inhibit changes of control that are not approved by our Board of Directors. These provisions could limit the price that investors might be willing to pay in the future for shares of our common stock. In particular, our certificate of incorporation provides for a classified Board of Directors and prohibits stockholder action by written consent. These provisions require advance notice for nomination of directors and stockholders' proposals. In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. In general, this law prevents a person who becomes the owner of 15% or more of the corporation's outstanding voting stock from engaging in specified business combinations for three years unless specified conditions are satisfied. In addition, our certificate of incorporation allows our Board of Directors to issue preferred stock without further stockholder approval. This could have the effect of delaying, deferring or preventing a change in control. The issuance of preferred stock also could effectively limit the voting power of the holders of our common stock. The provisions of our certificate of incorporation and bylaws, as well as provisions of Delaware law, may discourage or prevent an acquisition or disposition of our business.

We may be unable to adequately protect our intellectual property rights or may be subject to claims of patent infringement, either of which could result in substantial costs to us.

We currently rely on a combination of patents, trade secrets, copyrights, trademarks and licenses, together with non-disclosure and confidentiality agreements to establish and protect our proprietary rights in our products. We hold certain patent rights with respect to some of our products. Our existing patents or trademarks, as well as any future patents or trademarks obtained by us, may be challenged, invalidated or circumvented, or our competitors may independently develop or patent technologies that are substantially equivalent or superior to our technology. We also rely on unpatented trade secrets and other unpatented proprietary information. Although we take precautionary measures to maintain our unpatented proprietary information, others may acquire equivalent information or otherwise gain access to or disclose our proprietary information, and we may be unable to meaningfully protect our rights to our proprietary information. As a result, our operating results could suffer.

Third parties could assert patent or other intellectual property infringement claims against us and the cost of responding to such assertions, regardless of their validity, could be significant. We may increasingly be subject to claims of intellectual property infringement as the number of our competitors grows and the functionality of their products and services increasingly overlap with ours. In addition, we may infringe upon patents that may be issued to third parties in the future. It may be time consuming and costly to defend ourselves against any of these claims and we may not prevail. Furthermore, parties making such claims may be able to obtain injunctive or other equitable relief that could block our ability to further develop or commercialize some or all of our products in the United States and abroad. In the event of a claim of infringement, we may be required to obtain one or more licenses from or pay royalties to third parties. We may be unable to obtain any such licenses at a reasonable cost, if at all. Defense of any lawsuit or failure to obtain such license could harm our business.

The enforcement of our intellectual property rights, especially through patent infringement lawsuits we may initiate, could result in substantial litigation costs and ultimately may not result in additional revenue to us or a favorable judicial determination.

Since 1999 we have aggressively pursued cases of potential infringement by third parties of our patents and other intellectual property rights. The enforcement process is costly and requires significant management attention. These costs generally are expensed during the period incurred, and the costs of pursuing the litigation

may not be directly matched with the related licensing or settlement revenue, if any. In addition, our enforcement of our rights may increase the risk of adverse claims, with or without merit, which could be time consuming to defend, result in costly litigation, divert management's attention and resources, limit the use of our services, or require us to enter into royalty or license agreements. In addition, such counter-claims asserted by these third parties may be found to be valid and could result in an injunction or damages against us. Our ability to prevail in this litigation is inherently uncertain, and if we were subject to an adverse judicial determination, our ability to protect our products and to secure related licensing or settlement revenue could be lost.

Failure to license necessary third party software incorporated in our products could cause delays or reductions in our sales.

We license third party software that we incorporate into our products. These licenses may not continue to be available on commercially reasonable terms, or at all. Some of this technology would be difficult to replace. The loss of any such license could result in delays or reductions of our applications until we identify, license and integrate or develop equivalent software. If we are required to enter into license agreements with third parties for replacement technology, we could face higher royalty payments and our products may lose certain attributes or features. In the future, we might need to license other software to enhance our products and meet evolving customer needs. If we are unable to do this, we could experience reduced demand for its products.

We are a defendant in two purported securities class action lawsuits that could divert management attention and resources or eventually expose us to liability.

In June 2003, we were served with a summons and first amended complaint, captioned *Liu v. Credit Suisse First Boston, et alia*, alleging the violation of federal and state securities laws, purportedly on behalf of persons who acquired our common stock (other than purchasers of our initial public offering) from August 6, 1999 to October 18, 2000. The case is now pending in the United States District Court for the Southern District of New York, where the Court held a status conference in September 2003. At the status conference we pointed out, and plaintiffs' counsel conceded, that the named plaintiffs lacked standing to pursue the action because they had not purchased any shares of any of the issuer defendants then in the case. In October 2003 plaintiffs filed a motion for leave to file a second amended complaint, which we have opposed. An adverse outcome could harm our business and operating results. Moreover, the costs in defending this lawsuit could harm future operating results. The accompanying consolidated financial statements do not include a reserve for any potential loss, as we do not consider a loss to be probable at this time. An adverse outcome could harm our business and operating results. Moreover, the costs in defending this lawsuit could harm future operating results.

In December 2001, certain plaintiffs filed a class action lawsuit in the United States District Court for the Southern District of New York on behalf of purchasers of the common stock of Valicert, alleging violations of federal securities laws. *In re Valicert, Inc. Initial Public Offering Securities Litigation*, No. 01-CV-10889 (SAS) (S.D.N.Y.), related to *In re Initial Public Offering Securities Litigation*, No. 21 MC 92 (SAS). In June 2003, Valicert accepted a settlement proposal presented to all issuer defendants in this case. Under the proposed settlement, the plaintiffs will dismiss and release all claims against the Valicert Defendants in exchange for a contingent payment guaranty by the insurance companies collectively responsible for insuring the issuers in all the consolidated cases, and the assignment or surrender of control to the plaintiffs of certain claims the issuer defendants may have against the underwriters. Under the guaranty, the insurers will be required to pay the amount, if any, by which \$1 billion exceeds the aggregate amount ultimately collected by the plaintiffs from the underwriter defendants in all of the cases. If the plaintiffs fail to recover \$1 billion and payment is required under the guaranty, Valicert would be responsible to pay its pro rata portion of the shortfall, up to the amount of the deductible retention under its insurance policy, which is \$500,000. The timing and amount of payments that Valicert could be required to make under the proposed settlement will depend on several factors, principally the timing and amount of any payment required by the insurers pursuant to the \$1 billion guaranty. The proposed settlement is subject to approval of the Court, which cannot be assured. Failure of the Court to approve the settlement followed by an adverse outcome could harm our business and operating results. Moreover, the costs in

defending this lawsuit could harm future operating results. The accompanying consolidated financial statements do not include a reserve for any potential loss, as we do not consider a loss to be probable at this time. An adverse outcome could harm our business and operating results. Moreover, the costs in defending this lawsuit could harm future operating results.

If we lose the services of executive officers or other key employees, our ability to develop our business and secure customer relationships will suffer.

We are substantially dependent on the continued services and performance of our executive officers and other key personnel. The loss of the services of any of our executive officers or other key employees could significantly delay or prevent the achievement of our development and strategic objectives. We do not have long-term employment agreements with any of our key personnel. The loss of services of any of our executive officers or other key personnel could significantly harm our business and prospects.

Our international business exposes us to additional risks that may result in future additional costs or limit the market for product sales.

Products and services provided to Tumbleweed's international customers accounted for 5% of revenues for 2003. Conducting business outside of the United States subjects us to additional risks, including:

- changes in regulatory requirements;
- reduced protection of intellectual property rights;
- evolving privacy laws;
- tariffs and other trade barriers;
- difficulties in staffing and managing foreign operations;
- problems in collecting accounts receivable; and
- difficulties in authenticating customer information.

Managing these risks may subject us to additional costs that may not be justified in light of the market opportunity, and the inability to comply with or manage foreign laws and related risks may preclude or limit sales in foreign jurisdictions. In addition, the recent outbreak of severe acute respiratory syndrome, or SARS, that began in China, Hong Kong, Singapore and Vietnam may have a negative impact on our operations by factors such as reduced sales in international channels.

We rely on public key cryptography and other security techniques that could be breached, resulting in reduced demand for our products and services.

A requirement for the continued growth of electronic commerce is the secure transmission of confidential information over public networks. We rely on public key cryptography, an encryption method that utilizes two keys, a public and private key, for encoding and decoding data, and on digital certificate technology, to provide the security and authentication necessary for secure transmission of confidential information. Regulatory and export restrictions may prohibit us from using the strongest and most secure cryptographic protection available, and thereby may expose us or our customers to a risk of data interception. A party who is able to circumvent our security measures could misappropriate proprietary information or interrupt our or our customers' operations. Any compromise or elimination of our security could result in risk of loss or litigation and possible liability and reduce demand for our products and services.

Item 7A—Quantitative and Qualitative Disclosures About Market Risk

We currently do not use financial instruments to hedge operating expenses in Bulgaria, India, Japan, the Netherlands, Switzerland, or the United Kingdom denominated in the respective local currency. We assess the need to utilize financial instruments to hedge currency exposures on an ongoing basis.

We do not use derivative financial instruments for speculative trading purposes, nor do we hedge our foreign currency exposure in a manner that entirely offsets the effects of changes in foreign exchange rates. We regularly review our hedging program and may as part of this review determine at any time to change our hedging program.

Interest Rate Sensitivity

The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive from our investments without significantly increasing risk. Some of the securities that we have invested in may be subject to market risk. This means that a change in prevailing interest rates may cause the fair value of the investment to fluctuate. For example, if we hold a security that was issued with a fixed rate equal to the then-prevailing interest rate and the prevailing interest rate later rises, the fair value of our investment will decline. To minimize this risk, we maintain our portfolio of cash equivalents in commercial paper and money market funds. In general, our investments are not subject to market risk because the interest paid on these funds fluctuates with the prevailing interest rate. As of December 31, 2003, none of our cash equivalents were subject to market risk.

Item 8—Financial Statements and Supplementary Data.

**TUMBLEWEED COMMUNICATIONS CORP.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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REPORT OF INDEPENDENT AUDITORS

The Board of Directors and Stockholders
Tumbleweed Communications Corp.:

We have audited the accompanying consolidated balance sheets of Tumbleweed Communications Corp. and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for each of the years in the three-year period ended December 31, 2003. 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 Tumbleweed Communications Corp. and subsidiaries as of December 31, 2003 and 2002, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2003, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 to the consolidated financial statements, the Company adopted the provisions of Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets*, on January 1, 2002.

/s/ KPMG LLP

Mountain View, California
January 20, 2004, except as to the third
paragraph of Note 13(a) and the first
paragraph of Note 13(b), which are as
of February 11, 2004

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except par value and share data)

	December 31,	
	2003	2002
<u>ASSETS</u>		
Current assets:		
Cash and cash equivalents	\$ 25,351	\$ 29,210
Accounts receivable, net of allowance for doubtful accounts of \$1,763 and \$2,058 as of December 31, 2003 and 2002, respectively	10,039	4,764
Other current assets	1,068	1,149
Total current assets	36,458	35,123
Property and equipment, net	1,648	1,794
Goodwill	13,308	—
Intangible assets, net	4,392	—
Other assets	540	892
Total assets	\$ 56,346	\$ 37,809
<u>LIABILITIES AND STOCKHOLDERS' EQUITY</u>		
Current liabilities:		
Accounts payable	\$ 250	\$ 1,653
Current installments of long-term debt	267	33
Accrued liabilities	6,791	5,234
Accrued merger-related and other costs	485	—
Deferred revenue	11,808	6,903
Total current liabilities	19,601	13,823
Long-term debt, excluding current installments	467	—
Accrued merger-related and other costs, excluding current portion	540	—
Deferred revenue, excluding current portion	2,984	2,061
Other long-term liabilities	159	94
Total liabilities	23,751	15,978
Stockholders' equity:		
Preferred stock, \$0.001 par value; 10,000,000 shares authorized, zero shares issued and outstanding as of December 31, 2003 and 2002, respectively	—	—
Common stock, \$0.001 par value; 100,000,000 shares authorized, 42,401,260 and 30,481,987 shares issued and outstanding as of December 31, 2003 and 2002, respectively	43	31
Additional paid-in capital	313,532	293,443
Treasury stock	(796)	(796)
Deferred stock compensation expense	(302)	(61)
Accumulated other comprehensive loss	(585)	(676)
Accumulated deficit	(279,297)	(270,110)
Total stockholders' equity	32,595	21,831
Total liabilities and stockholders' equity	\$ 56,346	\$ 37,809

See accompanying notes to consolidated financial statements.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Years Ended December 31,		
	2003	2002	2001
Revenue:			
Product revenue	\$16,342	\$ 13,317	\$ 17,241
Service revenue	12,648	9,845	10,657
Intellectual property and other revenue	1,605	2,363	1,150
Total revenue	<u>30,595</u>	<u>25,525</u>	<u>29,048</u>
Cost of revenue:			
Cost of product revenue	959	893	1,100
Cost of service revenue (inclusive of stock-based compensation expense of \$27, \$10, and \$317 in 2003, 2002, and 2001, respectively)	3,962	6,175	11,175
Amortization of intangible assets	750	—	—
Total cost of revenue	<u>5,671</u>	<u>7,068</u>	<u>12,275</u>
Gross profit	24,924	18,457	16,773
Operating expenses:			
Research and development (inclusive of stock-based compensation expense of \$39, \$31, and \$667 in 2003, 2002, and 2001, respectively)	9,166	10,086	15,886
Sales and marketing (inclusive of stock-based compensation expense (credit) of \$80, (\$405), and \$1,812 in 2003, 2002, and 2001, respectively)	15,937	18,004	36,446
General and administrative (inclusive of stock-based compensation expense of \$20, \$63, and \$668, in 2003, 2002, and 2001, respectively)	6,190	4,665	9,266
Amortization of goodwill	—	—	9,668
Amortization of intangible assets	532	—	2,552
Write-off of in-process research and development	100	—	—
Merger-related and other costs	2,909	—	—
Restructuring expenses (inclusive of stock-based compensation credit of (\$336) in 2001)	—	—	4,674
Impairment of goodwill and intangible assets	—	5,713	50,983
Total operating expenses	<u>34,834</u>	<u>38,468</u>	<u>129,475</u>
Operating loss	(9,910)	(20,011)	(112,702)
Impairment of investments	—	(543)	(3,434)
Other income, net	752	716	2,124
Net loss before provision for taxes and cumulative effect of change in accounting principle	(9,158)	(19,838)	(114,012)
Provision for income taxes	29	54	153
Net loss before cumulative effect of change in accounting principle	(9,187)	(19,892)	(114,165)
Cumulative effect of change in accounting principle	—	974	—
Net loss	<u>\$ (9,187)</u>	<u>\$ (20,866)</u>	<u>\$ (114,165)</u>
Net loss per share before cumulative effect of change in accounting principle—basic and diluted	\$ (0.26)	\$ (0.65)	\$ (3.78)
Cumulative effect of change in accounting principle per share—basic and diluted	—	(0.03)	—
Net loss per share—basic and diluted	<u>\$ (0.26)</u>	<u>\$ (0.68)</u>	<u>\$ (3.78)</u>
Weighted average shares—basic and diluted	<u>36,007</u>	<u>30,589</u>	<u>30,171</u>

See accompanying notes to consolidated financial statements.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE (LOSS)
Years Ended December 31, 2003, 2002 and 2001
(in thousands, except share data)

	Shares	Amount	Additional Paid- In Treasury Stock	Deferred Stock Compensation Expense	Accumulated Other Comprehensive Income (Loss)	Compre- hensive Loss	Accum- ulated Deficit	Total Stock holders' Equity
BALANCES, DECEMBER 31, 2000	29,554,621	30	295,183	(6,461)	(61)	\$(114,165)	(135,079)	153,612
Net loss	—	—	—	—	—	(524)	(114,165)	(114,165)
Foreign currency translation adjustment	—	—	—	—	(524)	—	—	(524)
Total comprehensive loss	—	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	788,869	1	659	—	—	—	—	660
Purchases under Employee Stock Purchase Plan	201,680	—	384	—	—	—	—	384
Issuance of options and warrants in exchange for services	—	—	341	—	—	—	—	341
Deferred compensation expense on vesting acceleration	—	—	234	163	—	—	—	397
Amortization of deferred compensation expense	—	—	—	3,123	—	—	—	3,123
Credit to deferred compensation related to terminated employees	—	—	(2,074)	1,341	—	—	—	(733)
BALANCES, DECEMBER 31, 2001	30,545,170	31	294,727	(1,834)	(585)	(20,866)	(249,244)	43,095
Net loss	—	—	—	—	—	(91)	(20,866)	(20,866)
Foreign currency translation adjustment	—	—	—	—	(91)	—	—	(91)
Total comprehensive loss	—	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	446,074	1	421	—	—	—	—	422
Purchases under Employee Stock Purchase Plan	208,243	—	369	—	—	—	—	369
Treasury stock	(717,500)	(1)	—	(796)	—	—	—	(797)
Amortization of deferred compensation expense	—	—	—	797	—	—	—	797
Credit to deferred compensation related to terminated employees	—	—	(2,074)	976	—	—	—	(1,098)
BALANCES, DECEMBER 31, 2002	30,481,987	\$ 31	\$293,443	\$ (61)	\$(676)	(9,187)	\$(270,110)	\$21,831
Net loss	—	—	—	—	—	91	(9,187)	(9,187)
Foreign currency translation adjustment	—	—	—	—	91	—	—	91
Total comprehensive loss	—	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	2,126,788	2	4,482	—	—	—	—	4,484
Issuance of common stock upon exercise of warrants	78,851	—	—	—	—	—	—	—
Issuance of common stock - Valicert acquisition	9,713,634	10	15,223	—	—	—	—	15,233
Issuance of common stock - acquired workforce	—	—	476	—	—	—	—	476
Compensation expense on vesting acceleration	—	—	29	—	—	—	—	29
Amortization of deferred compensation expense	—	—	—	166	—	—	—	166
Credit to deferred compensation related to terminated employees	—	—	(121)	121	—	—	—	—
Deferred compensation expense related to Valicert acquisition	—	—	—	(528)	—	—	—	(528)
BALANCES, DECEMBER 31, 2003	42,401,260	43	\$313,532	\$ (302)	\$(585)	—	\$(279,297)	\$32,595

See accompanying notes to consolidated financial statements.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,		
	2003	2002	2001
Cash flows from operating activities:			
Net loss	\$(9,187)	\$(20,866)	\$(114,165)
Adjustments to reconcile net loss to net cash used in operating activities:			
Stock-based compensation expense (credit)	166	(301)	3,128
Compensation expense on vesting acceleration	29	—	—
Depreciation and amortization	2,690	3,183	16,778
Bad debt expense	286	686	2,070
Write-off of in-process research and development	100	—	—
Minority interest	—	(356)	(249)
Cumulative effect of change in accounting principle	—	974	—
Impairment of goodwill and intangible assets	—	5,713	50,983
Impairment of investments	—	543	3,434
Loss on sale of short term investments	—	207	—
Loss on disposal of property and equipment, net	48	312	4,368
Other non-cash items	—	(762)	—
Changes in operating assets and liabilities, net of effect of acquisition of Valicert, Inc.:			
Accounts receivable	(4,534)	1,345	2,355
Other current assets and other assets	1,288	3,242	1,267
Accounts payable and accrued liabilities	(4,443)	(3,952)	(9,900)
Accrued restructuring	—	(2,335)	2,335
Accrued merger-related and other costs	1,025	—	—
Deferred revenue	4,446	1,066	5,341
Net cash used in operating activities	<u>(8,086)</u>	<u>(11,301)</u>	<u>(32,255)</u>
Cash flows from investing activities:			
Purchases of property and equipment	(1,092)	(354)	(3,081)
Proceeds from sales of property and equipment	—	—	2,915
Sales of short-term investments	—	555	—
Acquisition of Valicert, Inc., net of cash acquired	836	—	—
Net cash provided by (used in) investing activities	<u>(256)</u>	<u>201</u>	<u>(166)</u>
Cash flows from financing activities:			
Repayments of borrowings and other long-term liabilities	(892)	(660)	(600)
Repurchase of common stock	—	(796)	—
Proceeds from borrowings	800	—	—
Proceeds from issuance of common stock	4,484	790	1,044
Net cash provided by (used in) financing activities	<u>4,392</u>	<u>(666)</u>	<u>444</u>
Effect of exchange rate fluctuations	91	(91)	(524)
Net (decrease) increase in cash and cash equivalents	(3,859)	(11,857)	(32,501)
Cash and cash equivalents, beginning of year	29,210	41,067	73,568
Cash and cash equivalents, end of year	<u>\$25,351</u>	<u>\$ 29,210</u>	<u>\$ 41,067</u>
Supplemental disclosures of cash flow information:			
Cash paid during the year for interest	<u>\$ 73</u>	<u>\$ 15</u>	<u>\$ 116</u>
Cash paid during the year for taxes	<u>\$ 116</u>	<u>\$ 20</u>	<u>\$ 27</u>

See accompanying notes to consolidated financial statements.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Years ended December 31, 2003, 2002 and 2001

(1) Organization

Tumbleweed Communications Corp. ("Tumbleweed") is a provider of secure Internet messaging software products for enterprises and government. Tumbleweed's solutions are used by companies when email, file transfer or Web communications are mission-critical. By making Internet communications secure, reliable and automated, Tumbleweed's products help customers significantly reduce their cost of doing business.

(2) Summary of Significant Accounting Policies

Basis of Presentation and Consolidation Policy

The accompanying consolidated financial statements include the accounts of Tumbleweed and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. The results of operations of its wholly-owned subsidiary, Valicert, Inc. ("Valicert"), have been included commencing June 23, 2003, the effective date of the acquisition.

Cash and Cash Equivalents

Tumbleweed considers all highly liquid investments purchased with remaining maturities of three months or less to be cash equivalents.

Concentrations of Credit Risk

Financial instruments, which potentially subject Tumbleweed to concentrations of credit risk, consist primarily of cash equivalents and accounts receivable. Tumbleweed's cash equivalents generally consist of money market mutual funds with qualified financial institutions. To reduce credit risk with accounts receivable, Tumbleweed performs periodic evaluations of its customers' financial conditions and, when necessary, records an allowance for credit losses. One customer comprised 33% of Tumbleweed's accounts receivable balance, net of allowance for doubtful accounts, at December 31, 2003. This balance was collected in full in the first quarter of 2004. No single customer comprised 10% or more of Tumbleweed's accounts receivable balance at December 31, 2002. For 2003, 2002, and 2001, respectively, no single customer comprised 10% or more of Tumbleweed's revenue.

Property and Equipment

Property and equipment is stated at cost. Depreciation and amortization are computed using the straight-line method over the estimated useful life of the asset, generally 2 to 5 years for computers, software, furniture, and equipment; and the shorter of the estimated useful life of the asset or the remaining lease term for leasehold improvements. Equipment under capital lease is amortized over the shorter of the estimated useful life of the asset or the lease term. During 2001, Tumbleweed revised the estimated useful lives of certain assets based on changes in the planned usage of those assets. Tumbleweed recorded depreciation expense of \$1.4 million, \$3.2 million, and \$4.6 million for 2003, 2002, and 2001, respectively.

Maintenance and repairs are recorded as expenses as incurred. Renewals and betterments that materially extend the lives of assets are capitalized and depreciated. Upon disposal, the assets' cost and accumulated depreciation are removed from the balance sheet and any resulting gain or loss is recorded in the consolidated statement of operations.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Capitalized Software

Development costs incurred in the research and development of new software products and enhancements to existing software products are expensed as incurred until technological feasibility in the form of a working model has been established. To date, capitalized costs for software development have not been material.

Other Investments

During 2000, Tumbleweed made investments in two non-publicly traded companies of \$977,000 and \$3.0 million. The investments were carried at cost as Tumbleweed held less than 20% of the voting equity and did not have the ability to exercise significant influence. Tumbleweed monitored these investments for other-than-temporary impairment and made appropriate reductions in carrying values when necessary. Tumbleweed recorded expenses of \$543,000 and \$3.4 million in 2002 and 2001, respectively, to recognize an other-than-temporary impairment in the value of these investments. As of December 31, 2003 and 2002, respectively, Tumbleweed had no remaining assets on its balance sheet relating to these investments. One of the investee companies provided services to Tumbleweed in the amount of \$633,000 for 2001.

Letters of Credit

As of December 31, 2003, and 2002, Tumbleweed had certificates of deposit in the amount of \$297,000 and \$329,000, respectively, presented on its balance sheet as Other assets. The certificates of deposit relate to letters of credit held by the lessors of Tumbleweed's Redwood City, California and New York, New York office operating leases.

Goodwill and Intangible Assets

Tumbleweed assesses the impairment of identifiable intangibles, long-lived assets and goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors that are considered important, which could trigger an impairment review, include the following:

- significant underperformance relative to expected historical or projected future operating results;
- significant changes in the manner or use of the acquired assets or the strategy for the overall business;
- significant negative industry or economic trends;
- significant decline in Tumbleweed's stock price for a sustained period; and
- Tumbleweed's market capitalization relative to its net book value.

Recoverability of assets held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets, generally using discounted net cash flows. Assets to be disposed of are reported at the lower of their carrying amount or fair value less cost to sell.

In October 2001, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, which addresses financial accounting and reporting for the impairment or disposal of long-lived assets. While SFAS 144 supersedes SFAS 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of*, it retains many of the fundamental provisions of SFAS 121. SFAS 144 also supersedes the accounting and reporting provisions of APB Opinion 30 for the disposal of a segment of a business. By

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

broadening the presentation of discontinued operations to include more disposal transactions, SFAS 144 enhances companies' ability to provide information that helps financial statement users to assess the effects of a disposal transaction on the ongoing operations of an entity. Tumbleweed adopted SFAS 144 as of January 1, 2002. The adoption of SFAS 144 did not have a material impact on Tumbleweed's financial position or results of operations.

In July 2001, the FASB issued SFAS 142, *Goodwill and Other Intangible Assets*. SFAS 142 requires that goodwill and intangible assets be tested for impairment at least annually. Tumbleweed adopted the provisions of SFAS 142 on January 1, 2002. In connection with SFAS 142's transitional goodwill impairment evaluation, Tumbleweed assessed whether there was an indication that goodwill recorded in connection with its acquisition of Tumbleweed Communications KK ("TKK"), its majority-owned subsidiary in Japan, was impaired as of the date of adoption. To accomplish this, Tumbleweed determined the carrying value of the reporting unit by assigning assets and liabilities, including the existing goodwill and intangible assets, to the reporting unit as of the date of adoption. As the TKK reporting unit's carrying amount exceeded its fair value, indicating that TKK's goodwill might be impaired, Tumbleweed performed the second step of the transitional impairment test. In the second step, Tumbleweed compared the implied fair value of TKK's goodwill, determined by allocating TKK's fair value to all of its assets (recognized and unrecognized) and liabilities to its carrying amount, both of which were measured as of the date of adoption. A transitional impairment loss of \$974,000 was recognized as the cumulative effect of a change in accounting principle in Tumbleweed's consolidated statement of operations.

During the six months ended June 30, 2002, TKK experienced a sustained decline in operations. As a result, Tumbleweed reevaluated its future prospects in Japan and decided to transition to an indirect sales distribution model in Japan. As of June 30, 2002, Tumbleweed determined that its goodwill was impaired and wrote-off the \$5.7 million remainder of the goodwill balance. During the three months ended September 30, 2002, Tumbleweed began the liquidation of TKK. As a result of the liquidation of TKK, during the three months ended September 30, 2002, Tumbleweed recorded an operating expense of \$377,000 related to the write-off of the remaining net assets of TKK and its eighty percent equity position in TKK. TKK ceased operations in August 2002 and formally declared bankruptcy in December 2002.

In connection with the acquisition of Valicert on June 23, 2003, Tumbleweed recognized \$13.4 million of goodwill, representing the excess of the purchase price over the fair value of the acquired net tangible and identified intangible assets. In accordance with the provisions of SFAS 142, the goodwill acquired in the Valicert acquisition will not be amortized, but instead, the goodwill balance will be tested for impairment at least annually and more frequently if certain impairment conditions exist. During the last two quarters of 2003, Tumbleweed reduced its goodwill balance by \$50,000 due to actual expenditures for severance costs for former Valicert employees and other acquisition-related costs being less than previously estimated.

The following table presents net loss and loss per share information for the years ended December 31, 2003, 2002, and 2001, respectively, adjusted to exclude the amortization related to goodwill that is no longer amortized under SFAS 142:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Net loss as reported	\$(9,187)	\$(20,866)	\$(114,165)
Add: amortization of goodwill	—	—	9,668
Net loss pro forma	<u>\$(9,187)</u>	<u>\$(20,866)</u>	<u>\$(104,497)</u>
Basic and diluted net loss per share	\$ (0.26)	\$ (0.68)	\$ (3.78)
Amortization of goodwill—basic and diluted	—	—	0.32
Basic and diluted pro forma net loss per share	<u>\$ (0.26)</u>	<u>\$ (0.68)</u>	<u>\$ (3.46)</u>

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Revenue Recognition

Tumbleweed derives its revenue from three sources: (i) product revenue, which includes license fees, subscription-based license fees, transaction-based license fees, and hosting arrangements; (ii) service revenue, which includes support and maintenance fees, consulting fees, and training fees; and (iii) intellectual property and other revenue which includes patent license agreement fees and the sale of distribution rights. As described below, significant management judgments and estimates must be made and used in connection with the revenue recognized in any accounting period. Material differences may result in the amount and timing of revenue for any period if management made different judgments or utilized different estimates.

Tumbleweed recognizes revenue in accordance with Statement of Position (“SOP”)97-2, *Software Revenue Recognition* (“SOP 97-2”), as amended by SOP 98-9, *Modification of SOP 97-2, “Software Revenue Recognition” With Respect to Certain Transactions* (“SOP 98-9”), and generally recognizes revenue when all of the following criteria are met as set forth in paragraph 8 of SOP 97-2: (1) persuasive evidence of an arrangement exists, (2) delivery has occurred; (3) the fee is fixed and determinable; and (4) collectibility is probable. SOP 97-2 and SOP 98-9 generally require revenue recognized from software arrangements to be allocated to each element of the arrangement based on the relative fair values of the elements, such as software licenses, consulting, or customer support and maintenance. Fair values are based upon vendor specific objective evidence. If such evidence does not exist for delivered elements, Tumbleweed records revenue using the residual method. If such evidence does not exist for undelivered elements, all revenue from the arrangement is deferred until such time that evidence of fair value does exist, or until all elements of the arrangement are delivered, or revenue is recorded ratably if the only undelivered element is support and maintenance.

Tumbleweed’s recognition of revenue is based on its assessment of the probability of collecting the accounts receivable balance on a customer-by-customer basis. As a result, the timing or amount of revenue recognition may have been different if different assessments of the probability of collection had been made at the time the transactions were recorded. Tumbleweed assesses collectibility based on a number of factors, including past transaction history with the customer and the creditworthiness of the customer. Tumbleweed does not request collateral from its customers. If Tumbleweed determines that collection of a fee is not probable, it defers the fee and recognizes revenue upon receipt of cash.

Tumbleweed considers payment terms where fees are due within ninety days of delivery to be normal. Payment terms beyond ninety days are considered extended and not fixed or determinable. For contracts with extended payment terms, revenues are recognized when fees become due.

Arrangements that include consulting services are evaluated to determine whether those services are essential to the functionality of other elements of the arrangement. When services are not considered essential, the revenue allocable to the services is recognized separately from the software, provided vendor-specific objective evidence of fair value exists. If Tumbleweed provides consulting services that are considered essential to the functionality of the software products, both the product revenue and service revenue are recognized under contract accounting in accordance with the provisions of SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*. Revenues from these arrangements are recognized under the percentage of completion method based on the ratio of direct labor hours incurred to date to total projected labor costs except in limited circumstances where completion status cannot be reasonably estimated, in which case the completed contract method is used.

Tumbleweed’s software products are typically fully functional upon delivery and do not require significant modification or alteration. For arrangements where services are not essential to the functionality of the software, customers typically purchase consulting services to facilitate the adoption of Tumbleweed’s technology, but they

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

may also decide to use their own resources or appoint other professional service organizations to perform these services. Software products are generally billed separately and independently from professional services, which are generally billed on a time-and-materials basis. For time-and-materials contracts, Tumbleweed recognizes revenue as the services are performed.

Tumbleweed recognizes revenue from patent license agreements and from the sale of distribution rights when (i) the patent license or distribution agreement is executed, (ii) the amounts due are fixed, determinable, and billable, and (iii) collection of the resulting receivable is probable.

Tumbleweed typically grants its customers a warranty which guarantees that its products will substantially conform to its current specifications for 60 days from the delivery date. Services to be provided under a warranty are consistent with the services performed under support and maintenance purchased by almost all of Tumbleweed's customers. Tumbleweed provides for the estimated cost of product and service warranties based on specific warranty claims received, provided that it is probable that a liability exists, and provided the cost to repair or otherwise satisfy the claim can be reasonably estimated. The amount of the reserve recorded is equal to the costs to repair or otherwise satisfy the claim. Historically, costs related to warranty claims not covered by a support and maintenance agreement have not been significant.

Advertising

Tumbleweed expenses advertising costs as incurred. Total advertising expense was \$100,000, \$21,000, and \$527,000 for 2003, 2002, and 2001, respectively.

Income Taxes

Income taxes are accounted for under the asset and liability method. 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 basis and operating loss and tax credit carry forwards. 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. A valuation allowance is recorded to reduce deferred tax assets to an amount whose realization is more likely than not. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

Stock-Based Compensation

Tumbleweed accounts for its stock-based compensation arrangements for employees using the intrinsic-value method pursuant to Accounting Principles Board Opinion (APB) 25, *Accounting for Stock Issued to Employees*. As such, compensation expense is recorded for fixed plan stock options on the date of grant when the fair value of the underlying common stock exceeds the exercise price for stock options or the purchase price for issuance or sales of common stock. Expense associated with stock-based compensation is being amortized on an accelerated basis over the vesting period of the individual award consistent with the method described in FASB Interpretation 28.

During 2003, Tumbleweed recorded deferred stock compensation expense of \$528,000 for the difference at the effective date of acquisition of Valicert between the exercise price and the fair value of the common stock underlying the unvested options assumed upon the acquisition. Excluding the deferred stock compensation expense recorded in 2003 as a result of the Valicert acquisition, all stock options granted in 2003, 2002, and 2001

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

were granted at an exercise price equal to the fair value of the underlying stock. Amortization of deferred stock compensation expense of approximately \$166,000, \$(301,000), and \$3.1 million was recognized in 2003, 2002 and 2001, respectively. The credit to stock-based compensation expense in 2002 was the result of the reversal of previously recognized stock-based compensation expense associated with unvested options forfeited by terminated employees.

Had compensation expense for Tumbleweed's stock-based compensation plans been determined consistent with the fair value approach set forth in SFAS 123, Tumbleweed's net losses for 2003, 2002, and 2001, would have been as follows (in thousands, except per share amounts):

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Net loss as reported	\$ (9,187)	\$(20,866)	\$(114,165)
Add: Stock-based compensation expense (credit) included in net loss	166	(301)	3,128
Less: Total stock-based compensation determined under fair value based method for all awards	<u>(5,216)</u>	<u>(1,618)</u>	<u>(12,616)</u>
Net loss pro forma	<u>\$(14,237)</u>	<u>\$(22,785)</u>	<u>\$(123,653)</u>
Basic and diluted net loss per share as reported	<u>\$ (0.26)</u>	<u>\$ (0.68)</u>	<u>\$ (3.78)</u>
Basic and diluted net loss per share pro forma	<u>\$ (0.40)</u>	<u>\$ (0.74)</u>	<u>\$ (4.10)</u>

For purposes of computing pro forma net loss, the fair value of each option grant and stock purchases under the Purchase Plan is estimated on the date of grant using a Black-Scholes option pricing model. The assumptions used to value the option grants and purchase rights are stated as follows:

	<u>Years Ended December 31,</u>		
	<u>2003</u>	<u>2002</u>	<u>2001</u>
Stock options:			
Expected life	4.0 years	4.0 years	3.0 years
Volatility	136%	146%	100%
Risk-free interest rate	2.54%	3.46%	4.55%
Dividend yield	0%	0%	0%
Purchase plan options:			
Expected life	—	0.5 year	0.5 year
Volatility	—	102%	100%
Risk-free interest rate	—	1.72%	3.55%
Dividend yield	—	0%	0%

Options granted to consultants and other non-employees are considered compensatory and are accounted for at fair value pursuant to SFAS 123, *Accounting for Stock-Based Compensation*.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Net Loss Per Share

Basic net loss per common share has been computed using the weighted average number of shares of common stock outstanding during the period, less shares subject to repurchase. The following table presents the calculation of basic and diluted net loss per share (in thousands, except per share amounts):

	<u>Years Ended December 31,</u>		
	<u>2003</u>	<u>2002</u>	<u>2001</u>
Net loss before cumulative effect of change in accounting principle	\$(9,187)	\$(19,892)	\$(114,165)
Cumulative effect of change in accounting principle	—	974	—
Net loss	<u>\$(9,187)</u>	<u>\$(20,866)</u>	<u>\$(114,165)</u>
Basic and diluted:			
Weighted average shares of common stock outstanding	36,007	30,591	30,179
Shares of restricted stock subject to repurchase	—	(2)	(8)
Weighted average shares used in computing basic and diluted net loss per common share	<u>36,007</u>	<u>30,589</u>	<u>30,171</u>
Net loss per share before cumulative effect of change in accounting principle—basic and diluted	\$ (0.26)	\$ (0.65)	\$ (3.78)
Cumulative effect of change in accounting principle per share—basic and diluted	—	(0.03)	—
Net loss per share—basic and diluted	<u>\$ (0.26)</u>	<u>\$ (0.68)</u>	<u>\$ (3.78)</u>

Tumbleweed excludes potentially dilutive securities from its diluted net loss per share computation when their effect would be antidilutive to net loss per share amounts. The following potential common shares were excluded from the net loss per share computation (in thousands):

	<u>Years Ended December 31,</u>		
	<u>2003</u>	<u>2002</u>	<u>2001</u>
Warrants and options excluded for which the exercise price was less than the average fair market value of Tumbleweed's common stock during the period but were excluded as inclusion would decrease net loss per share	3,724	1,030	1,587
Warrants and options excluded due to the exercise price exceeding the average fair market value of Tumbleweed's common stock during the period	2,266	7,163	4,808
Common shares excluded as the common stock is subject to repurchase at the original purchase price	—	2	8
Total potential common shares excluded from diluted net loss per share	<u>5,990</u>	<u>8,195</u>	<u>6,403</u>

Fair Value of Financial Instruments

The fair values of Tumbleweed's cash, cash equivalents, accounts receivable, accounts payable and equipment loan facilities approximate their carrying values due to the short maturity or variable-rate structure of those instruments.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Deferred Revenue and Accounts Receivable

Tumbleweed records as deferred revenue any billed amounts due from customers in excess of revenues recognized. Advance payments are also recorded as deferred revenue until the products are shipped, services are delivered, or obligations are met. Accounts receivable includes amounts due from customers for which revenue has been recognized or amounts are legally due. Tumbleweed evaluates the collectibility of its accounts receivable based on a combination of factors. In cases where Tumbleweed is aware of circumstances that may impair a specific customer's ability to meet its financial obligations to it, Tumbleweed records a specific allowance against amounts owed to it by that customer, and thereby reduces the net recognized receivable to the amount it reasonably believes will be collected. For all other customers, Tumbleweed assesses collectibility based on a number of factors, including past transaction history with the customer and the creditworthiness of the customer. If all collection efforts have been exhausted, Tumbleweed writes off the receivable against the allowance.

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Specifically, there are significant judgments related to the allowance for doubtful accounts, the valuation of long-term assets, and revenue recognition. Actual results could differ from those estimates.

Foreign Currency

The functional currency for each foreign subsidiary is its respective local currency. Accordingly, all assets and liabilities related to these operations are translated at the current exchange rates at the end of each period. The resulting cumulative translation adjustments are recorded directly to the accumulated other comprehensive income (loss) account in stockholders' equity. Revenues and expenses are translated at average exchange rates in effect during the period. Foreign currency transaction gains and losses are included in the results of operations. At December 31, 2003 and 2002, no foreign currency transactions were hedged.

Reclassification

Certain reclassifications have been made to prior year amounts to conform to the current year presentation.

Recent Accounting Pronouncements

In June 2001, the FASB issued SFAS 143, *Accounting for Asset Retirement Obligations*, which addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. The standard applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development, or normal use of the asset. SFAS 143 requires that the fair value of a liability for an asset retirement obligation be recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. Tumbleweed adopted the provisions of SFAS 143 as of January 1, 2003. The adoption of SFAS 143 did not have a material impact on Tumbleweed's financial position or results of operations.

In June 2002, the FASB issued SFAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*, which addresses financial accounting and reporting for costs associated with an exit or disposal activity.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

SFAS 146 nullifies Emerging Issues Task Force (EITF) Issue 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. SFAS 146 requires that a liability be recognized for those costs only when the liability is incurred, that is, when it meets the definition of a liability in the FASB's conceptual framework. In contrast, under EITF Issue 94-3, a company recognized a liability for an exit cost when it committed to an exit plan. SFAS 146 also established fair value as the objective for initial measurement of liabilities related to exit or disposal activities. Tumbleweed adopted the provisions of SFAS 146 as of January 1, 2003. The adoption of SFAS did not have a material impact on Tumbleweed's financial position or results of operations.

In November 2002, the EITF reached a consensus on Issue 00-21 (EITF 00-21), *Revenue Arrangements with Multiple Deliverables*. EITF 00-21 addresses certain aspects of the accounting by a vendor for arrangements under which the vendor will perform multiple revenue-generating activities. Tumbleweed is required to adopt the provisions of EITF 00-21 as of January 1, 2004. Tumbleweed does not expect the adoption of EITF 00-21 to have a material impact on its financial position or results of operations.

(3) Business Combination

On June 23, 2003, Tumbleweed acquired Valicert, which develops and licenses secure Internet communications and identity validation software for file transfer, financial messaging, and business process integration. The merger was entered into to combine the two companies into a single, more competitive industry participant. Since June 23, 2003, Valicert's results of operations have been included in Tumbleweed's consolidated financial statements. The acquisition was accounted for using the purchase method of accounting and accordingly, the purchase price was allocated to the assets acquired and liabilities assumed based on their estimated fair values on the acquisition date. The purchase price of \$17.0 million consisted of an exchange of 9,713,634 shares of Tumbleweed's common stock with a fair value of \$13.0 million based on the average fair value of Tumbleweed's stock two days before and two days after the announcement date of February 18, 2003, assumed stock options with a fair value of \$1.7 million, severances for former Valicert employees of \$276,000, and other acquisition-related costs of \$2.0 million, consisting primarily of payments for legal fees, investment banking fees, financial printing fees, accounting fees, and proxy mailing fees.

The following is a summary of the allocation of the purchase price in the acquisition of Valicert (in thousands):

Net tangible liabilities	\$(1,647)
Core/developed technology	2,600
Maintenance agreements	700
Customer base and reseller agreements	1,400
Trademarks and tradenames	200
In-process research and development	100
Purchases orders (license)	300
Goodwill	<u>13,308</u>
Total	<u>\$16,961</u>

Purchases orders (license) intangible assets and in-process research and development were written off in full during the three months ended June 30, 2003. The remaining intangible assets are being amortized over their estimated useful lives of three to five years.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Goodwill represents the excess of the purchase price over the fair value of acquired net tangible and identified intangible assets. In accordance with the provisions of SFAS 142, *Goodwill and Other Intangible Assets*, the goodwill acquired in the Valicert acquisition will not be amortized, but instead, the goodwill balance will be tested for impairment at least annually and more frequently if certain impairment conditions exist. Any future impairment loss related to the goodwill recorded in connection with the acquisition of Valicert will not be deductible by Tumbleweed for federal income tax purposes. During the last two quarters of 2003, Tumbleweed reduced its goodwill balance by \$50,000 due to actual expenditures for severances for former Valicert employees and other acquisition-related costs being less than previously estimated.

Pro Forma Results (Unaudited)

The following unaudited pro forma summary presents Tumbleweed's consolidated results of operations for 2003 and 2002 as if the acquisition of Valicert had been consummated at the beginning of the period. The pro forma consolidated results of operations include certain pro forma adjustments, including amortization of intangible assets and amortization of deferred compensation. The pro forma results do not give effect to the deferred revenue adjustment on revenue as the adjustment is directly related to the merger and the effect is non-recurring. Under the purchase method of accounting, Valicert's deferred revenue related to support and maintenance for perpetual license agreements in which payment had been received or was legally due and payable was reduced by \$1.0 million to the fair value of the related support and maintenance obligation as of June 23, 2003. This adjustment has had the effect of reducing the amount of revenue the combined company recognized in the period from June 23, 2003 to December 31, 2003, and will also affect the amount of revenue the combined company will recognize in 2004 compared to the amount of revenue Valicert would have recognized in the same periods absent the merger.

Pro forma results for 2003 and 2002 are as follows (in thousands, except per share amounts):

	<u>2003</u>	<u>2002</u>
Revenues	\$ 36,889	\$ 37,212
Net loss before loss from discontinued operations and cumulative effect of change in accounting principle	\$(13,521)	\$(39,302)
Loss from discontinued operations	—	(1,114)
Cumulative effect of change in accounting principle	—	(974)
Net loss	<u>\$(13,521)</u>	<u>\$(41,390)</u>
Net loss per share before loss from discontinued operations and cumulative effect of change in accounting principle—basic and diluted	\$ (0.33)	\$ (0.97)
Loss from discontinued operations per share—basic and diluted	—	(0.03)
Cumulative effect of change in accounting principle per share—basic and diluted	—	(0.03)
Net loss per share—basic and diluted	<u>\$ (0.33)</u>	<u>\$ (1.03)</u>

The pro forma results are not necessarily indicative of those that would have actually occurred had the acquisition taken place at the beginning of the periods presented. Pro forma results for 2003 include merger-related and other expenses of \$2.9 million.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Merger-related and Other Costs

Merger-related and other costs of \$2.9 million for 2003 consist of \$1.1 million of severance costs for Tumbleweed employees terminated in connection with the Valicert acquisition, \$596,000 of merger-related marketing programs, \$174,000 of other merger-related costs, and a \$996,000 charge related to anticipated losses on an operating lease. The operating lease was assumed during the acquisition of Interface, Inc. in 2000 and covers approximately 13,000 square feet of office space in Slough, United Kingdom. The lease is for a term ending in 2020 with quarterly rent payments of approximately \$65,000. This office space had been subleased to a tenant who was providing Tumbleweed with quarterly rent payments of approximately \$65,000 until the sublease was terminated effective July 2003. Anticipated future sublease rental income is not expected to cover the rent expense due to a weak office rental market in and around Slough. The following table describes merger-related and other expenses recorded in 2003 (in thousands):

	<u>Total charges for 2003</u>	<u>Payments</u>	<u>Accrued balance at December 31, 2003</u>
Severance costs	\$1,143	\$ (911)	\$ 232
Anticipated operating lease losses	996	(203)	793
Merger-related marketing programs	596	(455)	141
Other merger-related costs	174	(174)	—
Total	<u>\$2,909</u>	<u>\$(1,743)</u>	<u>\$1,166</u>

Liabilities for \$141,000 of unpaid merger-related marketing programs are presented on Tumbleweed's consolidated balance sheet as Accrued liabilities at December 31, 2003. Severance costs and payments for merger-related marketing programs accrued at December 31, 2003 will be paid in 2004. Payments for anticipated remaining losses on the operating lease are expected to occur over the life of the lease, which ends in 2020.

(4) Acquired Workforce

In September 2003, Tumbleweed issued 86,538 shares of stock to a company to convert certain former contract engineers to employees in its research and development center in Bulgaria. Since this acquisition was not considered to be an acquisition of a business, Tumbleweed recorded an acquired workforce intangible asset of \$476,000 to recognize the fair value of the stock issued. Tumbleweed will amortize this intangible asset over its estimated useful life of one year. During 2003, Tumbleweed recognized amortization expense of \$139,000 relating to the acquired workforce intangible asset.

(5) Financial Statement Components

A summary of cash and cash equivalents as of December 31, 2003 and 2002 follows (in thousands):

	<u>2003</u>	<u>2002</u>
Cash	\$ 7,848	\$ 4,460
Money market mutual funds	17,503	24,750
Cash and cash equivalents	<u>\$25,351</u>	<u>\$29,210</u>

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

A summary of property and equipment as of December 31, 2003 and 2002 follows (in thousands):

	2003	2002
Office furniture	\$ 1,901	\$ 1,987
Computers and equipment	8,509	7,311
Leasehold improvements	735	735
	11,145	10,033
Less accumulated depreciation	(9,497)	(8,239)
	\$ 1,648	\$ 1,794

A summary of intangible assets as of December 31, 2003 follows (in thousands):

	Amortization period (in years)	Gross carrying amount	Accumulated amortization	Net
Core/developed technology	3	\$2,600	\$(450)	\$2,150
Customer base and reseller agreements	3	1,400	(242)	1,158
Maintenance agreements	3	700	(121)	579
Acquired workforce	1	476	(139)	337
Trademarks and trade names	4	200	(32)	168
		\$5,376	\$(984)	\$4,392

The amounts above exclude intangible assets related to the acquisition of Valicert for Purchase orders (license) and In-process research and development in the amount of \$300,000 and \$100,000, respectively, as these amounts were written off in full in 2003. There were no intangible assets as of December 31, 2002.

The estimated amortization for each of the fiscal years subsequent to December 31, 2003, is as follows (in thousands):

<u>Year Ending December 31,</u>	
2004	\$1,955
2005	1,618
2006	805
	\$4,392

A summary of accrued liabilities as of December 31, 2003 and 2002 follows (in thousands):

	2003	2002
Accrued compensation	\$3,729	\$2,146
Accrued professional fees	946	911
Accrued taxes	640	966
Other	1,476	1,211
	\$6,791	\$5,234

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Other income, net consisted of the following (in thousands):

	Years Ended December 31,		
	2003	2002	2001
Interest income	\$272	\$577	\$1,959
Interest expense	(73)	(11)	(117)
Sale, net of related commissions, of an intellectual property asset acquired in the acquisition of Valicert	527	—	—
Other, net	26	150	282
	\$752	\$716	\$2,124

Allowance for Doubtful Accounts (in thousands):

Description	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
		(a)	(b)	
Allowance for doubtful accounts:				
Year Ended December 31, 2001	\$1,125	2,070	(1,210)	\$1,985
Year Ended December 31, 2002	\$1,985	686	(613)	\$2,058
Year Ended December 31, 2003	\$2,058	286	(581)	\$1,763

(a) Additions relate to bad debt expense

(b) Deductions relate to write-offs of specific accounts receivable, net of recoveries

(6) Restructuring

In January 2001, Tumbleweed's Board of Directors approved a restructuring program. This restructuring program was intended to align Tumbleweed's cost structures with its company-wide focus on customer service, sales, and research and development. The restructuring involved consolidating facilities in the U.S. and closing sales offices in Paris, France; Chatsworth, Australia; and Stockholm, Sweden, realigning the professional services organization, and reducing headcount in most areas of the business. The reduction in force involved approximately 100 employees and total charges incurred as a result of the restructuring were \$4.7 million during 2001, which includes charges related to vacating leased facilities domestically and abroad.

Restructuring charges expensed during 2001 were comprised of the following (in thousands):

Employee separation	\$2,642
Facilities charges and other	2,368
Stock compensation credit, net	(336)
Total restructuring charges	\$4,674

Employee separation for approximately 100 employees included severance pay and medical and other benefits. The restructuring charges were partially offset by a non-cash credit related to previously recorded stock-based compensation on unvested options held by terminated employees. All employee separation costs were paid in 2001. During the quarter ended March 31, 2002, Tumbleweed made lease settlement payments of \$2.3 million on facilities no longer required primarily due to the reduction in headcount. As of December 31, 2003 and 2002, respectively, Tumbleweed had no remaining liabilities relating to the restructuring expenses recorded in 2001.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(7) Goodwill Impairment

During the three months ended March 31, 2001, Tumbleweed performed an impairment assessment of the identifiable intangible assets and goodwill recorded in connection with its acquisition of Interface Systems, Inc. The assessment was performed primarily due to changes in the economy, the overall decline in the industry growth rate, and Tumbleweed's lower actual and projected operating results including that of the business acquired from Interface. Tumbleweed's assessment was supported by the significant sustained decline in its stock price since the valuation date of the shares issued in the Interface acquisition. As a result of the assessment, Tumbleweed recorded a \$51.0 million impairment charge to reduce goodwill and other intangible assets to their estimated fair value. The charge was based upon the estimated discounted cash flows over the remaining useful life of the goodwill and other intangible assets using a discount rate of 15%. The assumptions supporting the cash flows, including the discount rate, were determined using Tumbleweed's best estimates as of March 31, 2001. The remaining intangible assets were amortized in full over their remaining useful life during 2001. The impairment consisted of the following charge (in thousands):

Goodwill	\$49,210
Developed and core technology	1,127
Acquired workforce	<u>646</u>
Total impairment	<u>\$50,983</u>

Tumbleweed adopted the provisions of SFAS 142 on January 1, 2002. In connection with SFAS 142's transitional goodwill impairment evaluation, Tumbleweed assessed whether there was an indication that goodwill recorded in connection with its acquisition of Tumbleweed Communications KK ("TKK"), its majority-owned subsidiary in Japan, was impaired as of the date of adoption. To accomplish this, Tumbleweed determined the carrying value of the reporting unit by assigning assets and liabilities, including the existing goodwill and intangible assets, to the reporting unit as of the date of adoption. As the TKK reporting unit's carrying amount exceeded its fair value, indicating that TKK's goodwill might be impaired, Tumbleweed performed the second step of the transitional impairment test. In the second step, Tumbleweed compared the implied fair value of TKK's goodwill, determined by allocating TKK's fair value to all of its assets (recognized and unrecognized) and liabilities to its carrying amount, both of which were measured as of the date of adoption. A transitional impairment loss of \$974,000 was recognized as the cumulative effect of a change in accounting principle in Tumbleweed's consolidated statement of operations.

During the six months ended June 30, 2002, TKK experienced a sustained decline in operations. As a result, Tumbleweed reevaluated its future prospects in Japan and decided to transition to an indirect sales distribution model in Japan. As of June 30, 2002, Tumbleweed determined that its goodwill was impaired and wrote-off the \$5.7 million remainder of the goodwill balance. During the three months ended September 30, 2002, Tumbleweed began the liquidation of TKK. As a result of the liquidation of TKK, during the three months ended September 30, 2002, Tumbleweed recorded an operating expense of \$377,000 related to the write-off of the remaining net assets of TKK and its eighty percent equity position in TKK. TKK ceased operations in August 2002 and formally declared bankruptcy in December 2002.

(8) Related Party Transactions

Loan to Bernard J. Cassidy

At December 31, 2003, Tumbleweed had a loan outstanding with a combined principal and accrued interest balance of approximately \$51,000 to Mr. Cassidy, Tumbleweed's Vice President, General Counsel, and

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Corporate Secretary. Mr. Cassidy's loan was entered into on April 2, 2001, and is evidenced by a promissory note with the full principal amount and all accrued interest due in four years. The loan was made in order to help retain Mr. Cassidy, and Mr. Cassidy used the loan for purposes other than to purchase Tumbleweed stock. Interest on Mr. Cassidy's loan is at a rate of 7% per annum which Tumbleweed believes to be the market rate at the time of the loan.

Loan to Jeffrey C. Smith

At December 31, 2003, Tumbleweed had a loan outstanding with a combined principal and accrued interest balance of approximately \$30,000 to Mr. Smith, Tumbleweed's Chairman and Chief Executive Officer. Mr. Smith's loan was entered into on June 7, 2001, and is evidenced by a full recourse promissory note with the full principal amount and all accrued interest due in five years. The loan was made in order to help retain Mr. Smith, and Mr. Smith used the loan for purposes other than to purchase Tumbleweed stock. The promissory note is secured by shares of Tumbleweed's common stock and stock options to purchase shares of Tumbleweed's common stock that Tumbleweed issues to Mr. Smith, as well as the proceeds associated with such securities. Interest on Mr. Smith's loan is at a rate of 7% per annum which Tumbleweed believes to be the market rate at the time of the loan. Principal and interest obligations under this loan will be forgiven ratably over a period of five years beginning on the effective date of the loan, unless Mr. Smith's employment with Tumbleweed as an executive officer is terminated for any reason, in which case such ratable loan forgiveness shall terminate.

Loan to Douglas A. Sabella

At December 31, 2002, Tumbleweed had a loan outstanding with a combined principal and accrued interest balance of approximately \$154,000 to Mr. Sabella, Tumbleweed's President and Chief Operating Officer at the time, as well as a member of Tumbleweed's Board of Directors at the time. Mr. Sabella's loan was entered into on September 19, 2001, and was evidenced by a full recourse promissory note with the full principal amount and all accrued interest due in five years. The loan was made in order to help retain Mr. Sabella, and Mr. Sabella used the loan for purposes other than to purchase Tumbleweed stock. The promissory note was secured by shares of Tumbleweed's common stock and stock options to purchase shares of Tumbleweed's common stock that Tumbleweed issued to Mr. Sabella, as well as the proceeds associated with such securities. Interest on Mr. Sabella's loan was at a rate of 7% per annum which Tumbleweed believes to be the market rate at the time of the loan. Principal and interest obligations under this loan were forgiven ratably over a period of five years beginning on the effective date of the loan. Mr. Sabella resigned as a director and as President and Chief Operating Officer as of April 21, 2003. In 2003, after his resignation, Mr. Sabella repaid the remaining loan balance in full. As of December 31, 2003, Tumbleweed had no remaining assets on its balance sheet relating to the loan to Mr. Sabella.

Legal Counsel

Gregory C. Smith, a brother of Jeffrey C. Smith, is a partner of the law firm of Skadden, Arps, Slate, Meagher & Flom LLP ("Skadden Arps"), which began providing legal services to Tumbleweed in July 1998. Total fees paid to Skadden, Arps were approximately \$979,000, \$679,000, and \$496,000 in 2003, 2002, and 2001, respectively, for matters relating to Tumbleweed's intellectual property, Tumbleweed's follow-on public offering, Tumbleweed's acquisition of Valicert, and ongoing general and other litigation matters.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(9) Debt

Debt at December 31, 2003 and 2002 consisted of the following (in thousands):

	<u>December 31,</u>	
	<u>2003</u>	<u>2002</u>
Term loan	\$ 734	\$ —
Equipment loan facilities	—	27
Capital leases	—	6
Total debt	<u>734</u>	<u>33</u>
Less current portion	<u>(267)</u>	<u>(33)</u>
Total long-term portion	<u>\$ 467</u>	<u>\$ —</u>

In July 1998, Tumbleweed entered into a debt agreement with a bank, which includes a \$750,000 equipment loan facility. In June 1999, Tumbleweed obtained a second equipment loan facility in the amount of \$1.0 million with the same bank. The first equipment loan in the amount of \$750,000 expired in December 2001 and the second equipment loan in the amount of \$1.0 million expired in December 2002. Borrowings under both equipment loan facilities bore interest at prime rate plus 0.75%, were due and payable in 36 equal monthly installments and were secured by certain of Tumbleweed's assets. The weighted average interest rate for the equipment loans was 5.48% and 8.21% for 2002 and 2001, respectively. The equipment loan was paid in full in January 2003.

In the acquisition of Valicert, Tumbleweed assumed debt of \$855,000 resulting from equipment leases with two financing companies. During the three months ended September 30, 2003, this debt was refinanced with an \$800,000 loan from the same bank from whom Tumbleweed previously had obtained equipment loan facilities. The new debt bears interest at prime rate plus 0.63%, is due and payable in 36 equal monthly installments, and is secured by certain of Tumbleweed's assets. The weighted average interest rate for the loan was 4.63% for 2003. At December 31, 2003 the loan has aggregate maturities of \$734,000.

Future debt payments for the term loan as of December 31, 2003, are as follows (in thousands):

<u>Year Ending December 31,</u>	
2004	\$ 295
2005	283
2006	204
2007	—
2008	—
Thereafter	<u>—</u>
Future debt payments	782
Less amount representing interest	<u>(48)</u>
Total principal obligations	734
Less current portion	<u>(267)</u>
Long-term portion	<u>\$ 467</u>

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(10) Income Taxes

The amount of income tax expense recorded for 2003, 2002, and 2001 differed from the amounts computed by applying the U.S. federal income tax rate of 35% to pretax income as a result of the following (in thousands):

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Statutory federal income tax benefit	\$(3,205)	\$(7,076)	\$(38,764)
State income tax	—	48	12
Foreign income tax expense	29	6	141
Net operating loss, not utilized	2,585	5,100	18,161
Goodwill amortization and other permanent differences	620	1,976	20,603
Income tax expense	<u>\$ 29</u>	<u>\$ 54</u>	<u>\$ 153</u>

The types of temporary differences that give rise to significant portions of Tumbleweed's deferred tax assets and liabilities as of December 31, 2003 and 2002, respectively, are presented below (in thousands):

	<u>2003</u>	<u>2002</u>
Net operating loss carryforwards	\$ 106,440	\$ 75,615
Tax credit carryforwards	6,919	4,556
Reserves and accruals not currently deductible	4,031	2,179
Deferred research and development costs	907	288
Property and equipment	639	—
Restructuring	—	4
Total deferred tax assets	118,930	82,642
Less: valuation allowance	<u>(117,330)</u>	<u>(82,047)</u>
Net deferred tax assets	1,606	595
Acquired intangibles	(1,606)	—
Property and equipment	<u>(—)</u>	<u>(595)</u>
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

A valuation allowance against Tumbleweed's net deferred tax assets has been established since it can not be concluded that it is more likely than not that deferred tax assets in excess of deferred tax liabilities will be realized. The valuation allowance of \$82,047,000 at December 31, 2002, increased by \$35,283,000 to \$117,330,000 at December 31, 2003. Included in the December 31, 2003 valuation allowance is approximately \$18,213,000 related to the exercise of stock options, which will be credited to stockholders' equity when realized for tax purposes.

In connection with the acquisition of Valicert, deferred tax assets of approximately \$33.5 million were recorded. When recognized, the tax benefits of such deferred tax assets will be applied, first, to reduce to zero any goodwill related to this acquisition; second, to reduce to zero other non-current intangible assets related to this acquisition; and third, to reduce income tax expense.

As of December 31, 2003, Tumbleweed had net operating loss carryforwards for Federal and California income tax purposes of approximately \$287,674,000 and \$97,070,000, respectively, available to reduce future income subject to income taxes. The federal net operating loss carryforwards will expire in the years 2007 through 2023 and the California net operating loss carryforwards expire in the years 2004 through 2013.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

As of December 31, 2003, Tumbleweed also had research and development tax credit carryforwards for Federal and California income tax return purposes of approximately \$4,423,000 and \$3,594,000, respectively, available to reduce future income taxes. Tumbleweed also has California Manufacturing Credit carryforwards of \$246,000. The Federal research and development tax credit will expire in years 2007 through 2023. The California research and development tax credit carries forward indefinitely.

Tumbleweed's ability to utilize the net operating losses and tax credit carryforwards in the future may be subject to substantial restriction in the event of past or future ownership changes as defined in Section 382 of the Internal Revenue Code and similar state tax law.

(11) Stockholders' Equity

Under Tumbleweed's certificate of incorporation, Tumbleweed is authorized to issue 100,000,000 shares of common stock, each with a par value of \$0.001. As of December 31, 2003 and 2002, respectively, Tumbleweed has 42,401,260 and 30,481,987 shares issued and outstanding. Tumbleweed is also authorized to issue 10,000,000 shares of preferred stock, each with a par value of \$0.001. Tumbleweed has zero preferred shares issued and outstanding as of December 31, 2003 and 2002, respectively.

1993 Stock Option Plan

On September 30, 1993, Tumbleweed adopted the 1993 Stock Option Plan ("the Plan"). In 1999, Tumbleweed's Board of Directors approved an amendment to the plan to increase the number of shares authorized for issuance by 650,000 shares to a total of 3,768,500 authorized shares. In August 1999, Tumbleweed ceased granting further options under the Plan. Under the Plan, the exercise price for incentive options is at least 100% of the fair market value on the date of grant. The exercise price for nonqualified stock options is at least 85% of the fair market value on the date of grant. Options generally expire in 10 years. Vesting periods are determined by the Board of Directors and generally provide for 25% of the options to vest on the first anniversary date of the grant with the remaining options vesting monthly over the following 36 months.

1999 Omnibus Stock Incentive Plan

The 1999 Omnibus Stock Incentive Plan ("the Incentive Plan") was approved by stockholders on August 3, 1999, for the benefit of Tumbleweed's officers, directors, key employees, advisors and consultants. An aggregate of 8,882,858 shares of common stock is reserved for issuance under the Incentive Plan, which provides for the issuance of stock-based incentive awards, including stock options, stock appreciation rights, limited stock appreciation rights, restricted stock, deferred stock, and performance shares. The Incentive Plan provides for an automatic annual increase in the number of stock options available for grant of 5% of the number of Tumbleweed's shares that are issued and outstanding.

1999 Employee Stock Purchase Plan

The 1999 Employee Stock Purchase Plan ("the Purchase Plan") was approved by stockholders on August 3, 1999, which allows eligible employees to purchase common stock at a discount from fair market value. A total of 500,000 shares of common stock has been reserved for issuance under the Purchase Plan for each fiscal year occurring during the term of the Purchase Plan, which will terminate in 2009. Tumbleweed suspended the Purchase Plan in 2002.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

2000 NSO Incentive Stock Plan

The 2000 NSO Incentive Stock Plan (“the NSO Incentive Plan”) was adopted by Tumbleweed’s Board of Directors on July 10, 2000. The NSO Incentive Plan qualifies as a “broadly based” plan and is for the benefit of Tumbleweed’s officers, directors, employees, advisors, and consultants. It provides for the issuance of stock-based incentive awards, including stock options, stock appreciation rights, restricted stock, deferred stock, and performance shares or any combination of such. The options granted under the NSO Incentive Plan are not intended to qualify as “incentive stock options” within the meaning of Section 422 of the Internal Revenue Code of 1986. An aggregate of 4,181,500 shares of common stock are reserved for issuance under the NSO Incentive Plan, which will terminate on July 10, 2010.

Under the terms of the NSO Incentive Plan, the exercise price for stock options is determined by the Board of Directors, Compensation Committee, or Administrator (“Administrator”), generally 100% of the fair market value on the date of grant. The option term is determined by the Administrator, generally no longer than 10 years. Vesting periods are determined by the Administrator and generally provide for 25% of the options to vest on the first anniversary date of the grant with the remaining options vesting monthly over the following 36 months.

Interface Stock Option Plans

On September 1, 2000, Tumbleweed assumed the Interface 1992 Stock Option Plan (“1992 Plan”) and 1993 Stock Option Plan for Non-Employee Directors (“Directors Plan”). The 1992 Plan provided for the grant of both incentive stock options and non-qualified options to officers and key employees at not less than market price on the date of grant as determined by the Board of Directors. Under the 1992 Plan, options generally vest at the rate of 33% per year after one year from the date of grant and have a term of ten years. The Directors Plan provided for the grant to non-employee directors of non-qualified options at market price on the date of grant. The Directors Plan provides for discretionary grants with vesting determined at the time of grant with a term of ten years. A total of 236,000 shares of Tumbleweed’s common stock were reserved for issuance upon the exercise of stock options assumed in connection with the acquisition of Interface. Tumbleweed registered an additional 304,023 shares for issuance from the 1992 Plan, that was used to grant options to Interface employees at the time of the merger and who remain employed by Tumbleweed. The Directors Plan was terminated upon its assumption by Tumbleweed, and no further options will be granted under it.

Valicert Stock Option Plans

On June 23, 2003, Tumbleweed assumed the Valicert 1998 Stock Option Plan, the 2001 Non-Statutory Stock Plan, 1996 Equity Incentive Plan, and Receipt.com Plan. These stock plans provide for the grant of options and restricted stock to employees, consultants and directors. Incentive stock options are granted at fair market value on the date of grant. Non-statutory options may be offered at not less than 85% of the fair market value on the date of the grant. Options generally vest between three and over four years, are immediately exercisable and have a maximum term of 10 years. The number of stock options available for grant will automatically increase on the first day of each fiscal year by an amount equal to 5% of the common stock outstanding on the last day of the preceding year, or a lesser number of shares determined by the Board of Directors through 2008. An aggregate of 3,495,575 shares of common stock is reserved for issuance under the Valicert stock option plans.

Valicert stock option plans assumed by Tumbleweed were amended to conform with Tumbleweed stock option plans. This provides Tumbleweed with the flexibility to issue additional options as needed and promotes uniformity in new options issued to ex-Valicert and Tumbleweed employees. Specifically, the 2001 Non-Statutory Stock Plan, 1998 Stock Plan and 1996 Equity Incentive Plan, were amended, including the forms of option agreements under each such plan, to conform the terms and conditions applicable to options granted under

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

such plans to the terms and conditions applicable to options granted under Tumbleweed's 1999 Omnibus Incentive Plan, including the form of option agreement under such plan.

In addition to conforming the terms of the Valicert stock option plans assumed by Tumbleweed to Tumbleweed's stock option plan, the 1998 Stock Plan was further amended prior to the closing of the merger to provide the following:

- the number of shares of Valicert common stock available for grant under the 1998 Stock Plan immediately following the close of the merger was no less than 1.5 million shares of Valicert common stock; and
- the provision of the 1998 Stock Plan that provides for a 5% annual increase in the number of stock options available for grant under such plan shall be calculated as a percentage of the number of Tumbleweed shares issued and outstanding rather than the number of Valicert shares issued and outstanding.

A summary of all of Tumbleweed's stock option activity follows:

	Options Available for Grant	Options Outstanding	Weighted Average Exercise Price
Balances, December 31, 2000	626,595	7,242,963	\$25.01
Authorized	4,450,000	—	—
Granted	(6,895,088)	6,895,088	2.19
Exercised	—	(788,869)	0.84
Canceled	4,451,450	(4,451,450)	22.61
Expired	(67,317)	—	—
Balances, December 31, 2001	2,565,640	8,897,732	10.94
Authorized	1,527,259	—	—
Granted	(5,013,450)	5,013,450	1.61
Exercised	—	(446,074)	0.92
Canceled	3,628,603	(3,628,603)	14.56
Expired	(534,265)	—	—
Balances, December 31, 2002	2,173,787	9,836,505	5.30
Authorized	4,703,120	—	—
Granted	(5,677,965)	5,677,965	2.55
Exercised	—	(2,126,788)	2.11
Canceled	2,143,498	(2,143,498)	6.57
Expired	(10,938)	—	—
Balances, December 31, 2003	<u>3,331,502</u>	<u>11,244,184</u>	<u>\$ 4.75</u>

Options granted during 2003 include 2,668,310 options assumed during the Valicert acquisition.

During 2003, 2002, and 2001 Tumbleweed granted 5,677,965, 5,013,450, and 6,895,088 stock options, respectively, with weighted average fair values of \$2.34, \$1.33, and \$2.24 per share, respectively.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The following table summarizes information about stock options outstanding as of December 31, 2003:

<u>Exercise Prices</u>	<u>Number Outstanding</u>	<u>Weighted Average Exercise Price</u>	<u>Average Remaining Contractual Life (Years)</u>	<u>Number Exercisable</u>	<u>Weighted Average Exercise Price</u>
\$ 0.39– 0.75	272,737	\$ 0.69	8.1	192,778	\$ 0.67
0.77– 1.35	2,799,196	1.01	8.8	689,547	1.01
1.39– 2.99	4,430,667	2.35	9.0	880,743	2.23
3.03– 3.25	863,146	3.14	7.3	536,564	3.14
3.31– 3.76	1,158,576	3.49	7.9	556,724	3.53
3.86–25.32	1,345,089	11.97	7.0	988,032	13.12
30.77–38.56	283,955	32.27	6.3	261,389	32.28
42.63–56.63	40,818	47.70	6.5	36,291	47.50
118.44	<u>50,000</u>	<u>118.44</u>	<u>6.2</u>	<u>49,156</u>	<u>118.44</u>
\$ 0.39–118.44	<u>11,244,184</u>	<u>\$ 4.75</u>	<u>8.4</u>	<u>4,191,224</u>	<u>\$ 8.44</u>

Warrants

In conjunction with various financing arrangements and employment recruitment services provided to Tumbleweed in 2001 and prior years, Tumbleweed issued warrants to purchase an aggregate of approximately 583,113 shares of common stock. Additional warrants to purchase an aggregate of 289,789 shares of common stock were assumed in 2003 as a result of the merger with Valicert. As of December 31, 2003 and 2002, 734,977 and 526,613 warrants to purchase common stock remain outstanding, respectively. Of the warrants that remain outstanding at December 31, 2003, 77,000 expire in June 2004 with an exercise price of \$7.58; 11,858 expire in December 2004 with an exercise price of \$2.53; 855 expire in April 2005 with an exercise price of \$46.75; 433,330 expire in July 2006 with an exercise price of \$26.93; 139,089 expire in November 2006 with an exercise price of \$9.08; 3,830 expire in January 2007 with an exercise price of \$15.66; 21,129 expire in April 2008 with an exercise price of \$4.91; 10,266 expire in April 2008 with an exercise price of \$5.84; 2,566 expire in February 2010 with an exercise price of \$49.09; 1,283 expire in April 2010 with an exercise price of \$49.09; and the remaining 33,771 expire in June 2011 with an exercise price of \$6.66.

Stock Repurchase Program

In August 2002, Tumbleweed's Board of Directors approved a program to repurchase up to \$10.0 million of its common stock. During the year ended December 31, 2002, Tumbleweed repurchased 717,500 shares of its common stock for \$796,000. Tumbleweed did not repurchase any shares of its common stock during 2003. The repurchase program was terminated in August 2003.

(12) Employee Benefit Plan

Tumbleweed has a 401(k) plan that allows eligible employees to contribute a percentage of their compensation, limited to \$12,000 (\$14,000 for employees over age 50), \$11,000, and \$10,500 in 2003, 2002, and 2001, respectively. On April 1, 2000, Tumbleweed began matching each eligible employee's contribution 100% up to 4% of the employee's salary. Tumbleweed's matching contributions and earnings thereon vested immediately. In April 2002, Tumbleweed discontinued its matching contributions. Tumbleweed's matching contributions to employees' 401(k) plans totaled approximately \$0, \$0, and \$649,000 for 2003, 2002, and 2001, respectively.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(13) Commitments and Contingencies

(a) Lease Commitments

Tumbleweed leases its facilities and certain equipment under operating lease agreements. The facilities leases expire at various dates through 2020. In June 1999, Tumbleweed entered into an operating lease covering approximately 40,000 square feet of office space in Redwood City, California that was scheduled to expire in November 2004. During the three months ended September 30, 2003, Tumbleweed renewed this lease in advance of the scheduled termination date at a lower monthly rent cost in exchange for an extension of the lease term. The renewed lease expires in July 2008 with current monthly rent payments of approximately \$73,000. In September 2000, Tumbleweed leased an additional 42,000 square feet in an adjacent building with a term of five years and subleased this space. Tumbleweed terminated this second lease as of December 31, 2001 and made a lease settlement payment of \$2.3 million, using lease deposits, in the first quarter of 2002 as a part of the lease termination agreement.

As a result of the Interface acquisition, Tumbleweed assumed an operating lease in Slough, United Kingdom. The lease is for a term ending in 2020 with current quarterly rent payments of approximately \$65,000. This office space had been subleased to a tenant who was providing Tumbleweed with quarterly rent payments of approximately \$65,000 until the sublease was terminated effective July 2003. Anticipated future sublease rental income is not expected to cover the rent expense due to a weak office rental market in and around Slough. In 2003, Tumbleweed recognized a charge of \$996,000 related to potential losses on this lease that was included in the consolidated statement of operations as Merger-related and other costs. Tumbleweed is currently attempting to find a new sublessee.

Tumbleweed has an operating lease covering approximately 8,000 square feet in New York, New York with a lease term expiring in 2005 with current monthly rent payments of \$28,000. In February 2004, Tumbleweed entered into an agreement to sublease a portion of the space in New York beginning in March 2004 for the remainder of the lease term.

Future minimum lease payments for operating leases as of December 31, 2003, are as follows (in thousands):

<u>Year Ending December 31,</u>	<u>Operating Leases</u>
2004	\$1,591
2005	984
2006	895
2007	917
2008	931
Thereafter	<u>3,120</u>
Future minimum lease payments	<u>\$8,438</u>

The amounts above will be offset by sublease payments of \$104,000 in 2004.

Total rent expense under operating leases for 2003, 2002, and 2001, was \$1.8 million, \$3.0 million, and \$3.4 million, respectively.

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

(b) Contingencies

In July 2000, three complaints were filed by David H. Zimmer, Congressional Securities, Inc. and others against Interface Systems, Inc. (a company Tumbleweed acquired in 2000) and various additional defendants, including Interface's prior president and chief executive officer, Robert A. Nero. Plaintiff's most recent complaint sought compensatory damages for losses resulting from not selling their Interface stock from March 14, 2000 to the end of March 2000 and for losses from purchases of Interface stock from March 14, 2000 through April 12, 2000. In March 2003, the court dismissed all claims against Interface and dismissed all claims against Mr. Nero, except a breach of fiduciary duty claim to the extent that claim arises from Michigan common law. In April 2003, Mr. Nero filed an answer and a counterclaim against Mr. Zimmer and Congressional Securities, Inc. seeking contribution and indemnity. The parties remaining in this case agreed to settle the matter, and the Court dismissed the case with prejudice in February 2004.

In December 2001, certain plaintiffs filed a class action lawsuit in the United States District Court for the Southern District of New York on behalf of purchasers of the common stock of Valicert, Inc. (a company Tumbleweed acquired in June 2003), alleging violations of federal securities laws. *In re Valicert, Inc. Initial Public Offering Securities Litigation*, No. 01-CV-10889 (SAS) (S.D.N.Y.), related to *In re Initial Public Offering Securities Litigation*, No. 21 MC 92 (SAS). The operative amended complaint is brought on purported behalf of all persons who purchased Valicert common stock from the date of its July 27, 2000 initial public offering through December 6, 2000. It names as defendants Valicert, its former chief executive officer, its chief financial officer (the "Valicert Defendants"), as well as an investment banking firm that served as an underwriter for the IPO. The complaint alleges liability under Sections 11 and 15 of the Securities Act of 1933 and Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, on the grounds that the registration statement for the IPO did not disclose that: (1) the underwriter agreed to allow certain customers to purchase shares in the IPO in exchange for excess commissions to be paid to the underwriter; and (2) the underwriter arranged for certain customers to purchase additional shares in the aftermarket at predetermined prices. The complaint also appears to allege that false or misleading analyst reports were issued. The complaint does not claim any specific amount of damages. Similar allegations have been made in lawsuits relating to more than 300 other initial public offerings conducted in 1999 and 2000, all of which have been consolidated for pretrial purposes. In February 2003, the Court issued a ruling on all defendants' motions to dismiss, denying Valicert's motion to dismiss the claims under the Securities Act of 1933, but granting Valicert's motion to dismiss the claims under the Securities Exchange Act of 1934.

In June 2003, Valicert accepted a settlement proposal presented to all issuer defendants in this case. Under the proposed settlement, the plaintiffs will dismiss and release all claims against the Valicert Defendants in exchange for a contingent payment guaranty by the insurance companies collectively responsible for insuring the issuers in all the consolidated cases, and the assignment or surrender of control to the plaintiffs of certain claims the issuer defendants may have against the underwriters. Under the guaranty, the insurers will be required to pay the amount, if any, by which \$1 billion exceeds the aggregate amount ultimately collected by the plaintiffs from the underwriter defendants in all of the cases. If the plaintiffs fail to recover \$1 billion and payment is required under the guaranty, Valicert would be responsible to pay its pro rata portion of the shortfall, up to the amount of the deductible retention under its insurance policy, which is \$500,000. The timing and amount of payments that Valicert could be required to make under the proposed settlement will depend on several factors, principally the timing and amount of any payment required by the insurers pursuant to the \$1 billion guaranty. The proposed settlement is subject to approval of the Court, which cannot be assured. The accompanying consolidated financial statements do not include a reserve for any potential loss, as Tumbleweed does not consider a loss to be probable at this time.

In September 2002, Tumbleweed received a letter from Entrust, Inc. indicating that it may be interested in licensing the technology covered by U.S. Patent No. 6,393,568, Encryption and Decryption System and Method

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

with Content Analysis Provision, issued to Entrust. In October 2002, Tumbleweed sent a letter to Entrust indicating that Entrust may be interested in licensing the technology covered by four patents issued to Tumbleweed. In February 2003, Tumbleweed received a letter from Entrust indicating that Tumbleweed may have an interest in three additional patents issued to Entrust. In April 2003, Tumbleweed filed with the U.S. Patent and Trademark Office a request for interference with Entrust's Patent No. 6,393,568. In January 2004, Entrust and Tumbleweed entered into a cross license agreement covering the aforementioned patents and selected others, as well as patents issuing from certain patent applications that have been filed or that may be filed by either company over the next three years. As part of the agreement, the companies resolved the patent interference proceeding, and Entrust assigned to Tumbleweed U.S. Patent No. 6,393,568 in return for a financial consideration.

In June 2003, Tumbleweed was served with a summons and first amended complaint, captioned *Liu v. Credit Suisse First Boston, et alia*, alleging the violation of federal and state securities laws, purportedly on behalf of persons who acquired the common stock of Tumbleweed (other than purchasers of Tumbleweed's initial public offering) from August 6, 1999 to October 18, 2000. The case is now pending in the United States District Court for the Southern District of New York, where the Court held a status conference in September 2003. At the status conference, Tumbleweed pointed out, and plaintiffs' counsel conceded, that the named plaintiffs lacked standing to pursue the action because they had not purchased any shares of any of the issuer defendants then in the case. In October 2003, plaintiffs filed a motion for leave to file a second amended complaint, which Tumbleweed has opposed. An adverse outcome could harm Tumbleweed's business and operating results. Moreover, the costs in defending this lawsuit could harm future operating results. The accompanying consolidated financial statements do not include a reserve for any potential loss, as Tumbleweed does not consider a loss to be probable at this time.

All costs incurred as a result of these legal proceedings and claims are charged to expense as incurred.

Tumbleweed indemnifies its customers from third party claims of intellectual property infringement relating to the use of its products. Historically, costs related to these guarantees have not been significant and Tumbleweed is unable to estimate the potential impact of these guarantees on its future results of operations.

(14) Comprehensive Loss

Comprehensive loss includes Tumbleweed's net loss as well as foreign currency translation adjustments, recorded net of tax. Comprehensive loss for 2003, 2002, and 2001, respectively, is as follows (in thousands):

	Years Ended December 31,		
	2003	2002	2001
Net loss	\$(9,187)	\$(20,866)	\$(114,165)
Other comprehensive gain (loss)—translation adjustments	91	(91)	(524)
Comprehensive loss	\$(9,096)	\$(20,957)	\$(114,689)

(15) Segment Information

As defined by SFAS 131, *Disclosure About Segments of an Enterprise and Related Information*, Tumbleweed's chief operating decision-makers are its Chief Executive Officer and its Chief Operating Officer. These officers review financial information presented on a consolidated basis accompanied by disaggregated information about revenue by geographic region for purposes of making operating decisions and assessing

TUMBLEWEED COMMUNICATIONS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

financial performance. The consolidated financial information reviewed is the information presented in the accompanying consolidated statement of operations. Tumbleweed operates in a single reporting segment as its three operating segments, based on geographic regions, have similar economic characteristics.

Revenue information regarding operations in the different geographic regions is as follows (in thousands):

	<u>Years Ended December 31,</u>		
	<u>2003</u>	<u>2002</u>	<u>2001</u>
North America	\$29,080	\$23,490	\$22,099
Europe	670	1,631	4,379
Asia and Australia	845	404	2,570
Total revenue	<u>\$30,595</u>	<u>\$25,525</u>	<u>\$29,048</u>

Substantially all of Tumbleweed's long-lived assets are located in the United States.

Item 9—Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

Not applicable.

Item 9A—Controls and Procedures.

(a) Evaluation of disclosure controls and procedures.

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-14(c) and 15(d)-14(c) under the Securities Exchange Act of 1934, as amended) as of December 31, 2003, and, based on that evaluation, our chief executive officer and chief financial officer concluded that, as of December 31, 2003, our disclosure controls and procedures are effective in recording, processing, summarizing and reporting, on a timely basis, information required to be disclosed by us in the reports we file under the Exchange Act.

(b) Changes in internal controls.

There have not been any changes in our internal control over financial reporting (as such term is defined in Rules 13d-15(f) and 15(d)-15(f) under the Exchange Act) during the fourth quarter of 2003 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART III

Item 10—Directors and Executive Officers.

The information required by this item, insofar as it relates to our directors, will be contained under the captions “Election of Directors” and “Section 16 Beneficial Ownership Reporting Compliance” in the Proxy Statement and is incorporated herein by reference. The information relating to our executive officers is contained in Part I under the heading “Our Executive Officers.” We have adopted a Code of Conduct, which applies to all employees, officers and directors, including the Company’s Chief Executive Officer, Chief Financial Officer, Corporate Controller, and other finance organization employees. The Code of Conduct is available on our website at www.tumbleweed.com under the caption “Corporate Governance” on the Investor Relations page. A copy of the Code of Conduct will be provided, without charge, to any stockholder who requests one by written request addressed to:

Tumbleweed Communications Corp.
700 Saginaw Drive, Redwood City, CA 94063
Attention: Corporate Secretary.

If any substantive amendments to the Code of Conduct are made or any waivers are granted thereunder, including any implicit waiver, our Chief Executive Officer, Chief Financial Officer or other authorized officer will disclose the nature of such amendment or waiver on our website at www.tumbleweed.com or in a report on Form 8-K.

Item 11—Executive Compensation.

The information required by this item will be contained in the Proxy Statement under the caption “Executive Compensation” and is incorporated herein by reference.

Item 12—Security Ownership of Certain Beneficial Owners and Management.

The information required by this item will be contained in the Proxy Statement under the caption “Security Ownership of Certain Beneficial Owners and Management” and is incorporated herein by reference.

Item 13—Certain Relationships and Related Transactions.

The information required by this item will be contained in the Proxy Statement under the caption “Certain Transactions” and is incorporated herein by reference.

Item 14—Principal Accountant Fees and Services.

The information required by this item will be contained in the Proxy Statement under the caption “Principal Accountant Fees and Services” and is incorporated herein by reference.

PART IV

Item 15—Exhibits, Financial Statement Schedules and Reports on Form 8-K.

(a) Documents filed as a part of this Form 10-K:

(1) Financial Statements:

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Report of Independent Auditors	44
Consolidated Balance Sheets	45
Consolidated Statements of Operations	46
Consolidated Statements of Stockholders' Equity and Comprehensive Loss	47
Consolidated Statements of Cash Flows	48
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(2) Financial Statement Schedules:

Financial statement schedules are omitted because they are not applicable or are not required or the information required to be set forth therein is included in the Financial Statements or Notes thereto.

(b) Reports on Form 8-K:

No reports on Form 8-K were filed by the registrant during the fiscal quarter ended December 31, 2003.

(c) Exhibits:

The following exhibits are filed as part of, or incorporated by reference into, this Form 10-K.

<u>Exhibit Number</u>	<u>Exhibit Description</u>
2.3(1)	Agreement and Plan of Reorganization and Merger by and among Tumbleweed Communications Corp., Velocity Acquisition Sub, Inc. and Valicert, Inc., dated February 18, 2003.
3.1(2)	Amended and Restated Certificate of Incorporation of Registrant
3.2(2)	Amended and Restated Bylaws of Registrant
4.1(2)	Specimen common stock certificate
4.3(2)	Warrant to Purchase Stock, dated November 30, 1998, issued to Silicon Valley Bank
10.1(3)	1993 Stock Option Plan
10.2(4)	1999 Omnibus Stock Incentive Plan, as amended
10.3(3)	1999 Employee Stock Purchase Plan
10.4(6)	2000 NSO Incentive Stock Plan, as amended
10.8(3)	Form of Indemnity Agreement
21.1	Subsidiaries of the Registrant
23.1	Consent of KPMG LLP
31.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

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- (1) Previously filed in Tumbleweed's Joint Proxy Statement/Prospectus on Form S-4, filed March 17, 2003, and incorporated herein by reference.
 - (2) Previously filed in Tumbleweed's Registration Statement on Form S-1 (File No. 79687), as amended and incorporated herein by reference.
 - (3) Previously filed in Tumbleweed's Registration Statement on Form S-4 (File No. 333-92589), as amended and incorporated herein by reference.
 - (4) Previously filed in Tumbleweed's Registration Statement on Form S-1 (File No. 333-41188).
 - (5) Previously filed in Tumbleweed's Annual Report on Form 10-K, filed March 30, 2001, and incorporated herein by reference.
 - (6) Previously filed in Tumbleweed's Quarterly Report on Form 10-Q, filed May 15, 2001, and incorporated herein by reference.
 - (7) Previously filed in Tumbleweed's Annual Report on Form 10-K, filed March 29, 2002, and incorporated herein by reference.
 - (8) Previously filed in Tumbleweed's Annual Report on Form 10-K, filed March 20, 2003, and incorporated herein by reference.

