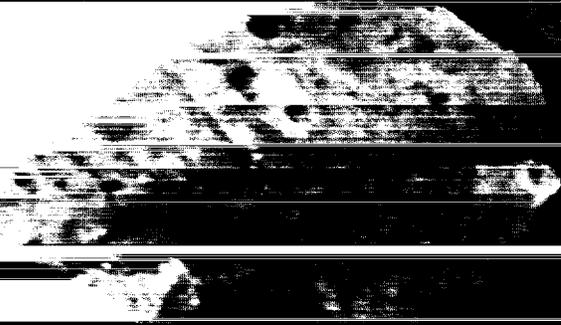


PE  
12-31-03

APR 26 2004

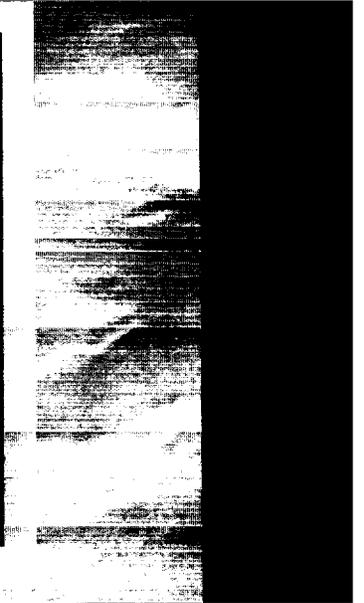
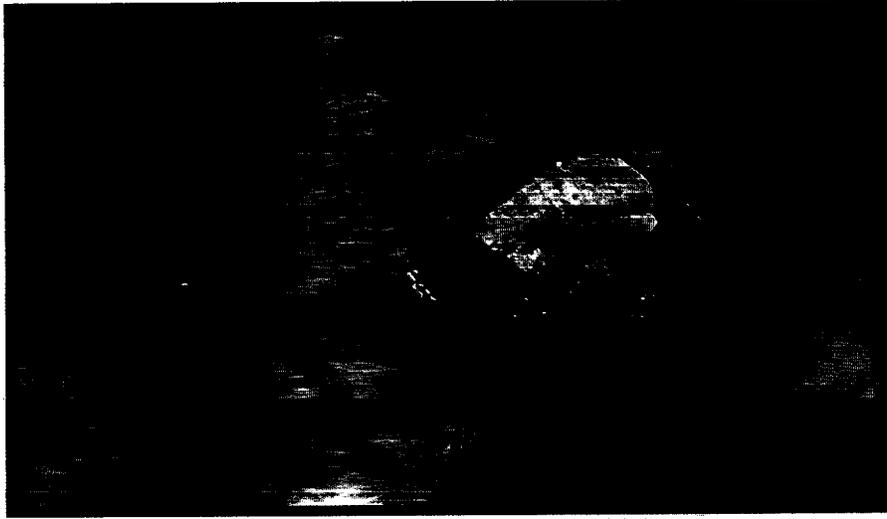
ARLS



PROCESSED  
APR 27 2004  
THOMSON  
FINANCIAL



Reality.



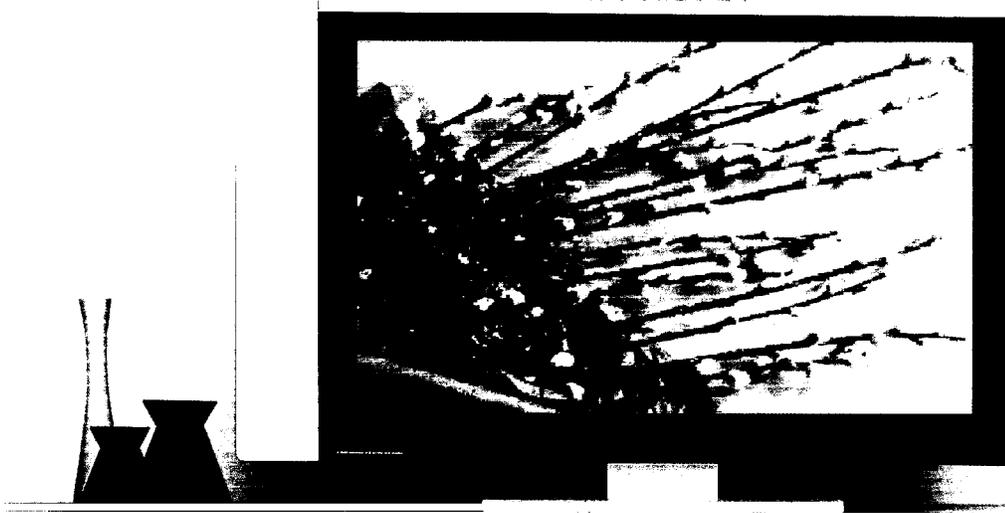
IV.



## Pixelworks 2003

Pixelworks is a leading provider of system-on-chip ICs for the advanced display industry including advanced television, multimedia projectors and flat panel monitors. Pixelworks' solutions provide the intelligence for these new types of displays by processing and optimizing video and computer graphic signals to produce high quality images. Many of the world's leading manufacturers of consumer electronics and computer display products utilize our technology to enhance image quality and ease of use of their products.

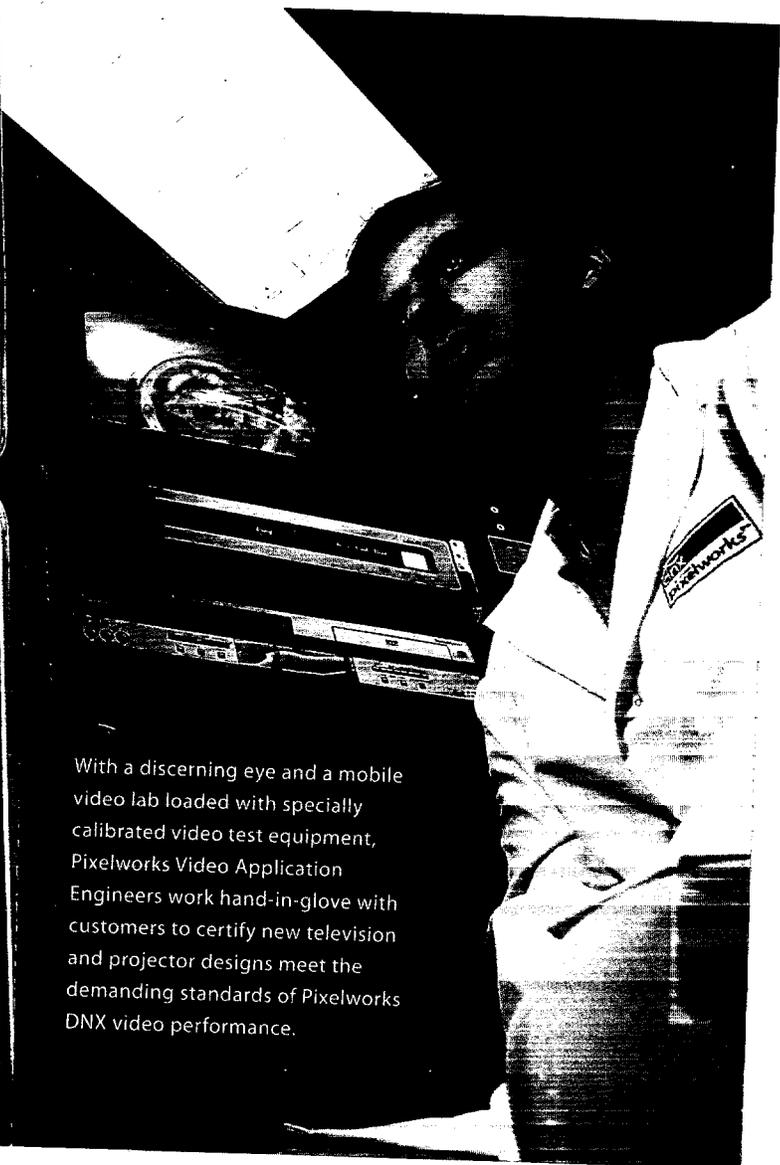
Developing the video technology to reproduce realistic images is ambitious, to say the least. In the real world the sky sets the screen boundaries. Resolution is infinite. Color palettes are unlimited. Visual artifacts don't exist. At Pixelworks, we're leading the charge to take video performance into the high definition future by mirroring reality to deliver the most lifelike images video processing technology will allow. We call it DNX™ – Digital Natural Expression technology. You'll call it reality television.



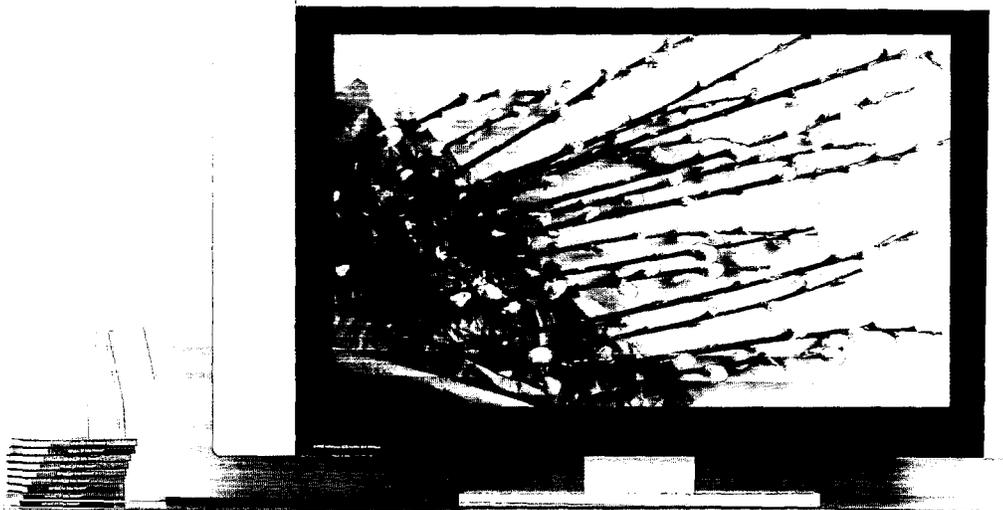
without DNX



The right angle



With a discerning eye and a mobile video lab loaded with specially calibrated video test equipment, Pixelworks Video Application Engineers work hand-in-glove with customers to certify new television and projector designs meet the demanding standards of Pixelworks DNX video performance.



with DNX

### Smoothing low-angle images

Diagonal lines – particularly low angled diagonal lines – bring out the worst in the pixelated displays used in projectors, plasma screens, and LCD TVs. That's because diagonal lines emphasize the pixel matrix used in these advanced displays. The result: jaggies. Those annoying stair-stepped lines

that show up when pixels aren't perfectly put in their place.

Our DNX technology uses a low-angle interpolation technique designed to eliminate jaggies by smoothing angled lines wherever they appear on screen. By assessing multiple video lines and

pixel patterns to identify angles and applying smoothing algorithms, Pixelworks DNX video processing keeps angled lines on the straight and narrow. And that brings out the best in any display that's powered by DNX technology.

www.samsung.com



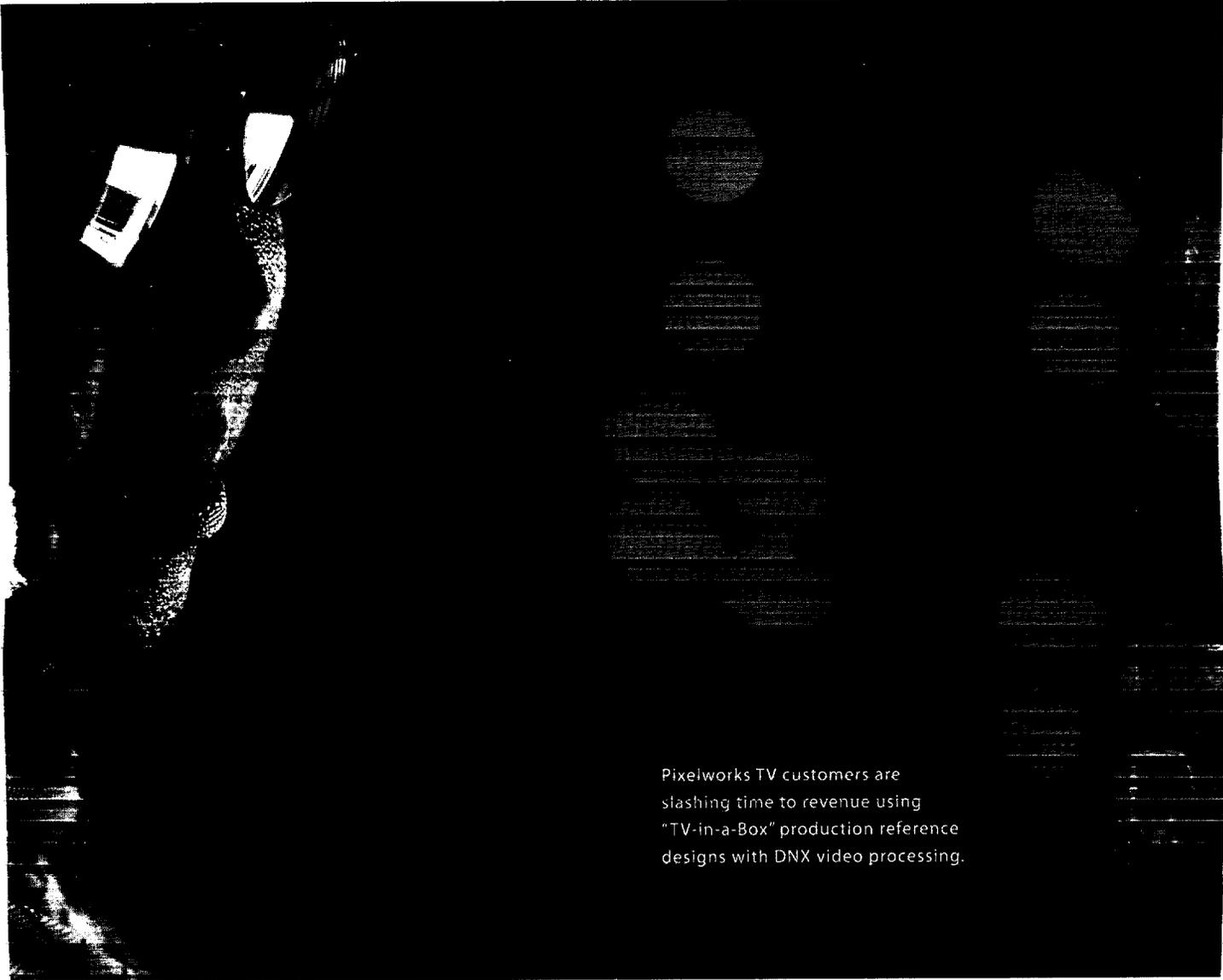
8-bit = 256 color steps

[ 256 x 256 x 256 = 16.8 million ]

10-bit = 1,024 color steps

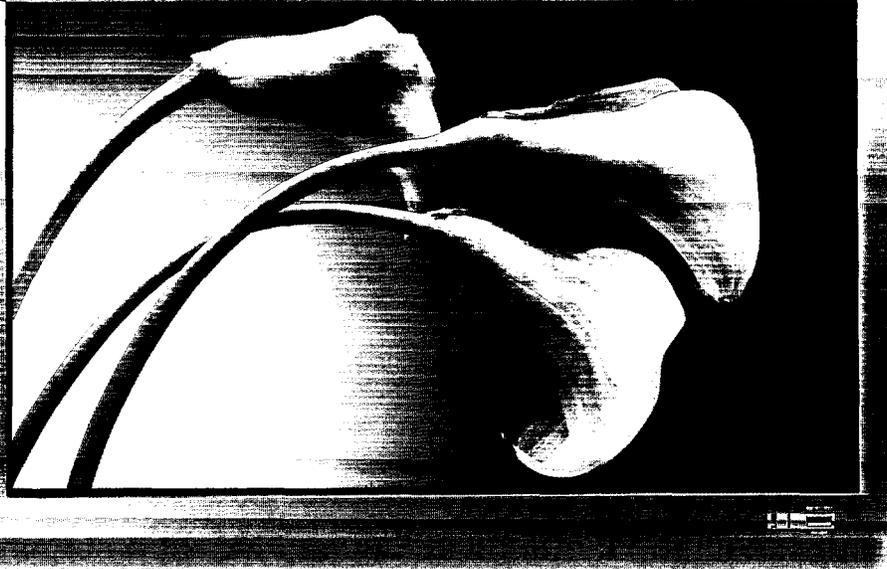
[ 1,024 x 1,024 x 1,024 = 1.07 billion ]

A refined palette



Pixelworks TV customers are  
slashing time to revenue using  
"TV-in-a-Box" production reference  
designs with DNX video processing.

Multiple Plasma TV



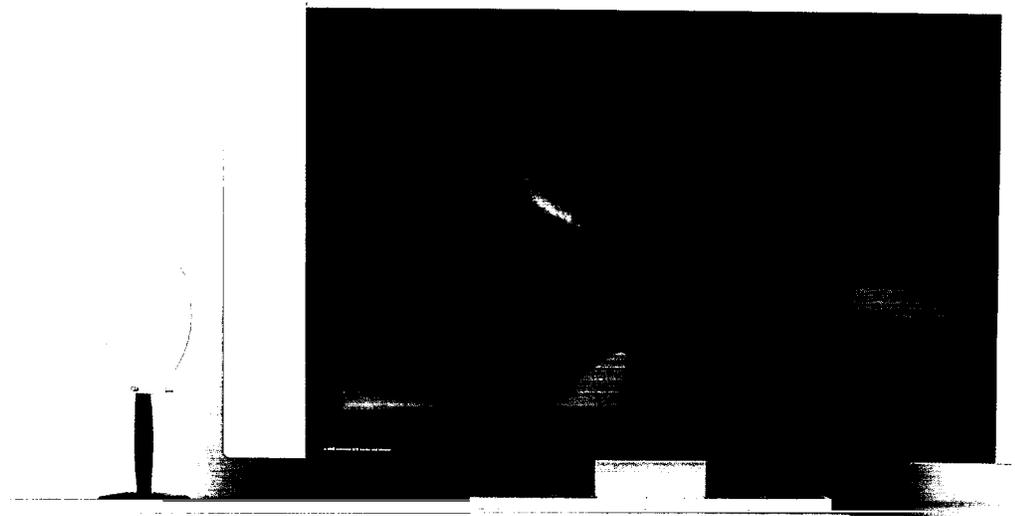
### One billion colors

A new generation of LCD and plasma displays uses 10-bit drivers. These new displays are capable of displaying video using colossal color palettes containing one billion colors. Compare that to the 16.9 million color palettes used in older LCD panels video systems. Matching Pixelworks' chips in a 10-bit video processing path

to the characteristics of 10-bit displays provides a dramatic improvement in image quality.

The reason: 10-bit processing increases the accuracy of internal processing. With 10-bit sampling per color pixel – instead of the usual 8-bits – transitions from black to gray are smoothed. The number of gray shades increases,

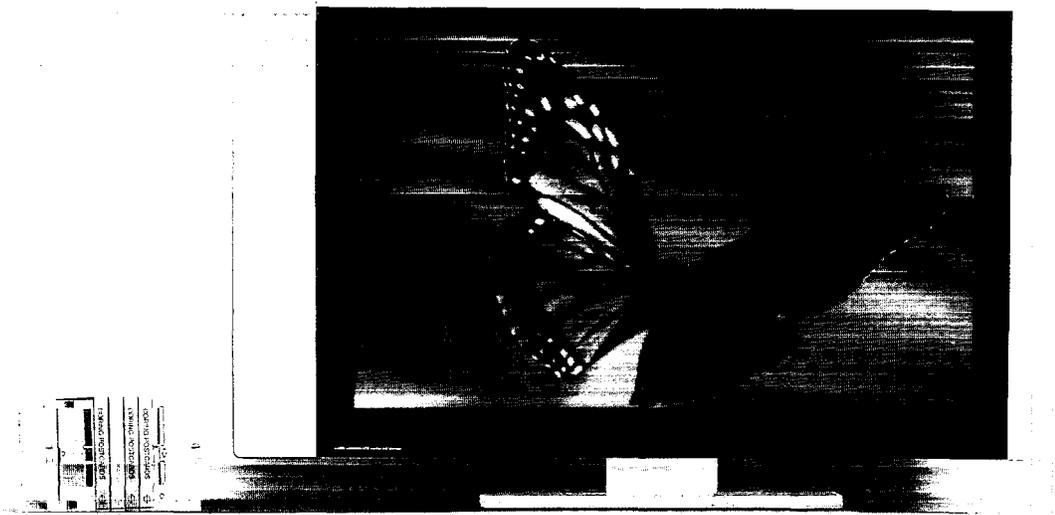
producing smooth color sweeps and highly detailed, richly saturated color images. False contours or bands of color where there should be smooth gradients are eliminated. And life is just a bit more refined.



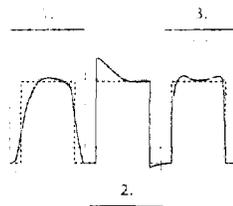
The need for speed



Leadership demands  
covering every segment  
of the market from high  
feature to high volume.  
Pixelworks is keeping pace  
with the rapidly growing  
advanced display market  
using automated testing  
and stringent quality  
control standards.



PixelBoost:  
 1. LCD response  
 2. DNX Pixelboost compensated signal  
 3. Resulting LCD response



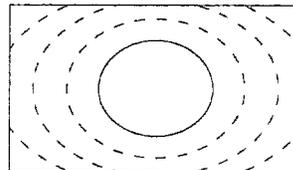
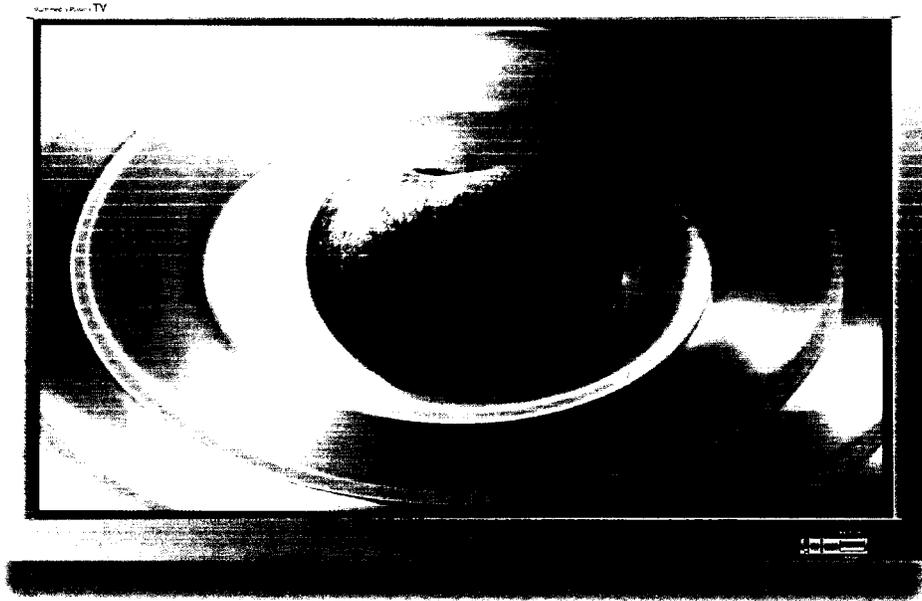
### PixelBoost™

What's so fast about butterflies? Every flutter reveals a nasty truth about an LCD's ability to handle video. While flat panel televisions can never be too thin or too wide, they can be too slow. LCDs have a hard time keeping up with fast moving video images. In fact, they have a hard time

keeping pace with the response time of traditional picture tube TVs.

To overcome this limitation the Pixelworks DNX development team invented PixelBoost™, a technology that inherently speeds the response time of LCDs by sending signals that prime pixels before they are

called into fast moving action. PixelBoost eliminates streaking and brings all the action into focus.

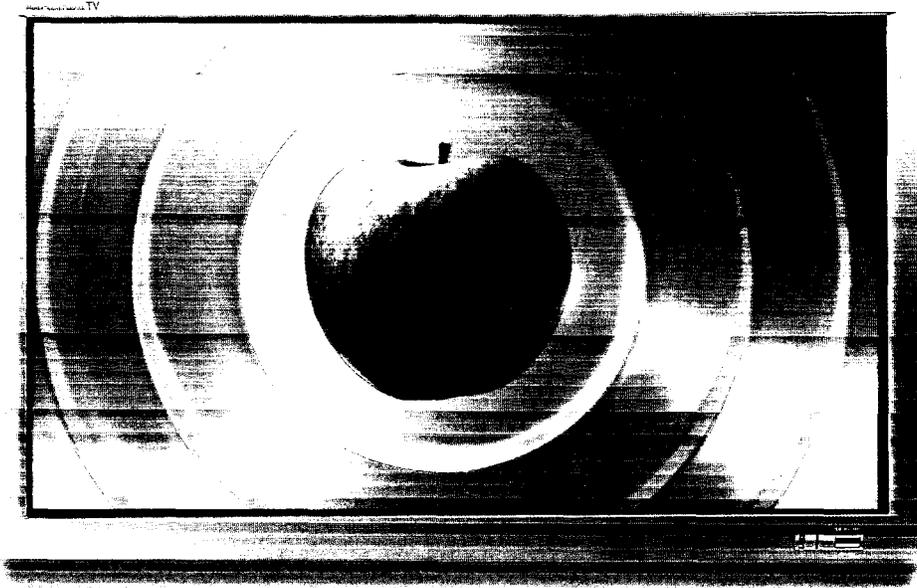


4:3 aspect ratio

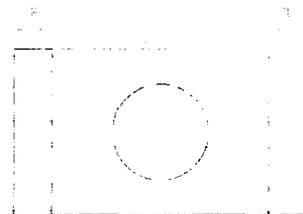
The shape of things to come



Around the world Pixelworks design teams combining IC design, software and hardware systems expertise are committed to keeping customers on the cutting edge of advanced television design by offering new generations of video processing ICs with higher levels of chip integration.



A = no change  
B = stretched



### Perfect Fit

The new generation of wide format 16 x 9 panels used in the latest flat panel televisions presents a problem: their 16 x 9 aspect ratio is inconsistent with the predominant 4:3 aspect ratio used in most television content. Our multi-region non-linear scaling solves the problem by intelligently

stretching the content to fill the widescreen without degrading image quality.

It divides the display into three regions, each with its own aspect ratio. The center of the image – where the human eye is focused – maintains a perfect 1:1 ratio, while the less noticeable outlying areas are scaled

to fill the screen. Pixelworks DNX technology automatically resizes images to fit a wide variety of standard and widescreen aspect ratios, including 4:3, 16:9, and 16:10. Perfect.



## The Reality of DNX

Reality is the ultimate

challenge in developing video

processing technology that

captures the color, the action,

the scope and emotion of real

life in a judicious goal. So you

start by putting first things

first and meticulously following

through with each step.

For intricate problems, the

best way to anomalies and arti-

facts inherent in conventional

video processing. Then analyze

them and eliminate them,

painstakingly one-by-one.

Next, develop an integrated

video path designed to work

together as a system. When it

comes to creating great video,

each step in the video path can

work with you or against you.

Once a problem is introduced

into the video path it's very dif-

ficult to identify and eliminate

the source of the problem. This

is especially true with conven-

tional video processing paths

made up of individual chips de-

veloped by a variety of vendors.

Now it really gets difficult.

Raising the bar on video perfor-

mance only gets you half way

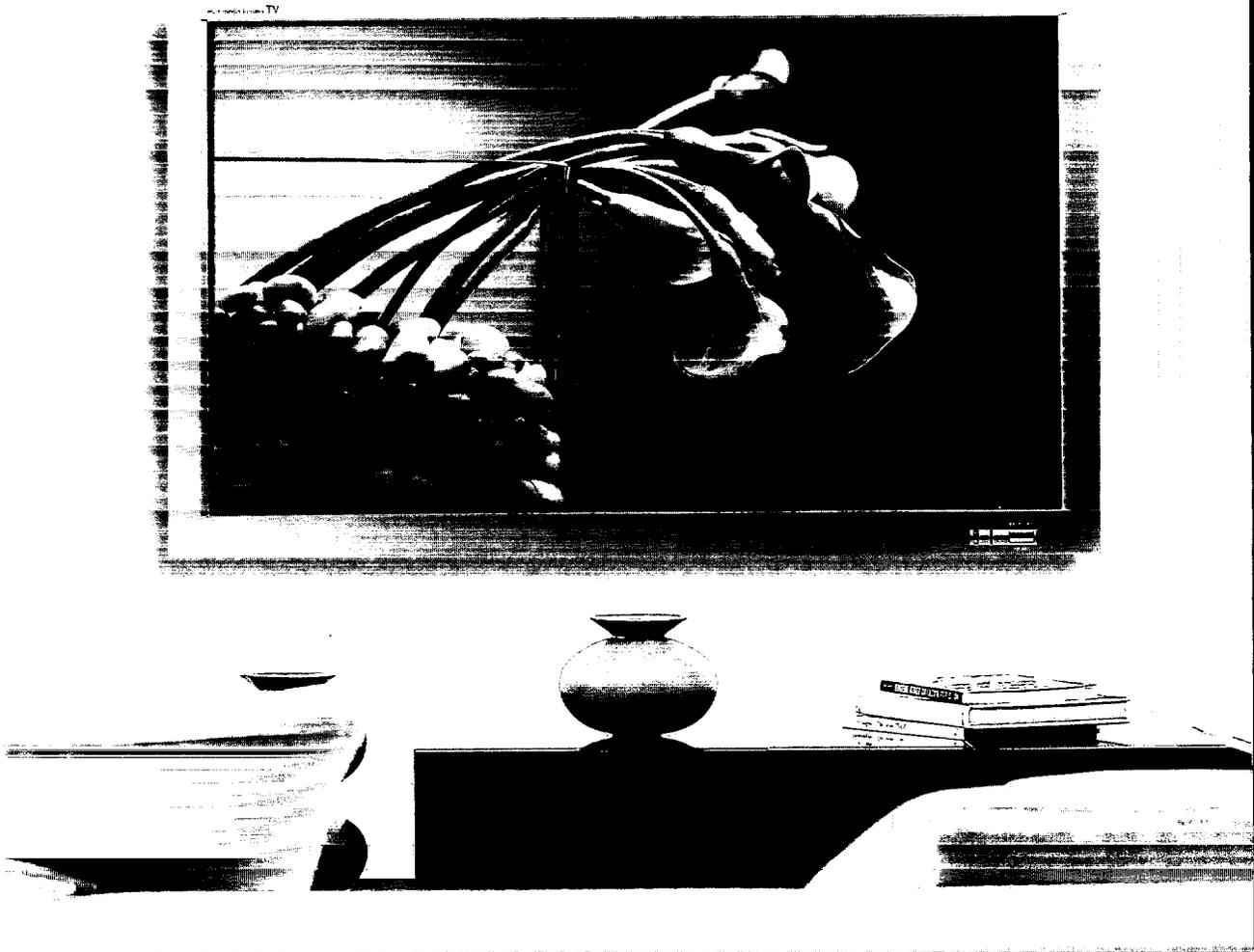
there. You need to be able to

handle standard definition

and high definition video with

equal grace and lower the

overall system cost in process.



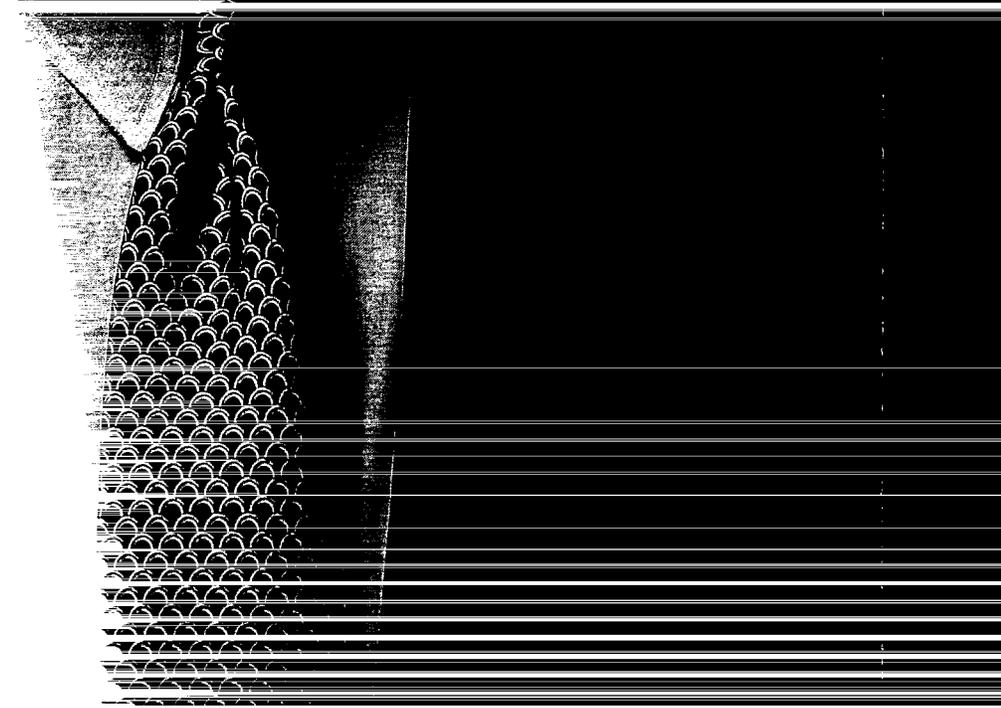
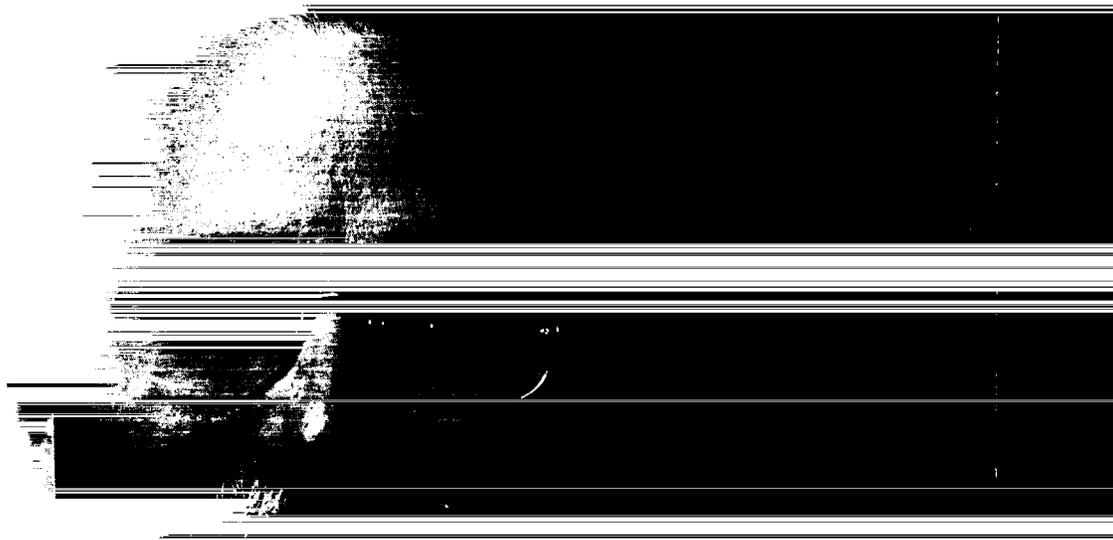
Pixelworks has embraced this challenge by introducing its most important chip to date in the company's history. These new chips set a new benchmark for video quality by optimizing the entire signal path and are the heart

of Pixelworks' Digital Natural Expression (DNE™) technology. DNE video processing dramatically improves the clarity of

video images by combining multiple enhancement techniques to deliver clear, natural-looking standard and high-definition video images.

These new chips cover each step in the video path with analog-to-digital converters, DVI receivers, video decoders, deinterlacers and scalars designed to work together seamlessly in a tuned system

while keeping costs down for television and projector manufacturers. Designed to bring HDTV and SDTV to life and give viewers innovative Pixelworks features like Intelligent Windowing, connectivity and powerful user interfaces that are a joy to use, the new DNE video processing chips bring us one step closer to experiencing the richness of reality.



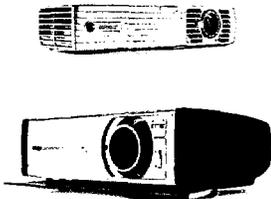
Employees, customers, and partners

In starting this year's letter, I took a few moments to reflect on how Pixelworks has matured and what has taken us to a \$140 million company in only seven years, as well as what will carry us to success into the future. It was enlightening to take a step back from my day-to-day responsibilities and look at the world-class company that we have built.

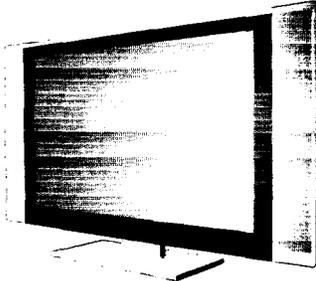
Pixelworks is a new breed of company that truly operates without borders. I believe this will be the model for companies in the new millennium. We have optimized our culture and operations to take advantage of a dynamic new style of business fueled by technology and

<p>             or 6 cents per share. In the fourth quarter, in 2003              our total chip shipments grew to almost 9 million              compared to just over 5 million for 2002.              We have had terrific performance and I am              extremely pleased with all of the Pixelworkers              around the world that have made this possible,              however, even given this exceptional perfor-              mance, I can say that I have never been more              excited about our products and markets, since              co-founding the company in 1997.           </p>	<p>             or 6 cents per share. In the fourth quarter, in 2003              our total chip shipments grew to almost 9 million              compared to just over 5 million for 2002.              We have had terrific performance and I am              extremely pleased with all of the Pixelworkers              around the world that have made this possible,              however, even given this exceptional perfor-              mance, I can say that I have never been more              excited about our products and markets, since              co-founding the company in 1997.           </p>
<p>             Riding the Waves              It has been my experience that the real value              in growing a technology company is in              identifying the "market waves" and then develop-              ing the products and the management team              necessary to ride these market waves. Pixelworks              has been successful because we have focused on              finding market waves and then have developed              products and management to enable us to take              full advantage of those waves.           </p>	<p>             Riding the Waves              It has been my experience that the real value              in growing a technology company is in              identifying the "market waves" and then develop-              ing the products and the management team              necessary to ride these market waves. Pixelworks              has been successful because we have focused on              finding market waves and then have developed              products and management to enable us to take              full advantage of those waves.           </p>
<p>             Let's look at our business as a series of these waves:              Projectors - The First Swells              I founded the company in 1997 with the              knowledge that multimedia projectors were              a rapidly growing market and that there was              an opportunity for a company to dramatically              improve the performance while reducing the              cost of the system electronics. We launched              the company at a time when the total available           </p>	<p>             Let's look at our business as a series of these waves:              Projectors - The First Swells              I founded the company in 1997 with the              knowledge that multimedia projectors were              a rapidly growing market and that there was              an opportunity for a company to dramatically              improve the performance while reducing the              cost of the system electronics. We launched              the company at a time when the total available           </p>

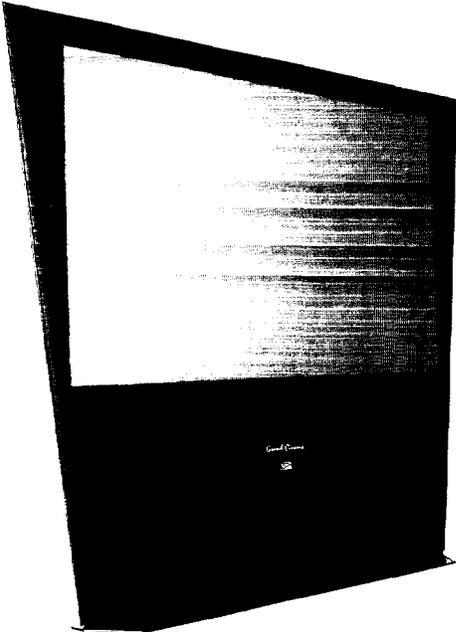
Pixelworks DNX



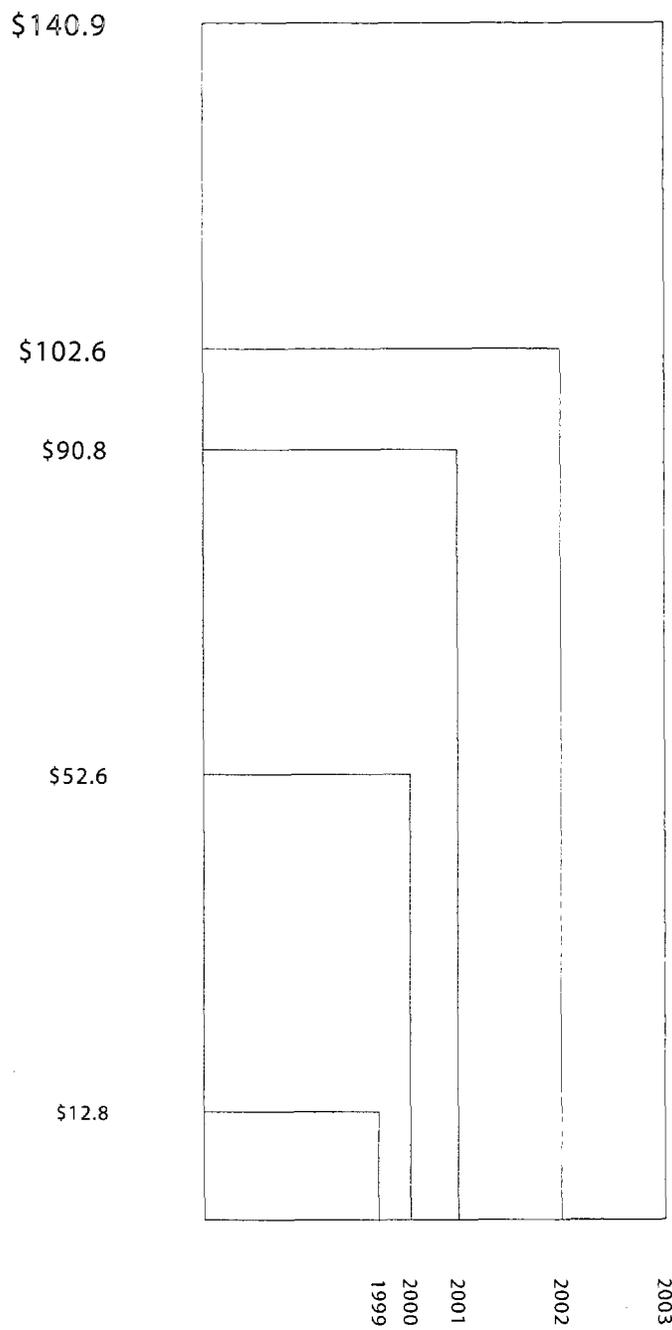
Pixelworks DNX video processing powers the latest home theater and micro-portable projectors.



Pixelworks DNX brings reality TV to the most advanced plasma, LCD, progressive scan CRT and rear projection TVs.



Dollars in Millions



Revenue

projector market in 1997 was approximately 10 million units annually. digital converter ICs, video decoders and deinterlacers. For the year, our projector revenue was up 25 percent.

A little ripple in 1997 has grown into some powerful swells. Even including the difficult years of 2001 and 2002, the projector industry has grown every year at a compound annual growth rate of 30 percent since 1997. Pacific India Associates, a leading projector industry analyst, estimates that approximately 2.5 million projectors were sold in 2003, representing approximately 55 percent growth over 2002.

Recent projections from industry analysts estimate that approximately 3.3 million projectors will be sold in 2004, up 35 percent over 2003.

Driving the recent actual and forecasted growth is the introduction of sub-\$1,000 projectors for both corporate and home use. We are proud to partner with the world's leading projector manufacturers to help drive the prices of their projectors to new thresholds of affordability. The superior performance of Pixelworks image processing chips has allowed our customers to use low-cost, low-resolution optical engines without sacrificing image quality, thereby eliminating in many cases, hundreds of dollars from the average cost of a projector.

Introducing chips instead of a single ImageProcessor has been key to our projector revenue growth. These companion chips include video processing chips and front-end chips that include analog to

#### Monitors – The Big Breakers

The monitor market has been very large, growing from 4.5 million units in 1999 to 49.1 million units in 2003. The products required in this segment have become increasingly simple, therefore lowering barriers to entry. The result has been a highly competitive environment with many new entrants. Given the highly competitive environment in supplying LCD monitor chips, our strategy has been and will continue to be to focus our resources on the segments within the LCD monitor space where we can compete profitably. Our focus is on high-resolution monitors and future developments of what we call our Smart Timing Controller product line which reduce costs and improve an LCD panel's performance.

Our programmable Smart Timing Controller, developed for the Smart Panel monitor that we pioneered with Samsung and Sharp, has the potential to be a great product on its own.

<p> because our Timing Controllers are "Smart" we  have added features to an LCD panel, improve perfor-  mance and reduce cost. Another benefit of the  Smart Timing Controller is that it actually broad-  ens our potential market beyond monitors to  include televisions and even the possibility of  laptop computers. </p> <p> The high end of the monitor business has con-  tinued to grow with 20-inch and larger UXGA-  resolution monitors having emerged as a solid  segment of the overall LCD monitor market.  These larger displays, which are used in applica-  tions such as engineering workstations and by  graphics designers, grew nearly 40 percent on  an annual basis in 2003. </p> <p> We anticipate that LCD monitors will  continue to grow rapidly in 2004 with recent  industry estimates projecting growth of approxi-  mately 40 percent in 2004 to 75 million units. </p> <p> Advanced Television - The Tsunami  We believe the biggest wave of all is the advanced  television market and Pixivox is beginning  to be recognized as a leader in this advanced  television segment. </p> <p> We attribute our success in the emerging  advanced TV business to several things: </p> <p> The Pixivox momentum is definitely moving in  the right direction. The advanced TV category, </p>	<p> comprised of LCD TVs, progressive scan CRT TVs,  plasma displays, and digital rear projection TVs,  is taking off both for the industry and for us. </p> <p> According to industry analysts, roughly 15 million  advanced TVs are expected to be sold this year.  This is roughly double that of 2002. Given  150 million TVs of all types are sold annually,  advanced TVs will represent roughly 10 percent  of all TVs sold this year, up from about 5 percent  last year. </p> <p> LCD televisions are expected to grow from  approximately 4 million units this year to  approximately 24 million units in 2006, a  compound annual growth rate of more than  80 percent. </p> <p> Second, advanced TVs are technically demanding  products like projectors, and this plays to our  strength developing and delivering system  solutions. We believe this gives us an advantage  compared to some of our competitors. </p> <p> We are using our systems expertise to provide  our customers with a time to market advantage  by creating and delivering production reference  designs that slash time to revenue by getting  complex televisions to market in record time. </p> <p> The response to our "TV in a Box" strategy has  been outstanding. To date, we have more than  1000 design starts from the worlds top consumer  electronics companies who are using our "TV in a  Box" designs. </p>
---	--

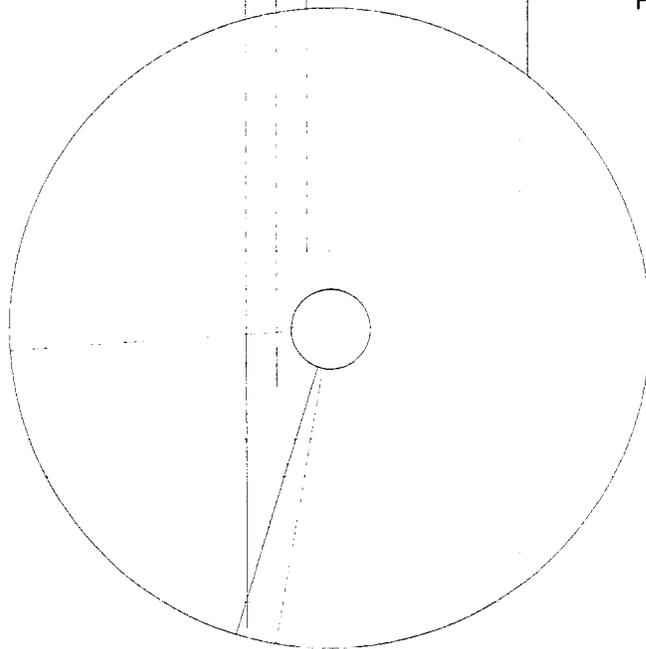
2003 Revenue \$140.9 million

Projector 53%

TV 27%

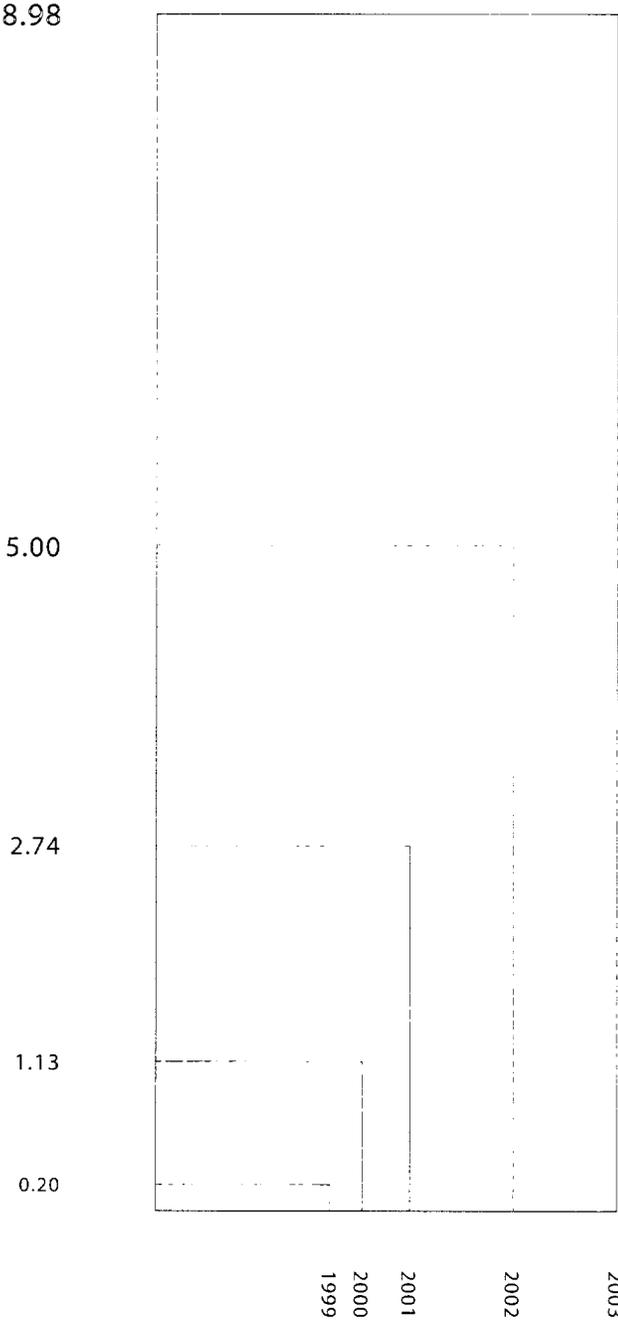
Monitor 18%

Other 2%



Revenue by Product Segment

In Millions



Unit Shipments

...summary, we are out to a great start in the ad- ImageProcessor ICs. It is largely an analog part  
...ance TV business and believe there is a bright that includes a high-speed analog to digital con-  
...come ahead of us. Since founding the company verter, a DVI receiver and a multi-standard video  
...1997 we have been trying to prove that the decoder. These chips use a patent pending ap-  
...word is flat, and it appears that that is in fact proach to integration, which we believe will  
...reclaiming true. provide us with an architectural cost advantage.

...organized to Deliver Photopia cost effectively couples the best of  
...attention to taking up impressive growth Pixelworks image processing with features  
...revenue, profitability and unit shipments, stemming from our Jolt technology initiative  
...we have organized the company to focus our including network connectivity, Intelligent  
...resources to lead in the explosively growing Windowing and a flexible user interface. Together  
...market for advanced televisions. We are focused Photopia and Cheddar embody Pixelworks DNX -  
...in developing the right technology, designing Digital Natural Expression video processing tech-  
...the right products, delivering them to the right nology which brings multiple Pixelworks video  
...customers at the right time, and at the right price. processing technologies together to control  
...We are dedicated to not only delivering great the entire video signal path for optimally tuned  
...products, but also to building a great company displays, delivering clear natural looking video  
...culture of responsibly managing expenses. images.

...We focus on building a superior operating sys- We are complementing these new chips with  
...tem that will allow Pixelworks to deliver outstanding our third generation software platform we call  
...structures and earnings. Cobalt. Cobalt embodies all of the lessons we

...We are rolling out the biggest new product intro- have learned developing and bringing to market  
...ductions in the history of our company. Our new the broadest range of advanced display products,  
...product platforms code named Cheddar and with the most demanding tier one customers, on  
...Photopia, set new standards for integration, critically tight schedules.

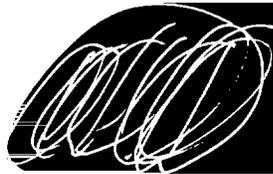
...quality and cost effective performance and are Cultivating Strategic Advantage  
...the foundation of our customers' new advanced We are continuously cultivating our strategic  
...technology and protectors for 2004 and beyond. advantage in China where more than 35 percent

...Cheddar is the front-end co-processor we of the world's televisions are built. We started  
...designed to work with all of our existing by developing the sales and marketing of our

to Chinese television customers. We are also opening an IC design center in Shanghai to stay close to our Chinese consumer electronics customers. Initially, the design center will focus on our panel products and timing controllers, and will also provide engineering services to support our foundry activities.

In September, we closed on a \$10 million equity investment in Semiconductor Manufacturing Corporation of Shanghai China, China's most advanced pure-play foundry. SMIC has enlisted Toshiba and TSMC as our semi-conductor foundry partners. Each of them bring unique strengths to Pixelworks that we could not be able to develop on our own. Our tremendous success is based on the outstanding support we have received from TSMC, Toshiba and Samsung.

Riding the Waves  
Pixelworks enters 2004 with a focused business model, products that play to our strengths in rapidly growing markets, great customers around the world and a global management and employee team that is excited about the present and even more excited about the future. We have identified the market waves. We are putting the people, products and strategies in place to ride those waves. We are very pleased that you have chosen us to be your partner for this incredible adventure.



Alan Alley  
President, CEO and Chairman of the Board

pxlw 2003 Form 10-K

## FINANCIAL HIGHLIGHTS

in millions of dollars, except per share data

	1999	2000	2001	2002	2003
Revenue	\$ 17,517	\$ 52,593	\$ 90,808	\$ 102,447	\$ 140,921
Net Loss	8,175	7,663	72,553	120,851	(530)
Loss Per Share	1.11	10.50	11.02	10.78	(0.01)
Net Income (Loss) – Pro forma <sup>1</sup>	4,322	5,773	14,286	7,211	10,212
Earnings (Loss) Per Share – Pro forma <sup>1</sup>	0.72	0.17	0.33	0.16	0.22
Cash and Marketable Securities	7,920	103,737	101,255	101,567	100,696
Working Capital	2,722	100,371	93,022	93,776	91,581
Total Assets	\$ 16,925	\$ 280,271	2,297,007	3,275,472	\$ 233,317

	01	02	03	04
Revenue	\$ 32,005	\$ 32,559	\$ 35,516	\$ 40,841
Net Income (Loss)	248	420	(4,141)	2,943
Earnings (Loss) Per Share – 0	0.01	0.01	(0.09)	0.06
Net Income (Loss) – Pro forma <sup>2</sup>	2,366	1,799	801	5,246
Earnings Per Share – Pro forma <sup>2</sup>	\$ 0.05	\$ 0.04	\$ 0.02	\$ 0.11

<sup>1</sup> Includes non-cash and one-time expenses for the amortization of developed technology, goodwill and assembled workforce, stock-based compensation expenses in process, research and development expense, patent settlement expense, accretion of preferred stock redemption and accretion of preferred stock beneficial conversion feature.

## Forward Looking and Cautionary Statements

These statements contained in this Annual Report may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve a number of risks, uncertainties and other factors that could cause actual results to be materially different, as discussed more fully elsewhere in this Annual Report and in the Company's filings with the Securities and Exchange Commission, including the Company's Annual Report on Form 10-K for the year ended December 31, 2003.

Pixelworks Limited represents features and capabilities of Pixelworks products. Pixelworks, PixelBoost, Digital Natural Expression, and the DNX logo are trademarks of Pixelworks, Inc. All other trademarks used and products shown are the property of their respective owners.

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2003

or

TRANSITION REPORT PURSUANT TO SECTION 13 or 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: 000-30269

**PIXELWORKS, INC.**

(Exact name of registrant as specified in its charter)

Oregon 91-1761992  
(State or other jurisdiction of (I.R.S. Employer Identification Number)  
incorporation or organization)

8100 SW Nyberg Road,  
Tualatin, OR 97062 (503) 454-1750  
(Address of principal executive offices) (Registrant's zip code) (Registrant's telephone number,  
including area code)

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

Securities registered pursuant to Section 12(g) of the Act:  
Common Stock

Indicate by checkmark whether the Registrant (1) has filed all reports required to be filed 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 checkmark 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 the 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 checkmark whether the Registrant is an accelerated filer (as defined in Rule 12b-2 of the Act).  
Yes  No

Aggregate market value of voting Common Stock held by non-affiliates of the Registrant at June 30, 2003: \$209,200,869. For purposes of this calculation, officers and directors are considered affiliates.

Number of shares of Common Stock outstanding at February 29, 2004: 45,847,387.

**Documents Incorporated by Reference**

Portions of the Registrant's proxy statement relating to its 2004 Annual Shareholder's Meeting, to be filed subsequently - Part III.

## TABLE OF CONTENTS

<b>PART I</b>		
Item 1.	Business	29
Item 2.	Properties	38
Item 3.	Legal Proceedings	38
Item 4.	Submission of Matters to a Vote of Security Holders	38
<b>PART II</b>		
Item 5.	Market for Registrant's Common Equity and Related Stockholder Matters	39
Item 6.	Selected Financial Data	40
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	41
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	65
Item 8.	Financial Statements and Supplementary Data	65
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	89
Item 9A.	Controls and Procedures	89
<b>PART III</b>		
Item 10.	Directors and Executive Officers of the Registrant	90
Item 11.	Executive Compensation	90
Item 12.	Security Ownership of Certain Beneficial Owners and Management	90
Item 13.	Certain Relationships and Related Transactions	90
Item 14.	Principal Accounting Fees and Services	90
<b>PART IV</b>		
Item 15.	Exhibits, Financial Statement Schedules, and Reports on Form 8-K	91
	Signatures	94

## PART I

### Item 1. Business

#### **OVERVIEW**

We are a leading designer, developer and marketer of semiconductors and software for the advanced display industry, including advanced televisions, multimedia projectors and flat panel monitors. Our system-on-chip semiconductors provide the 'intelligence' for these new types of displays by processing and optimizing video and computer graphic signals to produce high-quality images. Many of the world's leading manufacturers of consumer electronics and computer display products utilize our technology to enhance image quality and ease of use of their products. Our goal is to provide all of the electronics necessary to process the signal along its entire path through the system in order to provide a turnkey solution for our customers.

The display industry is undergoing a transformation from displays using cathode ray tubes, or CRTs, which have been the predominant display technology for more than 60 years and operate using analog, or waveform, signals. A new generation of technologies are now available that utilize display screens comprised of a grid of thousands of tiny picture elements, or pixels, and operate digitally. Examples of these new types of displays include liquid crystal displays, plasma displays, micro-mirror devices and other advanced display technologies.

During the transition to digital display technology, the way signal processing integrated circuits, or ICs, are developed is shifting away from development by vertically integrated manufacturers toward development by third-party companies like Pixelworks. We provide our customers, including manufacturers, original equipment manufacturers, or OEMs, and systems integrators, with video and graphics processing solutions that enable them to deliver an advanced display system with industry-leading performance and features to market rapidly. By choosing this product development strategy, our customers reduce their research and development costs, thereby reducing the cost of the overall system. In addition, our customers can utilize a consistent design environment across multiple product lines.

We have a broad product line that uses proprietary technologies and advanced designs to address the requirements of the industry we serve. Our products range from single-purpose discrete ICs to system-on-chip ICs integrating a microprocessor, memory and image processing circuits that function as a computer on a single chip. Pixelworks has expanded its technology portfolio through internal developments, acquisitions and co-developments with business partners. In the future, we plan to introduce products that continue to integrate additional functionality and utilize more advanced processes in order to improve performance and lower product costs.

#### **ADVANCED DISPLAY INDUSTRY**

Pixelworks serves three fast-growing markets that are reshaping how business users and consumers interact with information and entertainment, including advanced televisions, multimedia projectors and flat panel monitors. The display industry's shift toward digital, fixed pixel display technologies is creating a need for video signal processing electronics that achieve the necessary performance, in terms of image quality, ease of use and cost, to spur the transition to mainstream market adoption. These three markets are in different stages of maturity and they each have unique requirements and dynamics.

#### **Advanced Television Market**

While the television is a widely accepted technology worldwide, the transition to digital-based television is just beginning. According to iSuppli/Stanford Resources, in 2003 non-CRT televisions using digital display technologies, referred to as advanced televisions, are closing in on the important inflection point of five percent penetration of the total television units out of the worldwide market of 160 million units.

Looking ahead, the shift to televisions using digital display technology that would require digital video signal processing ICs is set to accelerate in the market. The display technologies include liquid crystal displays, or LCDs, plasma display panels, or PDPs, and rear-projection televisions using LCDs, digital micro-mirror devices, or DMDs, and newer technology such as liquid crystal on silicon, or LCoS. In 2007, advanced televisions are projected to comprise nearly one out of every five television units sold worldwide. While the entire television market is forecast to grow from 161 million units to almost 200 million units, a compound annual growth rate

of 5.1 percent, the advanced television market totaled 4.9 million units in 2003 and is forecast to grow to 41.0 million units in 2007 for a compound annual growth rate of 70 percent.

Looking more closely at the growth forecasted by iSuppli/Stanford Resources, two sub-categories will drive the adoption of advanced televisions as consumers choose thin-screen televisions for their homes. LCD televisions are expected to lead the transition among advanced televisions rising from 3.6 million units in 2003 to 28.3 million units in 2007, a compound annual growth rate of 68 percent. Plasma display televisions are expected to grow at a similar rate to LCD televisions, although at approximately one quarter of the overall units due to their higher average selling price based on their larger form factor. Plasma display televisions are estimated to grow from 885,000 units in 2003 to 8.0 million units in 2007, a compound annual growth rate of 74 percent.

Rear-projection television, or RPTV, growth is projected to be modest between 2003 and 2007, growing from 5.0 million units to 6.1 million units for a compound annual growth rate of 5.0 percent. However, the underlying architecture of RPTV is shifting from older projection TVs using analog CRT technology to newer digital technologies. In 2003, approximately 8 percent of RPTVs are based on digital display technologies. That is expected to exceed 70 percent in 2007 with 4.3 million units, comprised of DMD, LCD and LCoS, for a combined compound annual growth rate of 80 percent.

Another market that has emerged for Pixelworks is CRT televisions that utilize our discrete semiconductors for advanced video signal processing to enhance the picture quality, most frequently to de-interlace incoming television signals for CRTs that display using progressive scanning. These types of televisions are referred to as advanced CRT televisions.

Market forecasts indicate that the advanced television market is poised for robust growth over the next several years. In addition to the introduction of new display technologies into the consumer electronics marketplace, two major trends are driving the growth of advanced televisions worldwide: the introduction of digital television standards and new entrants in television manufacturers.

The introduction of a new broadcast standard requiring the use of digital transmission rather than analog methods is an important transition in the industry. Digital television offers a clearer image than analog and enables the transmission of high-definition standards, a wide-screen format, less interference and new types of applications such as interactivity and data transmission. In the United States, the digital television standard is referred to as the ATSC format with similar broadcast standards being developed in Europe and in Japan called DVB and ARIB, respectively. The ATSC format, which is being mandated by the Federal Communications Commission to be complete in 2007, is considered to be the most significant technology shift since the introduction of commercial television. According to the Yankee Group, approximately two million homes currently have HDTV and the installed base is projected to grow to 40 million homes in 2007. Commensurate with this technology transition, consumers are expected to upgrade to new televisions, which is underpinning the strong growth forecast by market research firms.

The second trend driving the growth of new entrants into the television market illustrates the shift in the supply chain from electronics developed by vertically integrated manufacturers toward those provided by third-party companies such as Pixelworks. With strong growth expected in advanced televisions, consumer electronics and PC manufacturers are converging on the television as the information and entertainment gateway. In addition, regional manufacturers in Asia are also attempting to gain a position in the market that further increases the competitive landscape.

#### **Multimedia Projector Market**

The multimedia projector market is continuing to mature with steady growth as prices continue to decline steadily and models are becoming more targeted, including an emerging segment for consumers. In 2003, 2.5 million units were sold worldwide. Pacific Media Associates is forecasting that in 2007 the multimedia projector market will expand to 8.2 million units, for a compound annual growth rate of 35 percent.

Two digital display technologies are currently used in multimedia projectors. Approximately 70 percent of the market is currently using liquid crystal displays while the remainder is utilizing digital micro-mirror devices, according to Pacific Media Associates. Models range from larger units designed for installation, to ultra-portable devices weighing less than two and a half pounds for maximum portability.

The largest segment of the market serves professional users who use multimedia projectors to display presentation materials from PCs and for showing video presentations. Requirements for the professional market include portability, compatibility with multiple sources and features that ensure simple operation. While businesses will continue to purchase projectors, we expect the growth in the professional segment to come from the education and government sectors.

One of the drivers for growth in the multimedia projector market is the emerging market for consumer projectors for home entertainment. Consumers are discovering that they can have a satisfying home cinema experience by investing in a sub-\$1,000 multimedia projector. In order to achieve attractive price targets, manufacturers are developing models using lower resolution displays, often with 800-by-600 pixel resolution, also known as SVGA which is an acronym for Super Video Graphics Array, and using lower cost liquid crystal displays. According to Pacific Media Associates, the consumer market for multimedia projectors was 313,000 units in 2003 with the segment growing to 1.6 million units in 2007 for a compound annual growth rate of 50 percent.

#### **LCD Monitor Market**

The desktop computer market has led the transition to digital display technologies with liquid crystal display monitors becoming available in 1997. Since that time, sales for LCD monitors have surged into the mainstream and the technology is expected to overtake CRT-based monitors in terms of units in 2004. In 2003, DisplaySearch reported that 49.1 million LCD monitors were shipped worldwide, which comprised 42 percent of the desktop monitor market. Looking ahead, DisplaySearch shows that the growth will continue in coming years with 2007 shipments forecast to be 112.4 million units, a compound annual growth rate of 23 percent. According to DisplaySearch forecasts, LCD monitors are expected to comprise nearly 80 percent of the market at that time.

LCD monitors are segmented primarily by size and resolution, which is directly proportionate to average selling price. According to DisplaySearch, the greatest number of LCD monitor units sold consist of a 17-inch monitor at SXGA resolution, an acronym for Super Extended Graphics Array, which denotes that the screen consists of a matrix of 1,280-by-1,024 pixels. Larger monitor sizes with higher resolutions up to 1,600-by-1,200, referred to as Ultra Extended Graphics Array, or UXGA, are used in applications such as at engineering workstations and by graphics designers where users are working on very high-resolution images. UXGA resolution monitors currently comprise less than two percent of the LCD monitor units.

#### **OUR PRODUCTS AND TECHNOLOGIES**

We design, develop and market ICs and software that optimize video and computer graphic signals for a wide variety of displays used in business and consumer markets, including advanced televisions, multimedia projectors and flat panel monitors. We have a broad product line that uses proprietary and licensed technologies and advanced designs to address the requirements of the industry we serve. Our products range from single-purpose discrete ICs to system-on-chip ICs integrating a microprocessor, memory and image processing circuits that function as a computer on a single IC.

As the advanced display industry has grown rapidly, we have expanded and adapted our products to meet the needs of manufacturers in terms of performance, cost and functionality. Our product development strategy is to take a systems-level approach, which means we design products from the manufacturers' viewpoint in terms of analyzing how we can integrate maximum functionality at a reasonable cost. We believe that by innovatively developing parts that anticipate the requirements of our target markets we will help accelerate the adoption of advanced display technologies.

## Products

We currently have three major product categories in our portfolio as follows:

**ImageProcessor ICs.** System-on-chip ICs include embedded microprocessors and digital signal processing circuitry that control the operations and signal processing within the advanced display system. ImageProcessor ICs are used in advanced televisions, multimedia projectors and LCD monitors. Semiconductors in this category include circuitry for advanced image scaling, aspect ratio conversion, color compensation, customizable on-screen display, automatic image optimization and control of the system operating system. ImageProcessor ICs can also include the following additional functions: advanced de-interlacing circuitry; digital keystone correction; an analog-to-digital controller, or ADC; a Digital Visual Interface, or DVI; and an LCD panel timing controller circuit, or TCON.

ImageProcessor ICs were our first product offerings and continue to form the core of our business in each of our markets. We have continued to design the architecture for optimal performance and manufactured the ICs on processes that align with our customers' requirements. Additionally, since our ImageProcessor ICs include the microprocessor for the entire system, we provide a complete software development environment and operating system that enables our customers to rapidly develop their products, customize the "look and feel" of their products, and provide a consistent software architecture across product lines and product categories.

Our most recent generation of ImageProcessor ICs code-named Photopia, targets the advanced television and digital projector markets. Photopia integrates our most advanced de-interlacing and color processing technology for a highly integrated solution.

**Video SignalProcessor ICs.** Integrated circuits in this category are discrete semiconductors that are companion chips for our ImageProcessor ICs that offer manufacturers more flexibility in their multimedia projection and advanced television system architectures. Video SignalProcessor ICs are most frequently used to pre-process video signals prior to sending them to an ImageProcessor IC. By offering these ICs, we can target specific needs in our markets and can perfect our technology developments prior to integrating the technology into our ImageProcessor ICs.

We currently produce two classes of Video SignalProcessor ICs. The first category is the IC family that performs de-interlacing. Currently, many video signals are delivered in an interlaced format which means that each frame of video is sent in two sequential fields comprised of first the odd-numbered rows and then the even-numbered. However, most advanced display technologies show fields in a single frame so the two separate fields must be reconstituted into a single frame of video information. This process presents many challenges and can introduce visual artifacts into the image, but our Video SignalProcessor ICs use patented de-interlacing technology to maximize video quality. We currently sell our Video SignalProcessor family that performs de-interlacing into the advanced television market, including the advanced CRT segment.

Our second class of Video SignalProcessor ICs are signal interface chips that combine a video decoder and analog-to-digital converter for processing current television formats and new digital television standards. Certain versions also include a DVI receiver. We currently offer our signal interfacing Video SignalProcessor family in the multimedia projector and advanced television markets.

**Digital TV Production Reference Designs.** In order to assist manufacturers in their development of advanced television designs, we pioneered the concept for our Digital TV Production Reference Designs. By rigorously studying market demands and evaluating systems for performance and cost, Pixelworks developed production-ready designs that an advanced television manufacturer can quickly implement based on our complete hardware and software solution.

As part of the Digital TV Production Reference Designs, we provide a complete circuit board using our ImageProcessor and Video SignalProcessor ICs as well as a system software architecture. Each system is able to be adapted to conform to standards in any geography that assists our customers in navigating the worldwide digital television standards, including features such as Closed Captioning, V-chip and Teletext.

Our Digital TV Production Reference Designs sell in low volumes, but help generate future business by serving as a catalyst for customer designs. We provide designs that contain varying levels of functionality in order to serve a range of digital TVs from the low-cost baseline models up to full-featured televisions.

#### **Technologies**

In order to offer targeted products, our semiconductors are designed with a flexible chip architecture that allows us to combine functional blocks of digital and mixed signal circuitry. Accordingly, we develop technologies that can be implemented across multiple product lines. Following is a description of selected technologies by target market.

#### **Core Technologies for Advanced Displays**

- *Advanced Image Scaling and Shaping.* Since advanced displays are typically fixed-pixel, digital display technologies, a constant challenge is to reconfigure incoming content in video or PC formats that does not match the display resolution. Pixelworks has developed innovative, industry leading image scaling technologies that intelligently enlarge or compress images for display in different resolutions or aspect ratios, which is the ratio of width to height of display screens. This technology is essential for interfacing fixed resolution digital displays to the wide range of inputs that are present in today's marketplace, including high-definition television, or HDTV. In addition, our image processing technology incorporates proprietary programmable image scaling capable of resizing images to fit a wide variety of aspect ratios.
- *Adaptive Image Optimization.* Our products must translate a broad range of signals in standard and non-standard formats. We use a proprietary image processing technique to identify the characteristics of an incoming signal and configure the system to produce the best possible image.
- *Color Compensation Technology.* Our sophisticated custom color compensation technology makes it possible to display consistent color images from video and computer graphics, which use very different color palettes, on different display devices. Our color processing technology compensates for variations in the color performance of a display. Using our approach, any color can be addressed independently and adjusted without impacting other colors.
- *Fully Customizable On-Screen Display.* Our technology couples an integrated on-screen display controller with our industry-first development application. These technologies allow customers who are designing ImageProcessor semiconductors into their display products to quickly develop and implement their own unique user interfaces with up to 256 colors that can incorporate graphics and colorful icons in start-up displays and menus.

#### **Advanced Television Technologies**

We have a suite of technologies that are designed to serve the advanced television market which we call DNX – Digital Natural Expression™. Pixelworks' DNX video processing technology dramatically improves the quality of video images by combining multiple enhancement techniques to deliver clear, natural-looking standard and high-definition video images. DNX technology utilizes sophisticated digital video processing to deliver a lifelike picture through a combination of techniques.

- *DNX Motion-Adaptive De-Interlacing.* We have developed a proprietary video processing technology to convert interlaced content into progressive content that virtually eliminates image artifacts such as stair-stepping, often referred to as 'jaggies,' that can occur with less sophisticated techniques. Our motion-adaptive de-interlacing is able to analyze the content and apply the most appropriate methods for both standard television formats and also high-definition television formats. In addition, DNX Motion-Adaptive De-Interlacing automatically recognizes when incoming signals were originally captured on film so that special methods are employed to display the content.
- *DNX PixelBoost.* A technology that improves pixel response to eliminate blurring in fast-motion video as seen on some LCD panels. Liquid crystal display pixels are not able to turn on and off as rapidly as pixels in CRTs, which results in blurry images when content contains quick movements. PixelBoost can compensate for this property of LCD panels by manipulating the content in a way that makes it display more crisply on the screen.

- *DNX Rich Color Processing.* A technology that renders more than one billion colors with 10-bit color processing and also optimizes content appearance for various display technologies. While several companies have developed and sold 10-bit processing using expensive proprietary solutions, we believe Pixelworks is the only supplier of a commercially available true 10-bit processing solution.
- *DNX Video Enhancement Processing.* Most content has been encoded in order to enhance its appearance on CRT-based televisions which makes it appear unnatural when displayed on LCDs, DMDs or plasma displays. Our DNX Video Enhancement Processing enables manufacturers to apply filters that compensate for the signals in order to produce sharp, rich picture quality.
- *DNX Noise Reduction.* Digital displays often appear to create movement where none exists because pixels flicker in areas where there is no motion, creating a distracting shimmering effect. This is referred to as 'noise.' We have developed proprietary technology that minimizes noise for a stable, accurate video image.

Other key video technologies include:

- *SteadySync™ Weak Signal Compatibility.* In many parts of the world, television viewers still receive their content via over-the-air broadcast. Our SteadySync technology is able to compensate for broadcast signals that are weak by being able to better lock onto a signal and display a picture. This technology helps users in under-served regions to better receive television broadcasts, which is attractive for manufacturers serving developing countries.
- *Intelligent Windowing.* Intelligent windowing offers consumers control over how they view multiple content simultaneously. Our ImageProcessor ICs for advanced televisions are capable of displaying video and computer content in various, user-controlled formats such as side-by-side, Picture-In-Picture, or PIP, and Picture-On-Picture, or POP, where as many as 12 images from various other sources or channels can be monitored while watching a primary viewing window. Our Intelligent Windowing delivers additional flexibility with adjustable transparency and user-controlled resizing of windows.

#### **Multimedia Projector Technologies**

- *Digital Keystone Correction.* We pioneered digital keystone correction technology and it is now established as a key feature on multimedia projectors. When projecting an image, if the digital projector is not perpendicular to the surface on which it is shining the image, the image will be distorted. Our digital keystone correction modifies the geometry of the image in our ImageProcessor IC so that it will appear that the image is 'squared up,' which allows a projector to be placed virtually anywhere in the room. Our ICs have the ability to adjust the image both vertically and horizontally. With our CornerClick™ feature, a user can simply correct the image using our unique user interface.

#### **LCD Monitor Technologies**

- *Smart Timing Controllers.* We have focused our development efforts for the LCD monitor market on an emerging trend called 'SmartPanels.' SmartPanels integrate all of the electronics directly onto the LCD display module in order to streamline monitor product development by reducing the number of circuit boards used, lowering assembly costs and minimizing the manufacturing challenges caused by sourcing and integrating an array of individual components from different vendors. Typically, every LCD module requires a specific IC called a timing controller, or TCON, that is a purpose-built, discrete component with the function of signaling the LCD module when to turn on and off the pixels. Our Smart TCONs are programmable to work with most LCD modules so it serves as a more flexible component.

#### **Future Developments**

Pixelworks has continued to expand its technology portfolio through internal developments, acquisitions, co-developments with business partners, licensing and through selling of joint reference designs. In the future, we plan to introduce products and technologies that will enable us to provide the electronics solution for our

customers for the entire signal path of an advanced display. We will look to provide electronics for MPEG decoding, a form of data compression for television images, broadcast signal tuners and networking capabilities.

#### **CUSTOMERS, SALES AND MARKETING**

We have achieved design wins with global leaders in the business computing and consumer electronics markets. The key elements of our sales and marketing strategy are to achieve design wins with industry leading branded manufacturers in targeted markets and to continue building strong customer-supplier relationships. Once a design win has been achieved, sales and marketing efforts are focused on building long-term mutually beneficial business relationships with our customers by providing superior technology and reducing their costs, which complements our customers' product development objectives and meets their expectations for price-performance and time to market. Marketing efforts are focused on building market-leading brand awareness and preference for our semiconductors.

Our global distribution channel is multi-tiered and involves:

- *Distributors.* Distributors are resellers in local markets who provide pre- and post-sales support and stock our semiconductors in direct relation to specific manufacturing customer orders. Sales to distributors accounted for 69%, 68% and 61% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively.

Our largest distributor, Tokyo Electron Device, or TED, located in Japan, represented 39%, 45% and 52% of our total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. TED accounted for 20% and 48% of our total accounts receivable at December 31, 2003 and 2002, respectively.

Our second largest distributor, Neoview, located in Taiwan, represented 16%, 12% and 8% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. Neoview accounted for 33% and 17% of our total accounts receivable at December 31, 2003 and 2002, respectively. We have additional distributor relationships in China and Europe.

- *Direct Relationships.* We have established direct relationships with companies that manufacture advanced display systems. Some of our direct relationships are supported by manufacturers representatives, which are independent sales agents who represent us in local markets and provide pre- and post-sales support and do not carry inventory. Revenue through direct relationships accounted for 31%, 32% and 39% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. Revenue through TED to a single end customer, Seiko Epson Corporation, accounted for 7%, 10% and 12% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. We have identified three classifications of direct relationships as follows:

- *Integrators.* Integrators are OEM customers who build display devices based on specifications provided by branded manufacturers.
- *Branded Manufacturers.* Branded manufacturers are globally recognized manufacturers who develop display device specifications, manufacture, market and distribute display devices either directly or through resellers to end-users.
- *Branded Suppliers.* Branded suppliers are globally recognized suppliers who develop display device specifications and then source them from integrators, typically in Asia, and distribute them either directly or through resellers to end-users.

Looking ahead, we anticipate an increase in the percentage of revenue through direct relationships. We expect this change to strengthen our relationships with our direct customers and to be cost effective.

Our sales and marketing team included 90 employees as of December 31, 2003. The sales and marketing team includes the architecture support team of 64 field application engineers who provide technical expertise and assistance to manufacturing customers on final product development. We have sales, marketing and support offices in the U.S., China, Japan and Taiwan.

**SEASONALITY**

Our business generally has followed a seasonal trend; however, there can be no assurance that this trend will continue. Historically, our sales were higher in the second half of the year, primarily due to holiday demand for consumer electronics including advanced televisions and flat panel monitors. Additionally, the multimedia projector market is subject to seasonality with higher shipments typically occurring in the fourth quarter.

**GEOGRAPHIC CONCERNS**

Our global operations subject us to risks and difficulties associated with doing business outside the U.S. These risks include foreign currency exchange rate fluctuations, political and economic instability, reduced or limited protection of our intellectual property and increased transaction costs. Our global operations also increase the difficulty of managing our distributors and manufacturers due to varying time zones, languages and business customs.

Financial information regarding our domestic and foreign operations is presented in Note 8 of the Notes to Consolidated Financial Statements included in Item 8. Financial Statements and Supplementary Data.

**BACKLOG**

Our sales are made pursuant to customer purchase orders for delivery of standard products. The quantity of products actually purchased by our customers, as well as shipment schedules, are subject to frequent revisions that reflect changes in both the customers' needs and in product availability. Our entire order backlog is cancelable, with a portion subject to restocking fees. In light of industry practice and our own experience, we do not believe that backlog as of any particular date is indicative of future results.

**RESEARCH AND DEVELOPMENT**

Our internal research and development efforts are focused on the development of our semiconductors for the advanced television, multimedia projector and LCD monitor markets. Our development efforts are focused on pursuing higher levels of integration and new features in order to extend our system-on-chip semiconductors and discrete ICs to provide our customers with electronics solutions, including software, service and support, that enable them to introduce market leading products. These higher levels of integration are designed to reduce components on circuit boards and help lower final systems costs for our customers.

In addition to our 64 applications engineers, on December 31, 2003, we had 104 engineers, technologists and scientists who are organized into the following functional groups: Integrated Circuit Design, Software Engineering, Video and Image Processing Engineering, Display Interface Engineering, Systems Engineering and Product and Test Engineering.

We have invested, and expect that we will continue to invest, significant resources in research and development activities. Our research and development expenses, inclusive of stock-based compensation, were \$25.1 million, \$25.7 million and \$24.2 million in 2003, 2002, and 2001, respectively.

**MANUFACTURING**

Our products require advanced semiconductor processing and packaging technologies. Within the semiconductor industry we are known as a "fabless" company, meaning that we do not fabricate the semiconductors that we design and develop, but instead rely on third parties to manufacture our products. We have IC foundry relationships with Infineon, Semiconductor Manufacturing International Corporation, or SMIC, Taiwan Semiconductor Manufacturing Corporation, or TSMC, and Toshiba. This approach allows us to concentrate our resources on product design and development where we believe we have greater competitive advantages; however, as the estimated time for us to adapt a product's design to a particular contract manufacturer's process is at least four months, there is no readily available alternate supply for any specific product.

**INTELLECTUAL PROPERTY**

We rely on a combination of nondisclosure agreements and copyright, trademark and trade secret laws to protect the algorithms, design and architecture of our system-on-chip technology. As of February 2004, we held 8 patents in the U.S. and have 40 patent applications pending with the U.S. Patent and Trademark Office,

which relate generally to improvements in the visual display of digital image data including, but not limited to, improvements in image scaling, image correction, automatic image optimization and video signal processing for digital displays.

In addition to filing patents in the United States, we have applied for and have been granted 7 patents in Canada. We intend to seek patent protection for other significant technologies that we have already developed and expect to seek patent protection for future products as necessary. Any future patents may not be granted and if granted may be invalidated, circumvented, challenged or licensed to others.

To supplement the technologies that we develop internally, we have licensed rights to use intellectual properties held by third parties, and we may license additional technology rights in the future. If any of these agreements terminate, we would be required to exclude the licensed technology from our existing and future product lines.

In particular, we licensed two U.S. patents (5,767,916 and 5,805,233) in February 2000 from InFocus Corporation. These patents are related to the method and apparatus for automatic pixel clock phase and frequency correction in analog-to-digital video signal conversion. These patents expire in the year 2018.

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. We have indemnification obligations with respect to the infringement of third party intellectual property rights. There is no intellectual property litigation currently pending against us. However, we may, from time to time, receive notifications of claims that we may be infringing patents or other intellectual property rights owned by third parties. If it is necessary or desirable, we may seek licenses under those patents or intellectual property rights. However, we cannot be sure that licenses will be offered or that the terms of any offered licenses would be acceptable to us.

#### **COMPETITION**

In general, the market for semiconductors is intensely competitive. Our market is characterized by rapid technological change, evolving industry standards, compressed product life cycles and declining average selling prices. We believe the principle factors impacting competition in our markets are levels of product integration, functional versatility provided by software, compliance with industry standards, time to market, cost, product performance, system design costs, intellectual property, customer relationships and reputation.

Our current products face competition from specialized display controller developers and in-house display control chips designed by our customers and potential customers. Additionally, new, alternative display processing technologies and industry standards may emerge that directly compete with technologies that we offer.

We compete with specialized and diversified electronics and semiconductor companies that offer display processors or scaling components. Some of these include Genesis Microchip, I-Chips, ITE, Macronix, Mediatek, Media Reality Technologies, Micronas, MStar Semiconductor, Inc., Oplus, Realtek, Silicon Image, Silicon Optix, STMicroelectronics, Techwell, Topro, Trident, Trumpion, Weltrend, Zoran and other companies. Potential competitors may include diversified semiconductor manufacturers and the semiconductor divisions or affiliates of some of our customers, including ATI, Intel, Koninlijke Philips Electronics, LG Electronics, Matsushita Electric Industrial, Mitsubishi, National Semiconductor, NEC, nVidia, Samsung Electronics, Sanyo Electric Company, Sharp Corporation, Sony Corporation, Texas Instruments and Toshiba Corporation. In addition, start-up companies may seek to compete in our markets.

#### **EMPLOYEES**

As of December 31, 2003, we had a total of 241 employees – 104 in engineering, 90 in sales and marketing, of which 64 are application engineers and 26 sales and marketing staff, 15 in operations, and 32 in finance and administration. Of these employees, 146 are in the United States. None of our employees are represented by a collective bargaining agreement, nor have we experienced any work stoppage. We consider our relationship with our employees to be good. The Company's future success will depend in large part upon its ability to continue to attract, retain, and motivate highly skilled and qualified personnel.

**AVAILABLE INFORMATION**

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission (SEC) under the Securities Exchange Act of 1934 as amended (Exchange Act). You can inspect and copy our reports, proxy statements and other information filed with the SEC at the offices of the SEC's Public Reference Rooms in Washington, D.C., New York, New York and Chicago, Illinois. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Rooms. The SEC maintains an Internet Web site at <http://www.sec.gov/> where you can obtain most of our SEC filings. In addition, you can inspect our reports, proxy materials and other information at the offices of the Nasdaq Stock Market at 1735 K Street NW, Washington D.C. 20006. We also make available free of charge on our website at [www.pixelworks.com](http://www.pixelworks.com) our annual report on Form 10-K, quarterly reports on Form 10-Q, 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 they are filed electronically with the SEC.

**Item 2. Properties**

We lease approximately 55,000 square feet in two buildings located in Tualatin, Oregon, which house our corporate headquarters, and include engineering, operations, sales and marketing and administrative facilities. We have leased these spaces through various dates ranging from May 2004 through December 2008.

In connection with our acquisitions of nDSP Corp. in January 2002 and Jaldi Semiconductor in September 2002, we added approximately 13,000 square feet in Campbell, California, and 12,000 square feet in Ontario, Canada. These leased facilities house research and development activities. We have subsequently subleased approximately 4,000 square feet in Campbell due to excess capacity. The Canadian lease expires in August 2005 and the Campbell lease and sublease expire in May 2006.

We rent space in three cities in China for purposes of sales and customer support, and we anticipate commencing research and development operations in these offices. We also rent additional space in Japan and Taiwan for the purpose of sales and customer support.

**Item 3. Legal Proceedings**

We are involved in litigation from time to time that is routine in nature and incidental to our business. We believe that the outcome of any such litigation would not have a material adverse effect on our financial condition, results of operations or cash flows.

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

No matters were submitted to a vote of our security holders during the fourth quarter of the fiscal year ended December 31, 2003.

## PART II

### Item 5. Market for Registrant's Common Equity and Related Stockholder Matters

Our Common Stock is listed for trading on the Nasdaq National Market under the symbol "PXLW." The stock began trading on May 19, 2000. The following table sets forth, for the periods indicated, the highest and lowest sales prices for the Common Stock.

Fiscal 2003	High	Low
Fourth Quarter	\$ 14.65	\$ 8.68
Third Quarter	\$ 10.82	\$ 5.90
Second Quarter	\$ 8.83	\$ 5.46
First Quarter	\$ 8.95	\$ 5.25

Fiscal 2002	High	Low
Fourth Quarter	\$ 9.67	\$ 3.85
Third Quarter	\$ 8.37	\$ 3.50
Second Quarter	\$ 12.79	\$ 6.80
First Quarter	\$ 17.71	\$ 10.17

As of February 26, 2004, there were 346 shareholders of record, and the last per share sales price of the Common Stock on that date was \$16.57.

To date, we have not declared any cash dividends. We expect to retain any earnings to finance the expansion and development of our business and have no plans to declare cash dividends. The payment of dividends is within the discretion of our Board of Directors and will depend on our earnings, capital requirements and operating and financial condition, among other factors.

## Item 6. Selected Financial Data

The following selected financial data should be read in conjunction with Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Item 8. "Financial Statements and Supplementary Data."

### STATEMENTS OF OPERATIONS DATA

Year Ended December 31,	2003	2002	2001	2000	1999
In thousands, except per share data					
Revenue	\$ 140,921	\$ 102,641	\$ 90,808	\$ 52,593	\$ 12,812
Cost of revenue	<u>77,528</u>	<u>51,736</u>	<u>46,539</u>	<u>31,412</u>	<u>8,376</u>
Gross profit	63,393	50,905	44,269	21,181	4,436
Operating expenses:					
Research and development	23,674	23,730	18,096	10,225	4,805
Selling, general and administrative	24,805	21,865	16,373	9,708	4,366
Merger related expenses	8,949	-	-	-	-
Restructuring	5,049	-	-	-	-
In-process research and development	-	24,342	32,400	-	-
Stock-based compensation and amortization of goodwill and assembled workforce	3,530	3,214	24,403	2,157	558
Patent settlement expense	-	-	-	4,078	-
Total operating expenses	<u>66,007</u>	<u>73,151</u>	<u>91,272</u>	<u>26,168</u>	<u>9,729</u>
Loss from operations	(2,614)	(22,246)	(47,003)	(4,987)	(5,293)
Interest and other income, net	<u>1,177</u>	<u>2,275</u>	<u>4,444</u>	<u>4,420</u>	<u>409</u>
Loss before income taxes	(1,437)	(19,971)	(42,559)	(567)	(4,884)
Provision for (recovery of) income taxes	<u>(907)</u>	<u>880</u>	<u>-</u>	<u>-</u>	<u>3</u>
Net loss	(530)	(20,851)	(42,559)	(567)	(4,887)
Preferred stock beneficial conversion feature	-	-	-	9,996	-
Accretion of preferred stock redemption preference	-	-	-	<u>2,100</u>	<u>4,278</u>
Net loss attributable to common shareholders	<u>\$ (530)</u>	<u>\$ (20,851)</u>	<u>\$ (42,559)</u>	<u>\$ (12,663)</u>	<u>\$ (9,165)</u>
Net loss per share: basic and diluted	<u>\$ (0.01)</u>	<u>\$ (0.48)</u>	<u>\$ (1.05)</u>	<u>\$ (0.50)</u>	<u>\$ (1.53)</u>
Weighted average shares outstanding:					
basic and diluted	<u>45,337</u>	<u>43,397</u>	<u>40,662</u>	<u>25,573</u>	<u>5,971</u>

### BALANCE SHEET DATA

December 31,	2003	2002	2001	2000	1999
In thousands					
Cash and cash equivalents	\$ 75,165	\$ 62,152	\$ 53,288	\$ 49,681	\$ 12,199
Working capital	91,581	95,776	98,820	100,371	12,770
Total assets	233,317	227,212	202,839	120,294	18,394
Long-term obligations, net of current portion	-	-	-	-	591
Redeemable convertible preferred stock	-	-	-	-	23,701
Total shareholders' equity (deficit)	220,305	214,816	193,633	106,453	(9,295)

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

### **FORWARD-LOOKING STATEMENTS**

This Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this Report contain "forward-looking statements" within the meaning of the Securities Litigation Reform Act of 1995 that are based on current expectations, estimates, beliefs, assumptions and projections about our business. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and variations of such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks and uncertainties that are difficult to predict. Actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements due to numerous factors. Such factors include, but are not limited to, increased competition, continued adverse economic conditions in the U.S. and internationally, including adverse economic conditions in the specific markets for our products, adverse business conditions, failure to design, develop and manufacture new products, lack of success in technological advancements, lack of acceptance of new products, unexpected changes in the demand for our products and services, the inability to successfully manage inventory pricing pressures, failure to reduce costs or improve operating efficiencies, changes to and compliance with international laws and regulations, currency fluctuations and our ability to attract, hire and retain key and qualified employees. These forward-looking statements speak only as of the date on which they are made, and we do not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date of this Annual Report on Form 10-K. If we do update or correct one or more forward-looking statements, you should not conclude that we will make additional updates or corrections with respect thereto or with respect to other forward-looking statements.

(Dollars and shares in thousands)

### **OVERVIEW**

We are a leading designer, developer and marketer of semiconductors and software for the advanced display industry, including advanced televisions, multimedia projectors and flat panel monitors. Our system-on-chip semiconductors provide the 'intelligence' for these new types of displays by processing and optimizing video and computer graphic signals to produce high-quality and realistic images. Many of the world's leading manufacturers of consumer electronics and computer display products utilize our technology to enhance image quality and ease of use of their products. Our goal is to provide all of the electronics necessary to process the entire signal path in order to provide a turnkey solution for our customers.

We sell our products worldwide through a direct sales force and indirectly through distributors and manufacturers representatives. We sell to distributors in Japan, Taiwan, China and Europe. Sales to distributors represented 69%, 68% and 61% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. Manufacturers representatives support some of our European and Korean sales.

Historically, significant portions of our revenue have been generated by sales to a relatively small number of end customers and distributors. Our top five end customers accounted for 35%, 41% and 43% of our total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. End customers are customers that indirectly purchase our products through distributors and contract manufacturers as well as directly from us.

Significant portions of our products are sold overseas. Sales outside the U.S. accounted for approximately 99%, 98% and 91% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. Our integrators, branded manufacturers and branded suppliers incorporate our products into systems that are sold worldwide. All revenue to date has been denominated in U.S. dollars.

## **ACQUISITIONS**

On January 30, 2001, we made an investment of \$7,500 in Jaldi Semiconductor Corporation ("Jaldi"), a privately held development stage semiconductor company. On September 6, 2002, we acquired the remaining equity interest in Jaldi in exchange for an undertaking to issue 1,731 shares of Pixelworks' common stock upon the exchange of Jaldi shares plus the assumption of all outstanding Jaldi stock options. The acquisition was accounted for as an asset purchase and the results of Jaldi's operations are included in Pixelworks' financial statements beginning on September 6, 2002. The Company incurred a charge of \$20,142 in the third quarter of 2002 for purchased in-process research and development ("IPR&D") related to the acquisition. Jaldi had two products under development at the acquisition date contributing 70% and 30% of the total IPR&D value. As of the acquisition date, the development projects ranged from 70% to 90% complete. Since the date of the acquisition, both of the products in development have been completed.

On January 14, 2002, we acquired all of the outstanding shares of nDSP, Inc. ("nDSP"), a fabless semiconductor company, in exchange for 1,186 shares of Pixelworks' common stock. The acquisition was accounted for using the purchase method of accounting and the results of nDSP's operations are included in Pixelworks' financial statements beginning on January 14, 2002. The Company incurred a charge of \$4,200 in the first quarter of 2002 for IPR&D related to the acquisition. nDSP had three main product lines under development at the acquisition date, each contributing from 7% to 64% of the total IPR&D value. As of the acquisition date, the development projects ranged from 20% to 80% complete. Since the date of the acquisition, two of the products in development have been completed. Development of the third product was discontinued, however the video and de-interlacing technology from this product was integrated into another Pixelworks product.

On January 30, 2001, we acquired all of the outstanding capital stock and stock options of Panstera, Inc. ("Panstera"), a privately held fabless semiconductor company, in exchange for 4,500 shares of Pixelworks Common Stock. The acquisition was accounted for using the purchase method of accounting and the results of Panstera's operations are included in Pixelworks' financial statements beginning on January 30, 2001. The Company incurred a charge of \$32,400 in the first quarter of 2001 for IPR&D related to the acquisition. Panstera had four main product groups under development at the acquisition date, each contributing from 11% to 41% of the total IPR&D value. As of the acquisition date, the development projects ranged from an estimated 50% to 85% complete. Development efforts on the four main product groups have been concluded.

## **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The preparation of financial statements in conformity with GAAP requires management to make estimates and judgments that affect the amounts reported in the financial statements and accompanying notes. On an on-going basis, we evaluate our estimates, including those related to product returns, warranty obligations, inventories, property and equipment, intangible assets, income taxes, litigation and other contingencies. We base our estimates on historical experience 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 the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements:

**Revenue Recognition.** We recognize revenue in accordance with Staff Accounting Bulletin No. 104, *Revenue Recognition*. Accordingly, revenue is recognized when an authorized purchase order has been received, the sales price is fixed and determinable, title has transferred, collection of the resulting receivable is probable and product returns are reasonably estimable. This generally occurs upon shipment of the underlying merchandise for product sales to direct customers. This also occurs upon shipment of the underlying merchandise for product sales to distributors if the distributor has a firm sales commitment from an end customer.

**Sales Returns and Allowances.** Our customers do not have a stated right to return product other than under our warranty policy discussed below. As such, customer returns are accepted on a case-by-case basis only as a customer accommodation. However, certain of our distributors have stock rotation provisions in their distributor agreements, which allow them to return 5-10% of the products purchased in the prior six months in exchange for products of equal value. Certain distributors also have price protection provisions in their agreements with us.

We record estimated reductions to revenue for these sales returns and allowances in our reserve for sales returns and allowances. We update the balance in this reserve based on historical experience at each reporting period. If actual returns and allowances increase, we may be required to recognize additional reductions to revenue. Our reserve for sales returns and allowances totaled \$202 and \$588 at December 31, 2003 and 2002, respectively.

**Product Warranties.** We warrant that our products will be free from defects in materials and workmanship for a period of twelve months from delivery. Warranty repairs are guaranteed for the remainder of the original warranty period. Our warranty is limited to repairing or replacing products, or refunding the purchase price.

We record the estimated cost of product warranties in our warranty reserve. We update the balance in this reserve based on historical experience at each reporting period. While we engage in extensive product quality programs and processes, which include actively monitoring and evaluating the quality of our suppliers, should actual product failure rates or product replacement costs differ from our estimates, revisions to the estimated warranty liability may be required. Our warranty reserve totaled \$569 and \$769 at December 31, 2003 and 2002, respectively.

**Allowance for Doubtful Accounts.** We offer credit to customers after careful examination of their creditworthiness. We maintain an allowance for doubtful accounts for estimated losses that may result from the inability of our customers to make required payments. We update the balance in the allowance based on historical experience and the age of outstanding receivables at each reporting period. 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. The balance in our allowance for doubtful accounts was \$212 at December 31, 2003 and 2002, and bad debt expense for the years ended December 31, 2003, 2002, and 2001 was \$0, \$7, and \$0 respectively.

**Inventory Valuation.** We record a reserve against our inventory for estimated obsolete, unmarketable, and otherwise impaired products by calculating the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. We review our inventory at the end of each reporting period for valuation issues. If actual market conditions are less favorable than those projected by management at the time the reserve was recorded, additional inventory write-downs may be required. Our inventory valuation reserve totaled \$1,942 and \$1,377 at December 31, 2003 and 2002, respectively.

**Useful Lives and Recoverability of Equipment and Other Long-Lived Assets.** We evaluate the remaining life and recoverability of equipment and other assets, including identifiable intangible assets with definite lives, whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable in accordance with Statement of Financial Accounting Standards ("SFAS") No. 144 *Accounting for the Impairment or Disposal of Long-Lived Assets*. If there is an indication of impairment, we prepare an estimate of future, undiscounted cash flows expected to result from the use of each asset and its eventual disposition. If these cash flows are less than the carrying value of the asset, we adjust the carrying amount of the asset to its estimated fair value.

In September 2003, we initiated a restructuring to better position the Company to compete in the advanced television market. The restructuring included the discontinuation of research and development efforts related to two products. As a result of these actions, we determined that certain tangible and intangible assets related to the discontinued development efforts were permanently impaired because there were no alternate uses for them. Impaired assets included tooling, licensed technology and prepaid royalties. The net book value of the impaired assets totaled \$3,927 at the discontinuation date, and this amount was recognized as a restructuring charge in the third quarter of 2003. At December 31, 2003, there were no remaining assets related to these discontinued products. We did not record any other impairment charges against equipment or other long-lived assets in 2003, 2002 or 2001.

**Goodwill.** Goodwill, which represents the excess of cost over the fair value of net assets acquired in business combinations, is tested annually for impairment, and is tested for impairment more frequently if events and circumstances indicate that the goodwill might be impaired. The impairment tests are performed in accordance with FASB Statement No. 142, *Goodwill and Other Intangible Assets*. Accordingly, an impairment loss is recognized to the extent that the carrying amount of goodwill exceeds its implied fair value. This determination is made at the reporting unit level. We have assigned all goodwill to a single, enterprise-level reporting unit. The impairment test consists of two steps. First, we determine the fair value of the reporting unit. The fair value is then compared to its carrying amount. Second, if the carrying amount of the reporting unit exceeds its fair value, an impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the implied fair value of that goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation in accordance with FASB Statement No. 141, *Business Combinations*. The residual fair value after this allocation is the implied fair value of the reporting unit goodwill. We perform our annual impairment test in the first quarter of each year. We did not record any goodwill impairment charges in 2003, 2002 or 2001.

**Income Taxes.** We record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. Should we determine that we will not be able to realize all or part of our net deferred tax asset in the future, an adjustment to the deferred tax asset would be charged to income in the period such determination was made. We had recorded a valuation allowance of \$13,452 and \$11,760 as of December 31, 2003 and 2002, respectively.

## RESULTS OF OPERATIONS

The following table sets forth certain financial data for periods indicated:

Year Ended December 31,	2003		2002		2001	
	Dollars	% of sales	Dollars	% of sales	Dollars	% of sales
Revenue	\$ 140,921	100.0%	\$ 102,641	100.0%	\$ 90,808	100.0%
Cost of revenue	77,528	55.0	51,736	50.4	46,539	51.2
Gross profit	63,393	45.0	50,905	49.6	44,269	48.8
Operating expenses:						
Research and development	23,674	16.8	23,730	23.1	18,096	19.9
Selling, general and administrative	24,805	17.6	21,865	21.3	16,373	18.0
Merger related expenses	8,949	6.4	-	-	-	-
Restructuring	5,049	3.6	-	-	-	-
In-process research and development	-	-	24,342	23.7	32,400	35.7
Stock-based compensation and amortization of goodwill and assembled workforce	3,530	2.5	3,214	3.1	24,403	26.9
Total operating expenses	66,007	46.8	73,151	71.3	91,272	100.5
Loss from operations	(2,614)	(1.9)	(22,246)	(21.7)	(47,003)	(51.8)
Interest income	1,188	0.8	2,349	2.3	4,444	4.9
Interest expense	(11)	-	(74)	(0.1)	-	-
Interest income, net	1,177	0.8	2,275	2.2	4,444	4.9
Loss before income taxes	(1,437)	(1.0)	(19,971)	(19.5)	(42,559)	(46.9)
Provision for (recovery of) income taxes	(907)	(0.6)	880	0.9	-	-
Net loss	\$ (530)	(0.4)%	\$ (20,851)	(20.3)%	\$ (42,559)	(46.9)%

Percentages may not add due to rounding.

## Revenue

Revenue increased 37.3% in 2003 compared to 2002 and increased 13.0% in 2002 compared to 2001.

Changes in units shipped and average selling prices were as follows:

	2003 compared to 2002	2002 compared to 2001
Increase in total units sold	79%	82%
Decrease in average selling prices	23%	38%

The increase in units sold in 2003 compared to 2002 was primarily due to:

- growth in the overall multimedia projector market, which was partially driven by the introduction of "sub-\$1,000" projectors (and more recently, "sub-\$800 projectors");
- growth in advanced television products, which was attributable to an increase in shipments to LCD television, plasma display and advanced CRT manufacturers; and
- an increase in shipments to manufacturers of UXGA resolution monitors and LCD smart panel manufacturers.

The increase in units sold in 2002 compared to 2001 was primarily due to:

- growth in the overall multimedia projector market, especially in Japan;
- growth in the advanced television market as well as the shipment of products added through our acquisition of nDSP in January 2002; and
- an increase in shipments to manufacturers of UXGA resolution monitors and LCD smart panel manufacturers.

Over the last two years we have experienced a decrease in average selling prices primarily due to aggressive pricing competition in each of our markets. In the latter part of 2003, however, average selling prices did not decrease as rapidly as they had in 2002 and the first half of 2003, due to the mix of products sold.

## Performance by Market Segment

Revenue by category as a percentage of total revenue was as follows:

	2003	2002	2001
Multimedia projectors	53%	57%	57%
Advanced televisions	27%	16%	3%
LCD monitors	18%	23%	38%
Other	2%	4%	2%

In each of the last two years, we have seen a significant increase in consumer demand for increasingly feature-rich LCD televisions, progressive scan televisions, plasma displays and digital rear projection televisions. As a result, revenue generated from sales to advanced television manufacturers increased as a percentage of total revenue over the past two years. Conversely, this demand trend, as well as our shift away from development of lower-end LCD monitor chips, caused a decrease in our revenue from sales to LCD monitor manufacturers as a percentage of total revenue. However, we continue to invest in developing smart timing controller products that reduce cost and improve an LCD monitor's performance.

Revenue from sources other than multimedia projectors, advanced televisions, and LCD monitors is not expected to be significant in the near future.

### Performance by Geographic Area

Revenue by geographic location as a percentage of total revenue was as follows:

	2003	2002	2001
Japan	42%	48%	52%
Taiwan	24%	17%	15%
China	13%	6%	1%
Korea	10%	12%	15%
Europe	6%	5%	7%
U.S.	1%	2%	9%
Other	4%	10%	1%

Greater demand for advanced televisions has caused an increase in revenue from Taiwan and China as a percentage of total revenue, where many advanced television manufacturers are located. This trend, in addition to our shift away from development of lower-end LCD monitor chips, has also caused a decrease in revenue from Korea as a percentage of total revenue, because many of our LCD monitor manufacturer customers are located in Korea. Revenue from Japan, where a large percentage of our revenue is generated from sales to the projector market, has decreased as a percentage of total revenue from 2001 to 2003 due to the increase in demand for advanced televisions.

### Cost of Sales and Gross Profit

Cost of sales includes purchased materials, assembly, test, labor and overhead, warranty, royalties, amortization of purchased developed technology and provisions for slow moving and obsolete inventory.

The reduction in gross profit margin in 2003 compared to 2002 was due to an intensely competitive environment that resulted in average selling prices declining at a more rapid rate than average product costs. Declines in gross profit margin are characteristic of our products and the markets we serve, and we expect this will occur again in the future, however we cannot predict when or how severe it will be. As a result, we actively seek ways to reduce our cost to manufacture our products.

### Research and Development

Research and development expense includes compensation and related costs for personnel, depreciation and amortization, expensed equipment and fees for outside services. Research and development expense, inclusive of stock-based compensation expense, was as follows:

	2003	2002	2001
Research and development expense, inclusive of stock-based compensation expense	\$ 25,148	\$ 25,720	\$ 24,246

Research and development expense, inclusive of stock-based compensation expense, decreased \$572 from 2003 to 2002 due to the following offsetting factors:

- a \$942 increase in compensation expense primarily related to increased personnel from our September 2002 Jaldi acquisition;
- a \$207 increase in expensed equipment and software;
- a \$138 decrease in recruiting expenses;
- a \$516 decrease in stock-based compensation expense; which was attributable to our use of the accelerated method of expense recognition, under which more expense is recognized in earlier periods, and
- a \$949 decrease in development related expenses including non-recurring engineering and outside services.

The \$1,474 increase in 2002 compared to 2001 resulted primarily from the following offsetting factors:

- a \$3,905 increase in compensation expenses related to an increase in personnel of 46 employees;
- a \$1,826 increase in depreciation and amortization and other software and equipment related expenses due to increased capital expenditures and acquired assets; and
- a \$4,160 decrease in stock-based compensation expense, which was attributable to our use of the accelerated method of expense recognition, under which more expense is recognized in earlier periods.

We expect our research and development expenditures to increase in future periods to support our continuing investment in new product development programs.

**Selling, General and Administrative**

Selling, general and administrative expense includes compensation and related costs for personnel, travel, outside services, sales commissions, and overhead incurred in our sales, marketing, customer support, management, legal and other professional and administrative support functions. Selling, general and administrative expense, inclusive of stock-based compensation expense, was as follows:

	2003	2002	2001
Selling, general and administrative expense, inclusive of stock-based compensation expense	\$ 26,375	\$ 22,847	\$ 18,644

The \$3,528 increase in 2003 compared to 2002 resulted primarily from the following offsetting factors:

- a \$1,282 increase in compensation expense due to an increase in personnel primarily in our foreign offices;
- a \$588 increase in stock-based compensation expense;
- a \$236 increase in rent expense due to additional leased building space to support the increase in employees;
- a \$164 increase in sales commissions, which were payable as a result of increased revenue;
- a \$131 increase in outside services primarily for legal and accounting services;
- a \$112 increase in investor relations expense;
- a \$480 increase in insurance expense due to higher Directors and Officers insurance premiums; and
- a \$158 decrease in travel and entertainment.

The \$4,203 increase in 2002 compared to 2001 primarily resulted from the following offsetting factors:

- a \$1,935 increase in compensation expenses related to an increase in personnel of 34 employees;
- a \$1,211 increase in rent expense due to an increase in building space to support a greater number of employees with new office locations in China, California and Canada;
- a \$403 increase in depreciation and amortization due to additional purchases of long-term assets;
- a \$639 increase in outside services primarily for legal and accounting services;
- a \$326 increase in sales commissions due to higher revenue;
- a \$364 increase in insurance due to higher Directors and Officers insurance premiums;
- a \$422 increase in travel related to customer visits to support product sales; and
- a \$1,289 decrease in stock-based compensation expense, which was attributable to our use of the accelerated method of expense recognition, under which more expense is recognized in earlier periods.

We expect our selling, general and administrative expenses to increase in future periods. The increases will result from higher sales-related and overhead costs that will be required to support a higher revenue base.

**Merger Related Expenses**

Merger related expenses totaling \$8,949 in 2003 represent costs related to our proposed merger with Genesis Microchip. The proposed merger was terminated August 5, 2003, and in the termination agreement, we agreed to pay a \$5,500 termination fee to Genesis Microchip. The fee was payable immediately and was expensed in the third quarter of 2003. Additional merger-related expenses incurred consisted primarily of legal fees.

**Restructuring**

In September 2003, we initiated a restructuring to better position the Company to compete in the advanced television market. The restructuring included the discontinuation of all research and development efforts related to two products.

As a result of these actions, we determined that certain tangible and intangible assets related to the discontinued development efforts were permanently impaired. The net book value of the impaired assets totaled \$3,927 at the discontinuation date, and this amount was recognized as a restructuring charge in the third quarter of 2003.

In addition, we implemented a reduction in force, which was communicated to employees on their termination date in the fourth of quarter 2003. The employees were granted one-time termination benefits. The total amount of these benefits was approximately \$916 and was expensed in the fourth quarter of 2003.

We also subleased approximately 4,000 square feet of our California office as a result of the restructuring. We included the present value of the difference between the future minimum lease payments and the non-cancelable sublease rentals in restructuring expense during the fourth quarter of 2003.

We do not anticipate any further costs related to this restructuring in future periods, and there are no material amounts accrued as of December 31, 2003 related to this restructuring.

**In-Process Research and Development**

In-process research and development expense totaling \$24,342 in 2002 represents the discounted future cash flows from research and development projects in progress, but not yet completed, at the time of our acquisition of nDSP in January of 2002 and Jaldi in September 2002.

In-process research and development expense totaling \$32,400 in 2001 resulted from the acquisition of Panstera in January 2001.

**Stock-Based Compensation and Amortization of Goodwill and Assembled Workforce**

Detail of stock-based compensation and amortization of goodwill and assembled workforce is as follows:

	2003	2002	2001
Stock-based compensation <sup>(1)</sup>	\$ 3,052	\$ 2,993	\$ 8,461
Amortization of assembled workforce	486	242	550
Amortization of goodwill	-	-	15,432
	<u>\$ 3,538</u>	<u>\$ 3,235</u>	<u>\$ 24,443</u>

(1) Includes amounts included in cost of sales of: \$ 8    \$ 21    \$ 40

As part of our restructuring efforts in the fourth quarter of 2003, we modified certain stock options as a severance benefit to employees. As a result of the modifications, we saw an increase in stock-based compensation from 2002 to 2003.

We use an accelerated method of expense recognition for stock-based compensation. Under this method, more expense is recognized in earlier periods. This led to the decrease in stock-based compensation from 2001 to 2002. The decrease was also attributable in part to reversals of deferred stock-based compensation resulting from employee terminations.

Amortization of the December 31, 2003 balance of \$449 of deferred stock-based compensation is estimated to be \$381 and \$68 for the years ending December 31, 2004 and 2005, respectively.

At the time of the acquisition of Panstera in January 2001, we recorded \$84,175 of goodwill, which was being amortized over sixty months at the rate of \$4,210 per quarter, and \$1,800 of assembled workforce, which was being amortized over thirty-six months at the rate of \$150 per quarter. As a result of the adoption of SFAS No. 142, *Goodwill and Other Intangible Assets*, the Panstera assembled workforce was reclassified to goodwill on January 1, 2002 and we ceased amortization of these assets on that date.

As a result of the Jaldi asset acquisition in September 2002, we recorded \$2,909 in assembled workforce, which is being amortized over 36 months. On December 31, 2002, Pixelworks, Inc. entered into an intellectual property asset purchase agreement with Jaldi Semiconductor Corporation, Pixelworks' Canadian subsidiary. As a result of the agreement, the Jaldi purchase price allocation was revised to reallocate \$1,332 of the excess purchase price over the fair value of the net assets acquired from the assembled workforce asset to a deferred tax charge and a reduction in the deferred tax liability.

#### **Interest Income**

The decrease in interest income in 2003 compared to 2002 and in 2002 compared to 2001 was primarily the result of lower yields on invested cash due to declining interest rates over the past two years.

#### **Provision for (Recovery of) Income Taxes**

We recorded an income tax benefit of \$907 for the year ended December 31, 2003. The tax benefit exceeds the expected benefit based on the statutory rates due to several permanent differences including, but not limited to, federal and state research and experimentation tax credits, stock-based compensation expense and amortization of purchased developed technology. The tax benefit of these items is partially offset by an increase in the valuation allowance against net operating loss carryforwards at Jaldi, due to the implementation of a research and development contract with that subsidiary.

We recorded a provision for income taxes in 2002 of \$880 despite the recognition of a pretax book loss. This was attributable to certain large non-cash expenses that were recognized for book purposes but were not deductible for tax purposes. Because these items were not tax deductible, we had taxable income in 2002. The large non-cash expenses that were not tax deductible included in-process research and development, amortization of purchased developed technology and stock-based compensation expense.

As of December 31, 2003, we had generated deductible temporary differences and operating loss and tax credit carryforwards. We have approximately \$20,606, \$29,448 and \$6,432 of operating loss carryforwards to offset future taxable income for federal, state and foreign tax purposes, respectively. The carryforwards expire on various dates through 2022, if not used. Utilization of a portion of net operating losses is subject to an annual limitation due to the ownership change provisions of the Internal Revenue Code of 1986 and similar state provisions.

We have established a valuation allowance for certain deferred tax assets, including net operating loss and tax credit carryforwards. A valuation allowance is recorded when it is more likely than not that some portion of the deferred tax assets will not be realized. At December 31, 2003, the valuation allowance totaled \$13,452 and we had \$5,497 of net deferred tax assets on our balance sheet. Accordingly, we may record additional valuation allowances in the future. The benefit of the operating loss and tax credit carryforwards, when utilized, will be an increase to equity or a reduction of goodwill.

#### **LIQUIDITY AND CAPITAL RESOURCES**

As of December 31, 2003, we had cash and cash equivalents of \$75,165, short and long-term investments of \$25,531 and working capital of \$91,581. We anticipate that our cash and investment balances, along with cash expected to be generated from operations will be adequate to fund our operating and investing needs for the next twelve months and the foreseeable future. From time to time, we may evaluate acquisitions of businesses, products or technologies that complement our business. Any such transactions, if consummated, may consume a material portion of our working capital or require the issuance of equity securities that may result in dilution to existing shareholders.

Accounts receivable decreased to \$8,468 at December 31, 2003 from \$10,421 at December 31, 2002. Average days sales outstanding ("DSO") decreased to 19 at December 31, 2003 compared to 32 days at December 31, 2002. The decrease in DSO was primarily attributable to a smaller portion of shipments in the third month of the fourth quarter in 2003 compared to 2002.

Inventories increased to \$10,478 at December 31, 2003 from \$6,788 at December 31, 2002 primarily to support increased sales activity during 2003 and forecasted increases in the first quarter of 2004. In addition, we have had an increase in the number of parts we are building in the customer-owned tooling process. In this process, we directly contract the manufacture of wafers and assume the responsibility for assembly and testing of our products. As a result, inventory parts are accounted for at an earlier stage of production than they are when we contract with a single foundry for complete production. Inventory turns were approximately 8 on an annualized basis in the fourth quarter of 2003 compared to approximately 11 for the fourth quarter of 2002. The \$10,478 inventory balance at December 31, 2003 represents approximately 6 weeks of shipments. We believe that our inventory levels are adequate based on projected usage and sales forecasts.

Capital expenditures of \$4,385 in 2003 were primarily for software, computer equipment and tooling. The increase in other long-term assets, net in 2003 is primarily due to a \$10,000 investment in Semiconductor Manufacturing International Corporation, a Chinese wafer foundry. Other long-term assets also include deferred tax assets and licensed technology.

#### CONTRACTUAL PAYMENT OBLIGATIONS

A summary of our contractual commitments and obligations as of December 31, 2003 is as follows:

Contractual Obligation	Total	Payments Due By Period			
		2004	2005 and 2006	2007 and 2008	2009 and beyond
Operating Leases	\$ 4,728	\$ 1,958	\$ 1,992	\$ 778	\$ -
Estimated Q1 2004 purchase commitments to contract manufacturers	19,320	19,320	-	-	-

The lease payments above are net of sublease rentals of \$73, \$95 and \$40 for the years ending December 31, 2004, 2005 and 2006.

#### OFF-BALANCE SHEET ARRANGEMENTS

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a material current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

#### RECENT ACCOUNTING PRONOUNCEMENTS

In November 2002, the Emerging Issues Task Force reached a consensus on Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables* ("EITF 00-21"). EITF 00-21 addresses certain aspects of accounting by a vendor for arrangements under which the vendor will perform multiple revenue generating activities. EITF 00-21 was effective for interim periods beginning after June 15, 2003. The adoption of EITF 00-21 did not have a material impact on our consolidated financial position or results of operations.

In December 2003, the SEC issued Staff Accounting Bulletin No. 104, *Revenue Recognition* ("SAB 104"), which updates the previously issued revenue recognition guidance in SAB 101, to reflect the consensus reached in EITF 00-21. The application of SAB 104 has not had a material effect on our financial position or results of operations.

In December 2003, the FASB issued FASB Interpretation No. 46 (revised December 2003), *Consolidation of Variable Interest Entities*, which addresses how a business enterprise should evaluate whether it has a controlling financial interest in an entity through means other than voting rights and accordingly should consolidate the entity. FIN 46R replaces FASB Interpretation No. 46, *Consolidation of Variable Interest Entities*, which was issued

in January 2003. We will be required to apply FIN 46R to variable interests in VIEs created after December 31, 2003. For variable interests in VIEs created before January 1, 2004, the Interpretation will be applied beginning on January 1, 2005. For any VIEs that must be consolidated under FIN 46R that were created before January 1, 2004, the assets, liabilities and noncontrolling interests of the VIE initially would be measured at their carrying amounts with any difference between the net amount added to the balance sheet and any previously recognized interest being recognized as the cumulative effect of an accounting change. If determining the carrying amounts is not practicable, fair value at the date FIN 46R first applies may be used to measure the assets, liabilities and noncontrolling interest of the VIE. We are not currently aware of any involvement in any VIEs and, therefore, the adoption of this interpretation did not have any effect on our financial position or results of operations.

In April 2003, the FASB issued SFAS No. 149, *Amendment of Statement 133 on Derivative Instruments and Hedging Activities* ("SFAS 149"). SFAS 149 amends and clarifies financial accounting and reporting for derivative instruments, including certain derivative instruments embedded in other contracts and for hedging activities under SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. The provisions of SFAS 149 were effective for contracts entered into after June 30, 2003. The adoption of SFAS 149 did not have a material impact on our financial position or results of operations.

In May 2003, the FASB issued SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity* ("SFAS 150"). SFAS 150 established standards for how an issuer classifies and measures certain financial instruments with characteristics of both liabilities and equity. It requires that an issuer classify certain instruments as liabilities (or assets in some circumstances). Many of those instruments were previously classified as equity. SFAS 150 was effective for financial instruments entered into or modified after May 31, 2003, and otherwise was effective on July 1, 2003. The adoption of SFAS 150 did not have a material impact on our financial position or results of operations.

#### **RISK FACTORS**

Investing in our shares of common stock involves a high degree of risk. If any of the following risks occur, the market price of our shares of common stock could decline and investors could lose all or part of their investment.

#### **RISKS RELATED TO OUR OPERATIONS**

##### **We have incurred net losses since our inception, and we may not achieve or sustain annual profitability.**

We incurred net losses of \$530, \$20,851 and \$42,559 in 2003, 2002 and 2001, respectively. In the future we expect our research and development and selling, general and administrative expenses to increase. Given expected increases in operating expenses, we must increase revenues and gross profit to become profitable. We cannot be certain that we will achieve profitability in the future or, if we do, that we can sustain or increase profitability on a quarterly or annual basis. This may in turn cause the price of our common stock to decline. In addition, if we are not profitable in the future we may be unable to continue our operations.

##### **Fluctuations in our quarterly operating results make it difficult to predict our future performance and may result in volatility in the market price of our common stock.**

Our quarterly operating results have varied significantly from quarter to quarter and are likely to vary significantly in the future based on a number of factors related to our industry and the markets for our products. Some of these factors are not in our control and any of them may cause the price of our common stock to fluctuate. These factors include:

- demand for multimedia projectors, advanced televisions, and LCD monitors;
- demand for our products and the timing of orders for our products;
- the deferral of customer orders in anticipation of our new products or product enhancements or due to a reduction in our end customers' demand;
- the loss of one or more of our key distributors or customers or a reduction, delay or cancellation of orders from one or more of these parties;

- changes in the available production capacity at the semiconductor fabrication foundries that manufacture our products and changes in the costs of manufacturing;
- our ability to provide adequate supplies of our products to customers and avoid excess inventory;
- announcement or introduction of products and technologies by our competitors;
- changes in product mix, product costs or pricing, or distribution channels; and
- general economic conditions and economic conditions specific to the personal computer, display and semiconductor markets.

These factors are difficult or impossible to forecast, and these or other factors could seriously harm our business. We anticipate the rate of new orders may vary significantly from quarter to quarter. Our operating expenses and inventory levels are based on our expectations of future revenues and our operating expenses are relatively fixed in the short term. Consequently, if anticipated sales and shipments in any quarter do not occur when expected, operating expenses and inventory levels could be disproportionately high, and our operating results for that quarter and, potentially, future quarters may be negatively impacted. Any shortfall in our revenues would have a direct impact on our business. In addition, fluctuations in our quarterly results could adversely affect the price of our common stock in a manner unrelated to our long-term operating performance. Because our operating results are volatile and difficult to predict, you should not rely on the results of one quarter as an indication of our future performance. It is possible that in some future quarter our operating results will fall below the expectations of securities analysts and investors. In this event, the price of our common stock may decline significantly.

**Our products are characterized by average selling prices that decline over relatively short time periods, which will negatively affect financial results unless we are able to reduce our product costs or introduce new products with higher average selling prices.**

Average selling prices for our products decline over relatively short time periods while many of our product costs are fixed. When our average selling prices decline, our revenues decline unless we are able to sell more units or reduce the cost to manufacture our products. Our operating results are negatively affected when revenue or gross profit margins decline. We have experienced these problems and expect that we will continue to experience them in the future, although we cannot predict when they may occur or how severe they will be.

**Our highly integrated products and high-speed mixed signal products are difficult to manufacture without defects and the existence of defects in the manufactured products could result in an increase in our costs and delays in the availability of our products.**

The manufacture of semiconductors is a complex process and it is often difficult for semiconductor foundries to produce semiconductors free of defects. Because our products are more highly integrated than many other semiconductors and incorporate mixed analog and digital signal processing and embedded memory technology, they are even more difficult to produce without defects.

The ability to manufacture products of acceptable quality depends on both product design and manufacturing process technology. Since defective products can be caused by either design or manufacturing difficulties, identifying quality problems can occur only by analyzing and testing our semiconductors in a system after they have been manufactured. The difficulty in identifying defects is compounded because the process technology is unique to each of the multiple semiconductor foundries we contract with to manufacture our products. Failure to achieve defect-free products due to their increasing complexity may result in an increase in our cost and delays in the availability of our products. For example, we have experienced field failures of our ICs in certain customer system applications that required us to institute additional IC level testing. As a result of these field failures we incurred additional costs due to customers returning potentially affected products. Additionally, customers have experienced delays in receiving product shipments from us that resulted in the loss of revenue and profits.

**If we do not achieve additional design wins in the future, our ability to grow would be seriously limited.**

Our future success will depend on developers of advanced display products designing our products into their systems. To achieve design wins we must define and deliver cost-effective, innovative and integrated semiconductors. Once a supplier's products have been designed into a system, the developer may be reluctant to change its source of components due to the significant costs associated with qualifying a new supplier. Accordingly, the failure on our part to obtain additional design wins with leading branded manufacturers or integrators, and to successfully design, develop and introduce new products and product enhancements could harm our business, financial condition and results of operations.

Achieving a design win does not necessarily mean that a developer will order large volumes of our products. A design win is not a binding commitment by a developer to purchase our products. Rather, it is a decision by a developer to use our products in the design process of that developer's products. Developers can choose at any time to discontinue using our products in their designs or product development efforts. If our products are chosen to be incorporated into a developer's products, we may still not realize significant revenues from that developer if that developer's products are not commercially successful.

**Because of the complex nature of our semiconductor designs and of the associated manufacturing process and the rapid evolution of our customers' product designs we may not be able to develop new products or product enhancements in a timely manner, which could decrease customer demand for our products and reduce our revenues.**

The development of our semiconductors, some of which incorporate mixed analog and digital signal processing, is highly complex. These complexities require that we employ advanced designs and manufacturing processes that are unproven. We have experienced increased development time and delays in introducing new products that resulted in significantly less revenue than originally expected for those products. We will not always succeed in developing new products or product enhancements nor will we always do so in a timely manner. Acquisitions have significantly added to the complexity of our product development efforts. We must now coordinate very complex product development programs between multiple, geographically dispersed locations.

Many of our designs involve the development of new high-speed analog circuits that are difficult to simulate and that require physical prototypes not required by the primarily digital circuits we currently design. The result could be longer and less predictable development cycles.

Successful development and timely introduction of new or enhanced products depends on a number of other factors, including:

- accurate prediction of customer requirements and evolving industry standards, including digital interface and content piracy protection standards;
- development of advanced display technologies and capabilities;
- timely completion and introduction of new product designs;
- use of advanced foundry processes and achievement of high manufacturing yields; and
- market acceptance of the new products.

If we are not able to successfully develop and introduce our products in a timely manner, our business and results of operations will be adversely affected.

**Integration of software in our products adds complexity and cost that may affect our ability to achieve design wins and may affect our profitability.**

Our products incorporate software and software development tools. The integration of software adds complexity, may extend our internal development programs and could impact our customers' development schedules. This complexity requires increased coordination between hardware and software development schedules and may increase our operating expenses without a corresponding increase in product revenue. Some customers and potential customers may choose not to use our products because of the additional requirements of implementing our software, preferring to use a product that works with their existing software. This additional level of complexity lengthens the sales cycle and may result in customers selecting competitive products requiring less software integration.

**A significant amount of our revenue comes from a few customers and distributors. Any decrease in revenues from, or loss of any of these customers or distributors could significantly reduce our total revenues.**

We are and will continue to be dependent on a limited number of large distributors and customers for a substantial portion of our revenue. Sales to distributors represented 69%, 68% and 61% of total revenue for the years ending December 31, 2003, 2002 and 2001, respectively. During the years ending December 31, 2003, 2002 and 2001, sales to Tokyo Electron Device Limited, our distributor in Japan, represented 39%, 45% and 52%, respectively, of our total revenue. Sales to our top five end customers accounted for approximately 35%, 41% and 43% for the years ended December 31, 2003, 2002 and 2001, respectively. As a result of this customer and distributor concentration, any one of the following factors could significantly impact our revenues:

- a significant reduction, delay or cancellation of orders from one or more of our key distributors, branded manufacturers or integrators; or
- a decision by one or more significant customers to select products manufactured by a competitor, or its own internally developed semiconductor, for inclusion in future product generations.

The display manufacturing market is highly concentrated among relatively few large manufacturers. We expect our operating results to continue to depend on revenues from a relatively small number of distributors that sell our products to display manufacturers and their suppliers.

**The concentration of our accounts receivable with a limited number of customers exposes us to increased credit risk and could seriously harm our operating results and cash flows.**

At December 31, 2003, we had three customers that represented more than 10% of our accounts receivable balance. Tokyo Electron Device represented 20% and 48% of our total accounts receivable at December 31, 2003 and 2002, respectively. Neoview, our distributor in Taiwan, represented 33% and 17% of the total accounts receivable at December 31, 2003 and 2002, respectively. A third customer accounted for 11% of total accounts receivable at December 31, 2003. The failure of these or any other customer representing 10% or more of our total accounts receivable in the future to pay these balances would result in a significant expense that would increase our operating expenses and would reduce our cash flows.

**International sales account for a significant portion of our revenue, and if we do not successfully address the risks associated with our international operations, our revenue could decrease.**

Sales outside of the U.S. accounted for 99%, 98% and 91% of our total revenue in 2003, 2002 and 2001, respectively. Most of our customers are concentrated in Japan, Taiwan, China and Korea, with aggregate sales from those four countries accounting for 89%, 83% and 83% of our total revenue during the years ended December 31, 2003, 2002 and 2001, respectively. We anticipate that sales outside the U.S. will continue to account for a substantial portion of our revenue in future periods. In addition, customers who incorporate our products into their products sell them outside of the U.S., thereby exposing us indirectly to foreign risks. In addition, all of our products are manufactured outside of the U.S. We are, therefore, subject to many international risks, including, but not limited to:

- increased difficulties in managing international distributors and manufacturers of our products and components due to varying time zones, languages and business customs;
- foreign currency exchange fluctuations such as the devaluation in the currencies of Japan, Taiwan and Korea that resulted in an increased cost of procuring our semiconductors;
- potentially adverse tax consequences, such as license fee revenue taxes imposed in Japan;
- difficulties regarding timing and availability of export and import licenses, which have limited our ability to freely move demonstration equipment and samples in and out of Asia;
- political and economic instability, particularly in China, Taiwan and Korea;
- reduced or limited protection of our intellectual property, significant amounts of which are contained in software, which is more prone to design piracy;
- increased transaction costs related to sales transactions conducted outside of the U.S. such as charges to secure letters of credit for foreign receivables;

- difficulties in maintaining sales representatives outside of the U.S. that are knowledgeable about the display processor industry and our display processor products;
- changes in the regulatory environment in China, Japan, Korea and Taiwan that may significantly impact purchases of our products by our customers; and
- difficulties in collecting accounts receivable.

**Our growing presence and investment within the Peoples Republic of China subjects us to risks of economic and political instability in the area, which would adversely impact our results of operations.**

A substantial and potentially increasing portion of our products are manufactured by foundries located in the Peoples Republic of China, or the PRC, and a large number of our customers are geographically concentrated in the PRC. In addition, approximately 25 percent of our employees are located in this area. We also recently made an investment of \$10 million in a foundry located in Shanghai, China. Disruptions from natural disasters, health epidemics and political, social and economic instability may affect the region, and would have a negative impact on our results of operations. In addition, the economy of the PRC differs from the economies of many countries in respects such as structure, government involvement, level of development, growth rate, capital reinvestment, allocation of resources, self-sufficiency, rate of inflation and balance of payments position, among others. In the past, the economy of the PRC has been primarily a planned economy subject to State plans. Since the entry of the PRC into the World Trade Organization in 2002, the PRC government has been reforming its economic and political systems. These reforms have resulted in significant economic growth and social change. We cannot assure, however, that the PRC government's policies for economic reforms will be consistent or effective. Our results of operations and financial position may be harmed by changes in the PRC's political, economic or social conditions.

**Our dependence on selling through distributors and integrators increases the complexity of managing our supply chain and may result in excess inventory or inventory shortages.**

Selling through distributors reduces our ability to forecast sales and increases the complexity of our business. Since our distributors act as intermediaries between us and the companies using our products, we must rely on our distributors to accurately report inventory levels and production forecasts. This arrangement requires us to manage a more complex supply chain and monitor the financial condition and credit worthiness of our distributors and customers. Our failure to manage one or more of these challenges could result in excess inventory or shortages that could seriously impact our operating revenue or limit the ability of companies using our semiconductors to deliver their products.

**Dependence on a limited number of sole-source, third party manufactures for our products exposes us to shortages based on capacity allocation or low manufacturing yield, errors in manufacturing, price increases with little notice, volatile inventory levels and delays in product delivery, which could result in delays in satisfying customer demand, increased costs and loss of revenues.**

We do not own or operate a semiconductor fabrication facility and we do not have the resources to manufacture our products internally. We rely on third party foundries for wafer fabrication and other contract manufacturers for assembly and testing of our products. Our requirements represent only a small portion of the total production capacity of our contract manufacturers. Our third-party manufacturers have in the past re-allocated capacity to other customers even during periods of high demand for our products. We expect that this may occur in the future. We have limited control over delivery schedules, quality assurance, manufacturing yields, potential errors in manufacturing and production costs. We generally do not have long-term supply contracts with our third-party manufacturers so they are not obligated to supply us with products for any specific period, in any specific quantity or at any specific price, except as may be provided in a particular purchase order. From time to time our third-party manufacturers increase prices charged to manufacture our products with little notice. This requires us to either increase the price we charge for our products or suffer a decrease in our gross margins. We try not to maintain substantial inventories of products, but need to order products long before we have firm purchase orders for those products which could result in excess inventory or inventory shortages.

If we are unable to obtain our products from manufacturers on schedule, our ability to satisfy customer demand will be harmed, and revenue from the sale of products may be lost or delayed. If orders for our products are cancelled, expected revenues would not be realized. In addition, if the price charged by our third-party manufacturers increases we will be required to increase our prices, which could harm our competitiveness.

**We use a COT, or customer owned tooling, process for manufacturing some of our products which exposes us to the possibility of poor yields and unacceptably high product costs.**

We are building some products on a customer owned tooling basis, also known in the semiconductor industry as COT, where we directly contract the manufacture of wafers and assume the responsibility for the assembly and testing of our products. As a result, we are subject to increased risks arising from wafer manufacturing yields and risks associated with coordination of the manufacturing, assembly and testing process. Poor product yields would result in higher product costs, which could make our products uncompetitive with products offered by our competitors, thereby resulting in low gross profit margins or loss of revenue, or both.

**We are dependent on our foundries to implement complex semiconductor technologies, which could adversely affect our operations if those technologies are not available, delayed or inefficiently implemented.**

In order to increase performance and functionality and reduce the size of our products, we are continuously developing new products using advanced technologies that further miniaturize semiconductors. However, we are dependent on our foundries to develop and provide access to the advanced processes that enable such miniaturization. We cannot be certain that future advanced manufacturing processes will be implemented without difficulties, delays or increased expenses. Our business, financial condition and results of operations could be materially and adversely affected if advanced manufacturing processes are unavailable to us, substantially delayed or inefficiently implemented.

**Manufacturers of our semiconductor products periodically discontinue manufacturing processes, which could make our products unavailable from our current suppliers.**

Semiconductor manufacturing technologies change rapidly and manufacturers typically discontinue older manufacturing processes in favor of newer ones. Once a manufacturer makes the decision to retire a manufacturing process, notice is generally given to its customers. Customers will then either retire the affected part or develop a new version of the part that can be manufactured on the newer process. In the event that a manufacturing process is discontinued, our products could become unavailable from our current suppliers. Additionally, migrating to a new, more advanced process requires significant expenditures for research and development. A significant portion of our products use 0.25 $\mu$ m embedded DRAM technology and the required manufacturing process for these technologies will likely be available for the next two years. We also utilize a 0.18 $\mu$ m standard logic process, which we expect will be readily available for the next five to seven years. We have commitments from our suppliers to notify us in the event of a discontinuance of a manufacturing process in order to assist us with product transitions.

**If we have to qualify a new contract manufacturer or foundry for any of our products, we may experience delays that result in lost revenues and damaged customer relationships.**

None of our products are fabricated by more than one supplier. Additionally, our products require manufacturing with state-of-the-art fabrication equipment and techniques. Because the lead-time needed to establish a relationship with a new contract manufacturer is at least six months, and the estimated time for us to adapt a product's design to a particular contract manufacturer's processes is at least four months, there is no readily available alternative source of supply for any specific product. This could cause significant delays in shipping products, which may result in lost revenues and damaged customer relationships.

**Our future success depends upon the continued services of key personnel, many of whom would be difficult to replace and the loss of one or more of these employees could seriously harm our business by delaying product development.**

Our future success depends upon the continued services of our executive officers, key hardware and software engineers, and sales, marketing and support personnel, many of whom would be difficult to replace. The loss of one or more of these employees, particularly Allen Alley, our President and Chief Executive Officer, could seriously harm our business. In addition, because of the highly technical nature of our business, the loss of key engineering personnel could delay product introductions and significantly impair our ability to successfully create future products. We believe our success depends, in large part, upon our ability to identify, attract and retain qualified hardware and software engineers, and sales, marketing, finance and managerial personnel. Competition for talented personnel is intense and we may not be able to retain our key personnel or identify, attract or retain other highly qualified personnel in the future. We have experienced, and may continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. If we do not succeed in hiring and retaining employees with appropriate qualifications, our product development efforts, revenues and business could be seriously harmed.

**Because we do not have long-term commitments from our customers, and plan purchases based on estimates of customer demand, which may be inaccurate, we must contract for the manufacture of our products based on those potentially inaccurate estimates.**

Our sales are made on the basis of purchase orders rather than long-term purchase commitments. Our customers may cancel or defer purchase orders at any time. This process requires us to make multiple demand forecast assumptions, each of which may introduce error into our estimates. If our customers or we overestimate demand, we may purchase products that we may not be able to sell. As a result, we would have excess inventory, which would negatively affect our operating results. Conversely, if our customers or we underestimate demand or if sufficient manufacturing capacity is unavailable, we would forego revenue opportunities, lose market share and damage our customer relationships.

**Development arrangements may cause us to incur substantial operating expenses without the guarantee of any associated revenue or far in advance of revenue.**

We have development arrangements that consume large amounts of engineering resources far in advance of product revenue. Our work under these arrangements is technically challenging and places considerable demands on our limited resources, particularly on our most senior engineering talent, and may not result in revenue for twelve to eighteen months, if at all. In addition, allocating significant resources to these arrangements may detract from or delay the completion of other important development projects. Any of these development agreements could be canceled at any time without notice. These factors could have a material and adverse effect on our long-term business and results of operations.

**Because of our long product development process and sales cycle, we may incur substantial expenses before we earn associated revenues and may not ultimately sell as many units of our products as we forecasted.**

We develop products based on anticipated market and customer requirements and incur substantial product development expenditures, which can include the payment of large up-front, third-party license fees and royalties, prior to generating associated revenues. Because the development of our products incorporates not only our complex and evolving technology, but also our customers' specific requirements, a lengthy sales process is often required before potential customers begin the technical evaluation of our products. Our customers typically perform numerous tests and extensively evaluate our products before incorporating them into their systems. The time required for testing, evaluation and design of our products into a customer's equipment can take up to six months or more. It can take an additional six months before a customer commences volume shipments of systems that incorporate our products. However, even when we achieve a design win, the customer may never ship systems incorporating our products. We cannot assure you that the time required for the testing, evaluation and design of our products by our customers would not exceed six months. Because of this lengthy development cycle, we will experience delays between the time we incur expendi-

tures for research and development, sales and marketing, inventory levels and the time we generate revenues, if any, from these expenditures. Additionally, if actual sales volumes for a particular product are substantially less than originally forecasted, we may experience large write-offs of capitalized license fees, product masks and prepaid royalties that would negatively affect our operating results.

**Shortages of other key components for our customers' products could delay our ability to sell our products.**

Shortages of components and other materials that are critical to the design and manufacture of our customers' products could limit our sales. These components include liquid crystal display panels and other display components, analog-to-digital converters, digital receivers and video decoders. During 2000, some of our customers experienced delays in the availability of key components from other suppliers, which, in turn, caused a delay in demand for the products that we supplied to our customers.

**Shortages of materials used in the manufacturing of our products may increase our costs or limit our revenues and impair our ability to ship our products on time.**

From time to time, shortages of materials that are used in our products may occur. In particular, we may experience shortages of semiconductor wafers and packages. If material shortages occur, we may incur additional costs or be unable to ship our products to our customers in a timely fashion, all of which could harm our business and negatively impact our earnings.

**Our products could become obsolete if necessary licenses of third-party technology are not available to us or are only available on terms that are not commercially viable.**

We license technology from third parties that is incorporated into our products or product enhancements. Future products or product enhancements may require additional third-party licenses that may not be available to us or available on terms that are commercially reasonable. If we are unable to obtain any third-party license required to develop new products and product enhancements, we may have to obtain substitute technology of lower quality or performance standards or at greater cost, either of which could seriously harm the competitiveness of our products.

**We may not be able to respond to the rapid technological changes in the markets in which we compete, or we may not be able to comply with industry standards in the future making our products less desirable or obsolete.**

The markets in which we compete or seek to compete are subject to rapid technological change, frequent new product introductions, changing customer requirements for new products and features, and evolving industry standards. The introduction of new technologies and the emergence of new industry standards could render our products less desirable or obsolete, which could harm our business. Recent examples of changing industry standards include the introduction of high-definition television, or HDTV, new digital receivers and displays with resolutions that have required us to accelerate development of new products to meet these new standards.

**Our software development tools may be incompatible with industry standards and challenging to implement, which could slow product development or cause us to lose customers and design wins.**

Our existing products incorporate complex software tools designed to help customers bring products into production. Software development is a complex process and we are dependent on software development languages and operating systems from vendors that may compromise our ability to design software in a timely manner. Also, software development is a volatile market and new software languages are introduced to the market that may be incompatible with our existing systems and tools. New software development languages may not be compatible with our own requiring significant engineering efforts to migrate our existing systems in order to be compatible with those new languages. Existing or new software development tools could make our current products obsolete or hard to use. Software development disruptions could slow our product development or cause us to lose customers and design wins.

**Our integrated circuits and software could contain defects, which could reduce sales of those products or result in claims against us.**

Despite testing by both our customers and us, errors or performance problems may be found in existing or new semiconductors and software. This could result in a delay in the recognition or loss of revenues, loss of market share or failure to achieve market acceptance. These defects may cause us to incur significant warranty, support and repair costs. They could also divert the attention of our engineering personnel from our product development efforts and harm our relationships with our customers. The occurrence of these problems could result in the delay or loss of market acceptance of our semiconductors and would likely harm our business. Defects, integration issues or other performance problems in our semiconductors and software could result in financial or other damages to our customers or could damage market acceptance of our products. Our customers could also seek damages from us for their losses. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly to defend.

**The concentration of our manufactures and customers in the same geographic region increases our risk that a natural disaster, labor strike or political unrest could disrupt our operations.**

Most of our current manufacturers and customers are located in China, Japan, Korea and Taiwan. The risk of earthquakes in the Pacific Rim region is significant due to the proximity of major earthquake fault lines in the area. A current manufacturer's facilities were affected by a significant earthquake in Taiwan in September 1999. As a consequence of this earthquake, the manufacturer suffered power outages and disruption that impaired its production capacity. Earthquakes, fire, flooding and other natural disasters in the Pacific Rim region, or political unrest, labor strikes or work stoppages in countries where our manufacturers and customers are located likely would result in the disruption of our foundry partners' assembly capacity. Any disruption resulting from extraordinary events could cause significant delays in shipments of our solutions until we are able to shift our manufacturing or assembling from the affected contractor to another third-party vendor. There can be no assurance that alternative capacity could be obtained on favorable terms, if at all.

**Others may bring infringement actions against us that could be time-consuming and expensive to defend.**

We may become subject to claims involving patents or other intellectual property rights. For example, in early 2000, we were notified by InFocus Corporation ("InFocus") that we were infringing on patents held by InFocus. In February 2000, we entered into a license agreement with InFocus granting us the right to use the technology covered by the InFocus patents. As a result, we recorded a one-time charge of \$4,078 for patent settlement expense in the first quarter of 2000. Intellectual property claims could subject us to significant liability for damages and invalidate our proprietary rights. In addition, intellectual property claims may be brought against customers that incorporate our products in the design of their own products. These claims, regardless of their success or merit and regardless of whether we are named as defendants in a lawsuit, would likely be time-consuming and expensive to resolve and would divert the time and attention of management and technical personnel. Any future intellectual property litigation or claims also could force us to do one or more of the following:

- stop selling products using technology that contains the allegedly infringing intellectual property;
- attempt to obtain a license to the relevant intellectual property, which license may not be available on reasonable terms or at all;
- attempt to redesign those products that contain the allegedly infringing intellectual property; and
- pay damages for past infringement claims that are determined to be valid or which are arrived at in settlement of such litigation or threatened litigation.

If we are forced to take any of the foregoing actions, we may be unable to manufacture and sell our products, which could seriously harm our business. In addition, we may not be able to develop, license or acquire non-infringing technology under reasonable terms. These developments could result in an inability to compete for customers or could adversely affect our ability to increase our earnings.

**Our limited ability to protect our intellectual property and proprietary rights could harm our competitive position by allowing our competitors to access our proprietary technology and to introduce similar display processor products.**

Our ability to compete effectively with other companies will depend, in part, on our ability to maintain the proprietary nature of our technology, including our semiconductor designs and software. We rely on a combination of patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods to protect our proprietary technologies. We hold 8 U.S. patents and have 40 patent applications pending with the U.S. Patent and Trademark Office for protection of our significant technologies. In addition to filing patents in the U.S., we have applied for and have been granted 7 patents in Canada. We cannot assure you that the degree of protection offered by patents or trade secret laws will be sufficient. Furthermore, we cannot assure you that any patents will be issued as a result of any pending applications, or that, if issued, any claims allowed will be sufficiently broad to protect our technology. In addition, it is possible that existing or future patents may be challenged, invalidated or circumvented. Competitors in both the U.S. and foreign countries, many of whom have substantially greater resources, may apply for and obtain patents that will prevent, limit or interfere with our ability to make and sell our products, or develop similar technology independently or design around our patents. Effective copyright, trademark and trade secret protection may be unavailable or limited in foreign countries. In addition, we provide the computer programming code for our software to selected customers in connection with their product development efforts, thereby increasing the risk that customers will misappropriate our proprietary software.

**Any acquisition or equity investment we make could disrupt our business and severely harm our financial condition.**

To date, we acquired Panstera, Inc. in January 2001, nDSP in January 2002 and Jaldi Semiconductor in September 2002. In March 2003, we announced the execution of a definitive merger agreement with Genesis Microchip, Inc., however, the merger was terminated in August of 2003, and we incurred \$8,949 of expenses related to the transaction. Additionally, in the third quarter of 2003, we made an investment of \$10,000 in Semiconductor Manufacturing International Corporation (SMIC). We intend to continue to consider investments in or acquisitions of complementary businesses, products or technologies.

The acquisitions of Panstera, nDSP and Jaldi contained a very high level of risk primarily because the investments were made based on in-process technological development that may not have been completed, or if completed, may not have become commercially viable.

These and any future acquisitions and investments could result in:

- issuance of stock that dilutes current stockholders' percentage ownership;
- incurrence of debt;
- assumption of liabilities;
- amortization expenses related to other intangible assets;
- impairment of goodwill; or
- large and immediate write-offs.

Our operation of any acquired business will also involve numerous risks, including, but not limited to:

- problems combining the purchased operations, technologies or products;
- unanticipated costs;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with customers;
- risks associated with entering markets in which we have no or limited prior experience; and
- potential loss of key employees, particularly those of the acquired organizations.

We may not be able to successfully integrate businesses, products, technologies or personnel that we might acquire in the future and any failure to do so could disrupt our business and seriously harm our financial condition.

**Goodwill represents a significant portion of the Company's total assets.**

As of December 31, 2003, goodwill amounted to \$82,548, or approximately 35%, of the Company's total assets. Effective January 1, 2002 with the adoption of new accounting standards the Company is required to review goodwill for possible impairment on an annual basis or when events and circumstances arise which indicate a possible impairment. The review of goodwill for impairment may result in large write-offs of goodwill, which could have a material adverse effect on our results of operations.

**Failure to manage our expansion effectively could adversely affect our ability to increase our business and our results of operations.**

Our ability to successfully market and sell our products in a rapidly evolving market requires effective planning and management processes. We continue to increase the scope of our operations domestically and internationally and have increased our headcount substantially. Through internal growth as well as acquisition, our headcount grew from 176 employees at the end of 2001 to 241 at the end of 2003. Our past growth, and our expected future growth, places a significant strain on our management systems and resources including our financial and managerial controls, reporting systems and procedures. To manage our growth effectively, we must implement and improve operational and financial systems, train and manage our employee base and attract and retain qualified personnel with relevant experience. We must also manage multiple relationships with customers, business partners, contract manufacturers, suppliers and other third parties. Moreover, we will spend substantial amounts of time and money in connection with our rapid growth and may have unexpected costs. Our systems, procedures or controls may not be adequate to support our operations and we may not be able to expand quickly enough to exploit potential market opportunities. While we have not, to date, suffered any significant adverse consequences due to our growth, if we do not continue to manage growth effectively our operating expenses could increase more rapidly than our revenue causing decreased profitability.

**RISKS RELATED TO OUR INDUSTRY**

**Failure of consumer demand for LCD displays and other digital display technologies to increase would impede our growth and adversely affect our business.**

Our product development strategies anticipate that consumer demand for flat panel displays and other emerging display technologies will increase in the future. The success of our products is dependent on increased demand for these display technologies, which are at early stages of development. The potential size of the market for products incorporating these display technologies and the timing of its development are uncertain and will depend upon a number of factors, all of which are beyond our control. In order for the market for many of our products to grow, advanced display products must be widely available and affordable to consumers. In the past, the supply of advanced display products has been cyclical. We expect this pattern to continue. Under-capacity in the advanced display market may limit our ability to increase our revenues because our customers may limit their purchases of our products if they cannot obtain sufficient supplies of LCD panels or other advanced display components. In addition, advanced display prices may remain high because of limited supply, and consumer demand may not grow.

**If products incorporating our semiconductors are not compatible with computer display protocols, video standards and other devices, the market for our products will be reduced and our business prospects could be significantly limited.**

Our products are incorporated into our customers' products, which have different parts and specifications and utilize multiple protocols that allow them to be compatible with specific computers, video standards and other devices. If our customers' products are not compatible with these protocols and standards, consumers will return these products, or consumers will not purchase these products, and the markets for our customers' products could be significantly reduced. As a result, a portion of our market would be eliminated, and our business would be harmed.

**Intense competition in our markets may reduce sales of our products, reduce our market share, decrease our gross profit and result in large losses.**

Rapid technological change, evolving industry standards, compressed product life cycles and declining average selling prices are characteristics of our market and could have a material adverse effect on our business, financial condition and results of operations. As the overall price of advanced flat panel display screens continues to fall, we may be required to offer our products to manufacturers at discounted prices due to increased price competition. At the same time, new, alternative display processing technologies and industry standards may emerge that directly compete with technologies that we offer. We may be required to increase our investment in research and development at the same time that product prices are falling. In addition, even after making this investment, we cannot assure you that our technologies will be superior to those of our competitors or that our products will achieve market acceptance, whether for performance or price reasons. Failure to effectively respond to these trends could reduce the demand for our products.

We compete with specialized and diversified electronics and semiconductor companies that offer display processors or scaling components. Some of these include Genesis Microchip, I-Chips, ITE, Macronix, Mediatek, Media Reality Technologies, Micronas, MStar Semiconductor, Inc., Oplus, Realtek, Silicon Image, Silicon Optix, STMicroelectronics, Techwell, Topro, Trident, Trumption, Weltrend, Zoran and other companies. Potential competitors may include diversified semiconductor manufacturers and the semiconductor divisions or affiliates of some of our customers, including ATI, Intel, Koninlijke Philips Electronics, LG Electronics, Matsushita Electric Industrial, Mitsubishi, National Semiconductor, NEC, nVidia, Samsung Electronics, Sanyo Electric Company, Sharp Corporation, Sony Corporation, Texas Instruments and Toshiba Corporation. In addition, start-up companies may seek to compete in our markets. Many of our competitors have longer operating histories and greater resources to support development and marketing efforts. Some of our competitors may operate their own fabrication facilities. These competitors may be able to react more quickly and devote more resources to efforts that compete directly with our own. In the future, our current or potential customers may also develop their own proprietary display processors and become our competitors. In addition, start-up companies may seek to compete in our markets. Our competitors may develop advanced technologies enabling them to offer more cost-effective and higher quality semiconductors to our customers than those offered by us. Increased competition could harm our business, financial condition and results of operations by, for example, increasing pressure on our profit margin or causing us to lose sales opportunities. We cannot assure you that we can compete successfully against current or potential competitors.

**The cyclical nature of the semiconductor industry may lead to significant variances in the demand for our products and could harm our operations.**

In the past, the semiconductor industry has been characterized by significant downturns and wide fluctuations in supply and demand. Also, during this time, the industry has experienced significant fluctuations in anticipation of changes in general economic conditions, including economic conditions in Asia and North America. The cyclical nature of the semiconductor industry has led to significant variances in product demand and production capacity. It has also accelerated erosion of average selling prices per unit. We may experience periodic fluctuations in our future financial results because of changes in industry-wide conditions.

## **OTHER RISKS**

**The anti-takeover provisions of Oregon law and in our articles of incorporation could adversely affect the rights of the holders of our common stock by preventing a sale or takeover of us at a price or prices favorable to the holders of our common stock.**

Provisions of our articles of incorporation and bylaws and provisions of Oregon law may have the effect of delaying or preventing a merger or acquisition of us, making a merger or acquisition of us less desirable to a potential acquirer or preventing a change in our management, even if the shareholders consider the merger or acquisition favorable or if doing so would benefit our shareholders. In addition, these provisions could limit the price that investors would be willing to pay in the future for shares of our common stock. The following are examples of such provisions in our articles of incorporation or bylaws:

- Our board of directors is authorized, without prior stockholder approval, to create and issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us or change our control, commonly referred to as "blank check" preferred stock.
- Members of our board of directors can only be removed for cause.
- The board of directors may alter our bylaws without obtaining shareholder approval.
- Shareholders are required to provide advance notice for nominations for election to the board of directors or for proposing matters to be acted upon at a shareholder meeting.

**Our principal shareholders have significant voting power and may take actions that may make it more difficult to sell our shares at a premium to take over candidates.**

Our executive officers, directors and other principal shareholders, in the aggregate, beneficially own 4,935,248 shares or approximately 11% of our outstanding common stock as of February 29, 2004. These shareholders currently have, and will continue to have, significant influence with respect to the election of our directors and approval or disapproval of our significant corporate actions. This influence over our affairs might be adverse to the interest of our other shareholders. In addition, the voting power of these shareholders could have the effect of delaying or preventing a change in control of our business or otherwise discouraging a potential acquirer from attempting to obtain control of us, which could prevent our other shareholders from realizing a premium over the market price for their common stock.

**The price of our common stock has and may continue to fluctuate substantially.**

Investors may not be able to sell shares of our common stock at or above the price they paid due to a number of factors, including:

- actual or anticipated fluctuations in our operating results;
- changes in expectations as to our future financial performance;
- changes in financial estimates of securities analysts;
- announcements by us or our competitors of technological innovations, design wins, contracts, standards or acquisitions;
- the operating and stock price performance of other comparable companies;
- changes in market valuations of other technology companies; and
- inconsistent trading volume levels of our common stock.

In particular, the stock prices of technology companies similar to us have been highly volatile recently. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. Market fluctuations as well as general economic, political and market conditions including recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. Therefore, the price of our common stock may decline, and the value of your investment may be reduced regardless of our performance.

**We may be unable to meet our future capital requirements, which would limit our ability to grow.**

We believe our current cash balances will be sufficient to meet our capital requirements for the next 12 months. However, we may need, or could elect, to seek additional funding prior to that time. To the extent that currently available funds are insufficient to fund our future activities, we may need to raise additional funds through public or private equity or debt financing. Additional funds may not be available on terms favorable to us or our shareholders. Further, if we issue equity securities, our shareholders may experience additional dilution or the new equity securities may have rights, preferences or privileges senior to those of our common stock. If we cannot raise funds on acceptable terms, we may not be able to develop or enhance our products, take advantage of future opportunities or respond to competitive pressures or unanticipated requirements.

**Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

Our primary market risk exposure is the impact of interest rate fluctuations on interest income earned on our investment portfolio. The risks associated with market, liquidity and principal are mitigated by investing in high-credit quality securities and limiting concentrations of issuers and maturity dates. Derivative financial instruments are not part of our investment portfolio.

All of our sales are denominated in U.S. dollars and as a result, we have relatively little exposure to foreign currency exchange risk with respect to any of our sales. We have employees located in offices in Canada, Japan, Taiwan and China and as a result a portion of our operating expenses are denominated in foreign currencies. Accordingly, our operating results are affected by changes in the exchange rate between the U.S. dollar and those currencies. Any future strengthening of those currencies against the U.S. dollar could negatively impact our operating results by increasing our operating expenses as measured in U.S. dollars. We cannot estimate the effect that an immediate 10% change in foreign currency exchange rates would have on our future operating results or cash flows as a direct result of changes in exchange rates. However, management believes that the effect of an immediate 10% change in exchange rates would not have a material impact on our future operating results or cash flows. We do not currently hedge against foreign currency rate fluctuations.

**Item 8. Financial Statements and Supplementary Data**

The Company's Consolidated Financial Statements and the Independent Auditors' Report thereon are presented in the following pages. The Financial Statements filed in Item 8 are as follows:

	Page
Independent Auditors' Report	66
Consolidated Balance Sheets as of December 31, 2003 and 2002	67
Consolidated Statements of Operations for the years ended December 31, 2003, 2002 and 2001	68
Consolidated Statements of Cash Flows for the years ended December 31, 2003, 2002 and 2001	69
Consolidated Statements of Shareholders' Equity for the years ended December 31, 2003, 2002 and 2001	70
Notes to Consolidated Financial Statements	72

## INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders  
Pixelworks, Inc.:

We have audited the accompanying consolidated balance sheets of Pixelworks, Inc. and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of operations, shareholders' equity, 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 Pixelworks, Inc. and its 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.

Effective January 1, 2002, the Company adopted the provisions of SFAS 142, *Goodwill and Other Intangible Assets*, as required for goodwill and intangible assets resulting from business combinations.

**KPMG LLP**

Portland, Oregon  
January 16, 2004

## CONSOLIDATED BALANCE SHEETS

In thousands

December 31, 2003 2002

### ASSETS

#### Current assets:

Cash and cash equivalents	\$ 75,165	\$ 62,152
Short-term marketable securities	5,656	24,915
Accounts receivable, net	8,468	10,421
Inventories, net	10,478	6,788
Prepaid expenses and other current assets	<u>4,826</u>	<u>3,896</u>
Total current assets	104,593	108,172

Long-term marketable securities	19,875	14,500
Property and equipment, net	6,561	9,073
Other assets, net	16,205	7,037
Acquired intangible assets, net	3,535	5,882
Goodwill	<u>82,548</u>	<u>82,548</u>
Total assets	<u>\$ 233,317</u>	<u>\$ 227,212</u>

### LIABILITIES AND SHAREHOLDERS' EQUITY

#### Current liabilities:

Accounts payable	\$ 4,330	\$ 5,084
Accrued liabilities and current portion of long-term debt	<u>8,682</u>	<u>7,312</u>
Total current liabilities	13,012	12,396

#### Commitments and contingencies

#### Shareholders' Equity

Preferred stock, \$.001 par value; 50,000,000 shares authorized, 1 share issued and outstanding at December 31, 2003 and 2002	-	-
Common stock, \$.001 par value; 250,000,000 shares authorized, 45,113,662 and 43,967,585 shares issued and outstanding at December 31, 2003 and 2002, respectively	294,235	287,566
Shares exchangeable into common stock; 1,731,099 shares issued, 833,861 and 1,108,969 outstanding at December 31, 2003 and 2002, respectively	7,888	10,491
Deferred stock-based compensation	(449)	(2,402)
Accumulated deficit	<u>(81,369)</u>	<u>(80,839)</u>
Total shareholders' equity	220,305	214,816
Total liabilities and shareholders' equity	<u>\$ 233,317</u>	<u>\$ 227,212</u>

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

## CONSOLIDATED STATEMENTS OF OPERATIONS

In thousands, except per share data

Year Ended December 31,	2003	2002	2001
Revenue	\$ 140,921	\$ 102,641	\$ 90,808
Cost of revenue (1)	<u>77,528</u>	<u>51,736</u>	<u>46,539</u>
Gross profit	63,393	50,905	44,269
Operating expenses:			
Research and development (2)	23,674	23,730	18,096
Selling, general and administrative (3)	24,805	21,865	16,373
Merger related expenses	8,949	-	-
Restructuring	5,049	-	-
In-process research and development	-	24,342	32,400
Stock-based compensation and amortization of goodwill and assembled workforce	<u>3,530</u>	<u>3,214</u>	<u>24,403</u>
Total operating expenses	<u>66,007</u>	<u>73,151</u>	<u>91,272</u>
Loss from operations	(2,614)	(22,246)	(47,003)
Interest income	1,188	2,349	4,444
Interest expense	<u>(11)</u>	<u>(74)</u>	<u>-</u>
Interest income, net	<u>1,177</u>	<u>2,275</u>	<u>4,444</u>
Loss before income taxes	(1,437)	(19,971)	(42,559)
Provision for (recovery of) income taxes	<u>(907)</u>	<u>880</u>	<u>-</u>
Net loss	<u>\$ (530)</u>	<u>\$ (20,851)</u>	<u>\$ (42,559)</u>
Net loss per share: basic and diluted	<u>\$ (0.01)</u>	<u>\$ (0.48)</u>	<u>\$ (1.05)</u>
Weighted average shares outstanding: basic and diluted	<u>45,337</u>	<u>43,397</u>	<u>40,662</u>
(1) Includes amortization of:			
Acquired developed technology	\$ 529	\$ 485	\$ -
Deferred stock-based compensation	8	21	40
(2) Excludes stock-based compensation of:	1,474	1,990	6,150
(3) Excludes stock-based compensation of:	1,570	982	2,271

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

## CONSOLIDATED STATEMENTS OF CASH FLOWS

In thousands

Year Ended December 31,	2003	2002	2001
<b>Cash flows from operating activities:</b>			
Net loss	\$ (530)	\$ (20,851)	\$ (42,559)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Loss on asset disposals related to restructuring	3,927	-	-
Lease costs related to restructuring	188	-	-
In-process research and development expense	-	24,342	32,400
Amortization of acquired developed technology	529	485	-
Stock-based compensation and amortization of goodwill and assembled workforce	3,538	3,235	24,443
Non-cash expense related to option granted to non-employee	30	-	-
Depreciation and amortization	6,119	6,044	4,435
Amortization of deferred tax charge	55	-	-
Deferred income taxes	(1,168)	(646)	(2,256)
Income tax benefit from disqualifying dispositions	-	1,357	2,256
Write off of property and equipment and other assets	-	87	-
Provision for doubtful accounts	-	7	-
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable	1,953	(3,840)	230
Inventories, net	(3,690)	(1,788)	(896)
Prepaid expenses and other current and long-term assets	(548)	331	(2,670)
Accounts payable	(754)	394	(7,070)
Accrued liabilities	1,380	(2,477)	2,094
Net cash provided by operating activities	<u>11,029</u>	<u>6,680</u>	<u>10,407</u>
<b>Cash flows from investing activities:</b>			
Purchases of property and equipment	(4,385)	(5,622)	(4,988)
Purchases of other assets	(10,253)	(1,525)	(9,599)
Purchases of marketable securities	(34,444)	(46,445)	(68,561)
Proceeds from maturities of marketable securities	48,328	54,998	74,645
Acquisitions, net of cash acquired	-	102	-
Net cash (used in) provided by investing activities	<u>(754)</u>	<u>1,508</u>	<u>(8,503)</u>
<b>Cash flows from financing activities:</b>			
Payments on long-term debt	(199)	(779)	-
Proceeds from issuances of common stock	2,937	1,455	1,703
Net cash provided by financing activities	<u>2,738</u>	<u>676</u>	<u>1,703</u>
Net increase in cash and cash equivalents	13,013	8,864	3,607
Cash and cash equivalents, beginning of period	<u>62,152</u>	<u>53,288</u>	<u>49,681</u>
Cash and cash equivalents, end of period	<u>\$ 75,165</u>	<u>\$ 62,152</u>	<u>\$ 53,288</u>
<b>Supplemental disclosure of cash flow information:</b>			
Cash paid during the year for:			
Interest	\$ 11	\$ 80	\$ -
Income taxes	920	51	118
<b>Supplemental disclosure of non-cash investing activities:</b>			
Value of shares issued in acquisitions	-	37,501	118,150

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

plxw 69

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

In thousands, except share data

	Common Stock	
	Shares	Amount
Balances as of December 31, 2000	36,812,580	\$ 126,260
Stock issued under stock option and stock purchase plans and tax benefits associated with non-qualified stock option exercises and disqualifying dispositions	862,799	3,040
Shares issued in connection with Panstera acquisition	3,722,945	131,590
Reversal of deferred stock-based compensation related to terminations	-	(1,527)
Amortization of deferred stock-based compensation	-	-
Net loss	-	-
Balances as of December 31, 2001	41,398,324	259,363
Stock issued under stock option and stock purchase plans and tax benefits associated with non-qualified stock option exercises and disqualifying dispositions	764,433	2,716
Shares issued in connection with Jaldi acquisition	-	1,011
Shares issued in connection with nDSP acquisition	1,185,995	20,114
Release and cancellation of shares held in escrow from nDSP acquisition	(3,297)	(55)
Deferred stock-based compensation related to stock options granted	-	2,495
Reversal of deferred stock-based compensation related to terminations	-	(3,963)
Amortization of deferred stock-based compensation	-	-
Conversion of exchangeable shares to common stock	622,130	5,885
Net loss	-	-
Balances as of December 31, 2002	43,967,585	287,566
Stock issued under stock option and stock purchase plans	870,969	2,937
Stock-based compensation expense related to option modifications and grant to non-employee	-	1,903
Reversal of deferred stock-based compensation related to terminations	-	(774)
Amortization of deferred stock-based compensation	-	-
Conversion of exchangeable shares to common stock	275,108	2,603
Net loss	-	-
Balances as of December 31, 2003	<u>45,113,662</u>	<u>\$ 294,235</u>

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

Exchangeable Shares		Deferred Stock-based Compensation	Note Receivable for Common Stock	Accumulated Deficit	Total Shareholders' Equity
Shares	Amount				
-	\$ -	\$ (2,206)	\$ (172)	\$ (17,429)	\$ 106,453
-	-	-	88	-	3,128
-	-	(13,440)	-	-	118,150
-	-	1,527	-	-	-
-	-	8,461	-	-	8,461
-	-	-	-	(42,559)	(42,559)
-	-	(5,658)	(84)	(59,988)	193,633
-	-	-	84	-	2,800
1,731,099	16,376	(1,205)	-	-	16,182
-	-	-	-	-	20,114
-	-	-	-	-	(55)
-	-	(2,495)	-	-	-
-	-	3,963	-	-	-
-	-	2,993	-	-	2,993
(622,130)	(5,885)	-	-	-	-
-	-	-	-	(20,851)	(20,851)
1,108,969	10,491	(2,402)	-	(80,839)	214,816
-	-	-	-	-	2,937
-	-	-	-	-	1,903
-	-	774	-	-	-
-	-	1,179	-	-	1,179
(275,108)	(2,603)	-	-	-	-
-	-	-	-	(530)	(530)
<u>833,861</u>	<u>\$ 7,888</u>	<u>\$ (449)</u>	<u>\$ -</u>	<u>\$ (81,369)</u>	<u>\$ 220,305</u>

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

In thousands, except share and per share data

### Note 1. Basis of Presentation

#### **NATURE OF BUSINESS**

Pixelworks, Inc. ("Pixelworks" or "the Company") is a leading designer, developer and marketer of semiconductors and software for the advanced display industry, including advanced televisions, multimedia projectors and flat panel monitors. Our system-on-chip semiconductors provide the 'intelligence' for these types of displays by processing and optimizing video and computer graphic signals to produce high-quality images.

#### **CONSOLIDATED FINANCIAL STATEMENTS**

The consolidated financial statements include the accounts of Pixelworks and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated. All foreign subsidiaries use the US dollar as the functional currency. As a result, transaction gains and losses are included in the statement of operations.

#### **USE OF ESTIMATES**

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires us to make estimates and judgments that affect amounts reported in the financial statements and related disclosures. Our significant estimates and judgments include those related to product returns, warranty obligations, bad debts, inventories, property and equipment, intangible assets, income taxes, litigation and other contingencies. The actual results experienced by the Company could differ materially from our estimates.

#### **RECLASSIFICATIONS**

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

### Note 2. Summary of Significant Accounting Policies

#### **CASH AND CASH EQUIVALENTS**

We consider all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. Cash equivalents totaled \$67,615 and \$61,229 at December 31, 2003 and 2002, respectively.

#### **MARKETABLE SECURITIES**

We categorize our marketable securities in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, *Accounting for Certain Investments in Debt and Equity Securities*. At December 31, 2003 and 2002, all marketable securities are categorized as held-to-maturity because we have the positive intent and ability to hold the securities until maturity. The held-to-maturity marketable securities are stated at amortized cost in the consolidated balance sheets.

Short-term marketable securities have remaining maturities of twelve months or less as of December 31, 2003 and 2002, and long-term marketable securities have remaining maturities of greater than twelve months.

The cost of securities sold is based on the specific identification method.

#### **ACCOUNTS RECEIVABLE**

Accounts receivable are recorded at invoiced amount and do not bear interest. We do not have any off balance sheet exposure risk related to customers. Accounts receivable are stated net of an allowance for doubtful accounts, which is maintained for estimated losses resulting from the inability of our customers to make required payments. The balance is determined based on our historical experience and the age of outstanding receivables at each reporting date.

#### **INVENTORIES**

Inventories consists of finished goods and work-in-process, and are stated at the lower of standard cost (which approximates actual cost on a first-in, first-out basis) or market (net realizable value), net of a reserve for slow moving and obsolete items.

#### **PROPERTY AND EQUIPMENT**

Property and equipment are stated at cost. Depreciation is calculated on a straight-line basis over the estimated useful life of the assets as follows:

Software	3 years
Equipment, furniture and fixtures	2 years
Tooling	2 years
Leasehold improvements	Lesser of lease term or estimated useful life

Reviews for impairment of property and equipment are performed whenever events or circumstances indicate that the carrying amount of assets may not be recoverable, or that the useful life of assets is shorter than originally estimated. Impairment is assessed in accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-lived Assets* ("SFAS 144"), by comparing the projected undiscounted net cash flows associated with the assets over their remaining useful lives against their respective carrying amounts. Impairment, if any, is based on the excess of the carrying amount over the fair value of the assets.

The cost of property and equipment repairs and maintenance is expensed as incurred.

#### **ACQUIRED INTANGIBLE ASSETS**

Acquired intangible assets consist of developed technology and an assembled workforce asset. The acquired intangible assets are being amortized on a straight-line basis over seven and three years, respectively. The assets are reviewed regularly to determine whether events or circumstances indicate that the carrying amount of the assets may not be recoverable, or that the useful life of the assets is shorter than originally estimated. If such events or circumstances did exist, the assets would be assessed for recoverability in accordance with SFAS 144. To date, we have not recognized any impairment charges against these assets.

#### **OTHER INTANGIBLE ASSETS**

In addition to acquisition related intangible assets, we have recorded intangible intellectual property assets, which consist of amounts paid under technology license agreements. These assets are stated at cost and are amortized over the term of the license, or the estimated life of the asset if the license is not contractually limited. These assets are included in other long-term assets in the consolidated balance sheets, and are assessed for impairment in accordance with SFAS 144 when events or circumstances indicate that the carrying amount of the assets may not be recoverable, or that the useful life of the assets is shorter than originally estimated.

#### **GOODWILL**

Goodwill represents the excess cost over the fair value of net assets acquired in business combinations. Goodwill is tested annually for impairment, and is tested for impairment more frequently if events and circumstances indicate that the goodwill might be impaired. The impairment tests are performed in accordance with FASB Statement No. 142, *Goodwill and Other Intangible Assets*. Accordingly, an impairment loss is recognized to the extent that the carrying amount of goodwill exceeds its fair value. This determination is made at the reporting unit level. We have assigned all goodwill to a single, enterprise-level reporting unit. The impairment test consists of two steps. First, we determine the fair value of the reporting unit. The fair value is then compared to its carrying amount. Second, if the carrying amount of the reporting unit exceeds its fair value, an impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the implied fair value of that goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation in accordance with FASB Statement No. 141,

*Business Combinations.* The residual fair value after this allocation is the implied fair value of the reporting unit goodwill. We perform our annual impairment test in the first quarter of each year. We did not record any goodwill impairment charges in 2003, 2002 or 2001.

#### **REVENUE RECOGNITION**

We recognize revenue in accordance with Staff Accounting Bulletin No. 104, *Revenue Recognition*. Accordingly, we recognize revenue from product sales to customers and distributors upon shipment provided that:

- an authorized purchase order has been received;
- the sales price is fixed and determinable;
- title has transferred;
- collection of the resulting receivable is probable; and
- product returns are reasonably estimable.

There are no customer acceptance provisions associated with our products, and except for replacement of defective products under our warranty program, we have no obligation to accept product returns from end customers. Requests to return product are assessed on a case-by-case basis and returns are accepted as a customer accommodation only.

A portion of our sales are made to distributors under agreements that grant the distributor limited stock rotation rights and price protection discounts on in-stock merchandise. The stock rotation rights allow these distributors to exchange product currently in their inventory for other Pixelworks product. Under the price protection provisions, we may grant credits to certain distributors on previous sales.

We record estimated reductions to revenue for these sales returns and allowances in our reserve for sales returns and allowances. We update the balance in this reserve based on historical experience at each reporting period. If actual returns increase, we may be required to recognize additional reductions to revenue.

Revenue from software sales was not material for the periods presented.

#### **WARRANTY PROGRAM**

We warrant that our products will be free from defects in material and workmanship for a period of twelve months from delivery. Warranty repairs are guaranteed for the remainder of the original warranty period. Our warranty is limited to repairing or replacing products, or refunding the purchase price.

We provide for the estimated cost of product warranties in our warranty reserve. We update the balance in this reserve based on historical experience at each reporting period. While we engage in extensive product quality programs and processes, which include actively monitoring and evaluating the quality of our suppliers, should actual product failure rates or product replacement costs differ from our estimates, revisions to the estimated warranty liability may be required.

#### **STOCK-BASED COMPENSATION**

We have a 1997 Incentive Stock Option Plan and a 2001 Non-qualified Stock Option Plan under which employees, officers and directors may be granted stock options to purchase shares of the Company's common stock. We also have an Employee Stock Purchase Plan under which eligible employees may purchase shares of Pixelworks' common stock at 85% of fair market value at specific, pre-determined dates.

As permitted by SFAS No. 123, *Accounting for Stock-Based Compensation* ("SFAS 123"), and SFAS No. 148, *Accounting for Stock-Based Compensation – Transition and Disclosure, an Amendment of FASB Statement No. 123*, we continue to apply the intrinsic value based method of accounting for stock compensation described in APB Opinion No. 25, *Accounting for Stock Issued to Employees* ("Opinion 25"). As such, stock-based compensation cost is measured as the excess, if any, of the quoted market price of Pixelworks' stock at the grant, or other measurement date, over the amount that an option holder must pay to acquire the stock.

Deferred stock-based compensation is being amortized on an accelerated basis over the vesting period, generally four years, consistent with the methodology described in FASB Interpretation No. 28, *Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans*. Deferred stock-based compensation amortized in the years ended December 31, 2003, 2002 and 2001 was \$1,179, \$2,993 and \$8,461, respectively.

Amortization of the December 31, 2003 balance of deferred stock-based compensation will approximate \$381 and \$68 for the years ending December 31, 2004 and 2005, respectively.

During the fourth quarter of 2003, we accelerated the vesting of outstanding stock option awards for employees whose employment was terminated as a result of our restructuring. (See Note 9.) We recognized an additional \$1,873 of stock-based compensation expense as a result of the modifications.

Entities electing to continue to apply Opinion 25 must make prominent pro-forma disclosures of net income and earnings per share as if the fair value based method prescribed by SFAS 123 had been applied. Had we accounted for our stock-based compensation plans in accordance with SFAS 123, our net loss would approximate the pro-forma amounts below:

Year Ended December 31,	2003	2002	2001
Net loss as reported	\$ (530)	\$ (20,851)	\$ (42,559)
Add: Stock-based compensation included in reported net loss, net of related tax effects	1,862	2,993	8,461
Deduct: Stock-based compensation determined under the fair value based method, net of related tax effects	<u>(10,659)</u>	<u>(12,882)</u>	<u>(16,162)</u>
Pro-forma net loss	<u>\$ (9,327)</u>	<u>\$ (30,740)</u>	<u>\$ (50,260)</u>
Reported net loss per share	<u>\$ (0.01)</u>	<u>\$ (0.48)</u>	<u>\$ (1.05)</u>
Pro-forma net loss per share	<u>\$ (0.21)</u>	<u>\$ (0.71)</u>	<u>\$ (1.24)</u>

The fair value of stock-based compensation costs reflected in the above pro forma amounts were determined using the Black-Scholes option pricing model and the following weighted average assumptions:

Year Ended December 31,	2003	2002	2001
<b>Stock Option Plans:</b>			
Risk free interest rate	2.90%	2.76%	4.49%
Expected dividend yield	0%	0%	0%
Expected life (in years)	5.5	5.4	5.0
Volatility	109%	115%	126%
<b>Employee Stock Purchase Plan:</b>			
Risk free interest rate	1.83%	2.26%	6.13%
Expected dividend yield	0%	0%	0%
Expected life (in years)	1.2	1.2	1.4
Volatility	104%	114%	124%

Under the Black-Scholes option pricing model the weighted-average fair value of options granted at market value during 2003, 2002 and 2001 was approximately \$6.16, \$8.85 and \$18.99, respectively. The weighted-average fair value of options granted below fair value during 2002 was approximately \$10.77.

The effects of applying SFAS 123 in this pro forma disclosure are not indicative of future amounts and additional awards are anticipated in future years.

We account for equity instruments issued to non-employees in accordance with the provisions of SFAS 123 and Emerging Issues Task Force consensus on Issue No. 96-18, *Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring, or in Conjunction with Selling Goods or Services*. During 2003, we issued a stock option to purchase 2,500 shares of Pixelworks stock to a consultant in exchange for past services provided. The fair value of the award was calculated using the Black-Scholes option pricing model and was expensed on the date of grant. The total award value of \$30 is included in selling, general and administrative expense. There were no other equity instruments issued to non-employees during the periods presented.

**RESEARCH AND DEVELOPMENT**

Research and development expenses are charged to expense as incurred.

**INCOME TAXES**

We account for income taxes under the asset and liability method. This approach requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between financial statement carrying amounts and tax bases of assets and liabilities. 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. 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.

A valuation allowance is established in accordance with SFAS No. 109, *Accounting for Income Taxes* ("SFAS 109"), to reduce deferred tax assets to the amount expected "more likely than not" to be realized in future tax returns.

**COMPREHENSIVE INCOME**

SFAS No. 130, *Reporting Comprehensive Income*, establishes standards for the reporting of comprehensive income and its components. To date, we have had no transactions that are required to be reported in comprehensive income, other than net income or loss.

**FAIR VALUE OF FINANCIAL INSTRUMENTS**

The fair value of our monetary assets and liabilities, including cash and cash equivalents, marketable securities, accounts receivable and accounts payable, approximates the carrying value due to the short-term nature of these instruments.

## Note 3. Balance Sheet Components

**MARKETABLE SECURITIES**

Short-term marketable securities consist of the following:

December 31, 2003	Amortized Cost	Unrealized Gain	Fair Value
Auction rate securities	\$ 4,650	\$ —	\$ 4,650
Corporate bonds	1,006	2	1,008
	\$ 5,656	\$ 2	\$ 5,658
December 31, 2002	Amortized Cost	Unrealized Gain	Fair Value
Corporate notes and bonds	\$ 11,863	\$ 26	\$ 11,889
U.S. Treasury / agency securities	13,052	52	13,104
	\$ 24,915	\$ 78	\$ 24,993

Long-term marketable securities consist of the following:

December 31, 2003	Amortized Cost	Unrealized Gain (Loss)	Fair Value
Municipal bonds	\$ 10,875	\$ (5)	\$ 10,870
U.S. Treasury securities	<u>9,000</u>	<u>3</u>	<u>9,003</u>
	<u>\$ 19,875</u>	<u>\$ (2)</u>	<u>\$ 19,873</u>
December 31, 2002	Amortized Cost	Unrealized Gain	Fair Value
U.S. Treasury securities	\$ 14,500	\$ 23	\$ 14,523

Maturities of long-term marketable securities range from 1-2 years.

**ACCOUNTS RECEIVABLE**

Accounts receivable, net consists of the following:

December 31,	2003	2002
Accounts receivable, gross	\$ 8,680	\$ 10,633
Allowance for doubtful accounts	<u>(212)</u>	<u>(212)</u>
Accounts receivable, net	<u>\$ 8,468</u>	<u>\$ 10,421</u>

During the year ended December 31, 2002 we recorded a provision for doubtful accounts of \$7. During the years ended December 31, 2003 and 2001, the provision was \$0.

**INVENTORIES**

Inventories, net consists of the following:

December 31,	2003	2002
Finished goods	\$ 8,854	\$ 6,514
Work-in-process	<u>3,566</u>	<u>1,651</u>
	12,420	8,165
Reserve for slow moving and obsolete items	<u>(1,942)</u>	<u>(1,377)</u>
	<u>\$ 10,478</u>	<u>\$ 6,788</u>

The following is a summary of the change in our reserve for slow moving and obsolete items:

Year Ended December 31,	2003	2002	2001
Beginning balance	\$ 1,377	\$ 412	\$ 173
Provision	883	1,535	541
Charge offs	<u>(318)</u>	<u>(570)</u>	<u>(302)</u>
Ending balance	<u>\$ 1,942</u>	<u>\$ 1,377</u>	<u>\$ 412</u>

**PROPERTY AND EQUIPMENT**

Property and equipment, net consists of the following:

December 31,	2003	2002
Software	\$ 9,811	\$ 8,169
Equipment, furniture and fixtures	7,597	6,098
Tooling	3,378	4,333
Leasehold improvements	<u>992</u>	<u>636</u>
	21,778	19,236
Accumulated depreciation and amortization	<u>(15,217)</u>	<u>(10,163)</u>
	<u>\$ 6,561</u>	<u>\$ 9,073</u>

**ACQUIRED INTANGIBLE ASSETS**

Acquired intangible assets, net consist of the following:

	Gross Carrying Amount	Accumulated Amortization
December 31, 2003		
Developed technology	\$ 3,700	\$ 1,014
Assembled workforce	1,577	728
December 31, 2002		
Developed technology	\$ 3,700	\$ 485
Assembled workforce	2,909	242

Amortization of developed technology was \$529 and \$485 for the years ended December 31, 2003 and 2002, respectively. Amortization of the assembled workforce was \$486 and \$242 for the years ended December 31, 2003 and 2002, respectively.

The decrease in the gross carrying amount of the assembled workforce asset is attributable to an intellectual property asset purchase agreement that we established between Pixelworks, Inc. and Jaldi Semiconductor Corporation ("Jaldi"), our Canadian subsidiary. The agreement was effective December 31, 2002. As a result of the agreement, the September 2002 Jaldi purchase price allocation (see Note 11) was revised to reallocate \$1,332 of the excess purchase price over the fair value of the net assets acquired from the assembled workforce asset to a deferred tax charge and a reduction in the deferred tax liability.

Amortization of developed technology will be \$529 for the years ending December 31, 2004, 2005, 2006, 2007 and 2008. Amortization of the assembled workforce will be \$486 and \$363 for the years ending December 31, 2004 and 2005.

**OTHER ASSETS**

Other assets, net consist of the following:

December 31,	2003	2002
Investment in Semiconductor Manufacturing International Corporation	\$ 10,000	\$ -
Deferred tax assets	3,694	2,138
Licensed technology, net	1,158	2,393
Other	<u>1,353</u>	<u>2,506</u>
	<u>\$ 16,205</u>	<u>\$ 7,037</u>

The investment in Semiconductor Manufacturing International Corporation ("SMIC") was made in the third quarter of 2003. SMIC is a Chinese wafer foundry. Purchases from SMIC were not material during the year ended December 31, 2003 and the investment is carried at cost at December 31, 2003.

#### **GOODWILL**

##### **Changes in Carrying Amount**

During the year ended December 31, 2002, we recorded \$14,371 in goodwill in conjunction with the acquisition of nDSP, Inc. ("nDSP"). (See Note 11.) Additionally, as a result of the adoption of SFAS 142 on January 1, 2002, \$1,250 was reclassified from an acquired intangible assembled workforce asset to goodwill. The assembled workforce had been booked as a result of the acquisition of Panstera, Inc. ("Panstera") in 2001. (See Note 11.)

Goodwill decreased \$930 during 2002 due to the utilization of acquired net operating loss carryforwards that, at the original acquisition date, had a full valuation allowance.

The carrying amount of goodwill did not change during 2003.

##### **Prior Period Amortization**

Also to comply with SFAS 142, on January 1, 2002, we ceased amortization of goodwill and the assembled workforce asset acquired in the Panstera acquisition. The following table summarizes the impact on net loss and net loss per share had SFAS 142 been in effect for the year ended December 31, 2001:

Net loss as reported	\$ (42,559)
Add: Amortization of goodwill and assembled workforce	<u>15,982</u>
Adjusted net loss	<u>\$ (26,577)</u>
Basic and diluted net loss per share as reported	<u>\$ (1.05)</u>
Adjusted basic and diluted net loss per share	<u>\$ (0.65)</u>

##### **Accrued Liabilities**

Accrued liabilities consist of the following:

December 31,	2003	2002
Payroll and related liabilities	\$ 3,502	\$ 2,811
Accrued manufacturing liabilities	1,179	500
Reserve for sales returns and allowances	202	588
Reserve for warranty returns	569	769
Other	<u>3,230</u>	<u>2,644</u>
	<u>\$ 8,682</u>	<u>\$ 7,312</u>

The following is a summary of the change in our reserve for sales returns and allowances:

Year Ended December 31,	2003	2002
Beginning balance	\$ 588	\$ 673
Provision	1,654	541
Charge offs	<u>(2,040)</u>	<u>(626)</u>
Ending balance	<u>\$ 202</u>	<u>\$ 588</u>

The following is a summary of the change in our warranty reserve:

Year Ended December 31,	2003	2002
Beginning balance	\$ 769	\$ 978
Provision	18	556
Charge offs	<u>(218)</u>	<u>(765)</u>
Ending balance	<u>\$ 569</u>	<u>\$ 769</u>

#### Note 4. Earnings Per Share

We calculate earnings per share in accordance with SFAS No. 128, *Earnings per Share*. Basic earnings per share amounts are computed based on the weighted average number of common shares outstanding, and includes exchangeable shares. These exchangeable shares, which were issued on September 6, 2002 by Jaldi, our Canadian subsidiary, to its shareholders in connection with the Jaldi asset acquisition, have characteristics essentially equivalent to Pixelworks' common stock.

Diluted earnings per share amounts are based on the increased number of common shares that would be outstanding assuming the exercise of certain outstanding stock options and the vesting of certain restricted stock, when such exercise or vesting would have the effect of reducing earnings per share.

The following incremental shares have been excluded from the computation of diluted net loss per share for the periods presented as the effect would have been anti-dilutive:

Year Ended December 31,	2003	2002	2001
Incremental shares related to stock options	1,237,281	1,334,356	2,425,285
Shares of restricted stock subject to vesting	99,001	91,650	122,844

The incremental shares related to stock options above are based on weighted average stock options outstanding with exercise prices less than the average market value of Pixelworks' common stock during the periods presented.

The following weighted average stock options have also been excluded from the computation of diluted net loss per share for the periods presented because the options' exercise prices were greater than the average market value of Pixelworks' common stock:

Year Ended December 31,	2003	2002	2001
Weighted average options outstanding with exercise prices in excess of average market value	3,009,257	3,199,252	636,706

Note 5. Income Taxes

The income tax (benefit) expense was allocated as follows:

Year Ended December 31,	2003	2002	2001
Income from continuing operations	\$ (907)	\$ 880	\$ -
Goodwill, for initial recognition of acquired tax benefits that previously were included in the valuation allowance	-	(930)	(831)
Stockholders' equity, for compensation for tax purposes in excess of amounts recognized for financial reporting purposes	-	(1,357)	(1,425)
	<u>\$ (907)</u>	<u>\$ (1,407)</u>	<u>\$ (2,256)</u>

Income tax (benefit) expense attributable to continuing operations is comprised of the following:

Year Ended December 31,	2003	2002	2001
Current:			
Federal	\$ 12	\$ 1,346	\$ 2,136
State	8	180	120
Foreign	241	-	-
Total current	261	1,526	2,256
Deferred:			
Federal	(627)	(572)	(2,136)
State	(541)	(74)	(120)
Total deferred	(1,168)	(646)	(2,256)
Income tax expense	<u>\$ (907)</u>	<u>\$ 880</u>	<u>\$ -</u>

The significant differences between the U.S. federal statutory tax rate and our effective tax rate for financial statement purposes are as follows:

Year Ended December 31,	2003	2002	2001
Computed "expected" income tax benefit	(34)%	(34)%	(34)%
Increase (decrease) resulting from:			
Research and experimentation credit	(65)	(5)	(2)
Change in valuation allowance	81	-	(6)
Difference between financial and tax reporting for stock option exercises	(12)	-	-
Amortization of acquired intellectual property, workforce in place and deferred tax charge	(19)	-	-
State income taxes, net of federal tax benefit	(8)	1	1
In-process research and development	-	41	26
Non-deductible goodwill amortization	-	-	12
Other	(6)	1	3
Actual tax (benefit) expense	<u>(63)%</u>	<u>4%</u>	<u>-%</u>

The tax effects of temporary differences and net operating loss carryforwards which give rise to significant portions of deferred tax assets and deferred tax liabilities are as follows:

December 31,	2003	2002
Deferred tax assets:		
Net operating loss carryforwards	\$ 10,809	\$ 10,097
Research and experimentation credit carryforwards	5,942	4,661
Accrued vacation	375	386
Reserves and accrued expenses	1,334	1,296
Deferred compensation	1,028	89
Depreciation	553	893
Other	239	271
Total gross deferred tax assets	20,280	17,693
Deferred tax liabilities:		
Amortization	(1,331)	(2,205)
Less valuation allowance	(13,452)	(11,760)
Net deferred tax assets	<u>\$ 5,497</u>	<u>\$ 3,728</u>

The net deferred tax assets are included in the consolidated balance sheet as follows:

December 31,	2003	2002
Prepaid expenses and other current assets	\$ 1,803	\$ 1,673
Other assets	3,694	2,055
Net deferred tax assets	<u>\$ 5,497</u>	<u>\$ 3,728</u>

We have established a valuation allowance for certain deferred tax assets, including net operating loss and tax credit carryforwards. SFAS 109 requires that a valuation allowance be recorded when it is more likely than not that some portion of the deferred tax assets will not be realized. Although realization of the remaining net deferred tax assets is not assured, we believe that it is more likely than not that net deferred tax assets, which do not have a valuation allowance, will be realized. We consider the scheduled reversal of deferred tax liabilities, future taxable income and tax planning strategies when making this assessment. The net change in the total valuation allowance for the years ended December 31, 2003, 2002 and 2001 was an increase of approximately \$1,692, \$4,371 and \$2,603, respectively.

Certain subsequently recognized tax benefits related to the valuation allowance for deferred tax assets as of December 31, 2003 will be allocated as an addition to common stock in the amount of approximately \$2,999 and as a reduction goodwill in the amount of approximately \$10,316.

As of December 31, 2003, we have federal, state and foreign net operating loss carryforwards of approximately \$20,606, \$29,448 and \$6,432, respectively, which will expire between the years 2007-2022. As of December 31, 2003, we have generated federal, state and foreign credit carryforwards of approximately \$4,340, \$2,032 and \$500, respectively, which will expire between the years 2007-2022. Utilization of acquired net operating loss and credit carryforwards are subject to certain annual limitations when there is a change of more than 50% in ownership. Such a change occurred with the acquisition of nDSP and Jaldi during 2002.

We provide for U.S. income taxes on the earnings of foreign subsidiaries unless the earnings are considered permanently invested outside the U.S. As of December 31, 2003, the cumulative amount of earnings upon which U.S. income taxes have not been provided are approximately \$3,298. Upon repatriation, some of these earnings would generate foreign tax credits that may reduce the federal tax liability associated with any future foreign dividend.

## Note 6. Commitments And Contingencies

### ROYALTIES

We license technology from third parties and have agreed to pay certain suppliers a per unit royalty based on either the number of chips sold or manufactured, or the net sales price of the chips containing the licensed technology. We have recorded \$1,798, \$826 and \$271 in royalty expense for the years ended December 31, 2003, 2002 and 2001, respectively.

### 401(K) PLAN

We have a profit-sharing plan for eligible employees under the provisions of Internal Revenue Code Section 401(k). Participants may defer a percentage of their annual compensation on a pre-tax basis, not to exceed the dollar limit that is set by law. A discretionary matching contribution by the Company is allowed and is equal to a uniform percentage of the amount of salary reduction elected to be deferred, which percentage will be determined each year by the Company. The Company made no contributions to the 401(k) plan during 2003, 2002 or 2001.

### LEASES

We lease office space under operating leases that expire at various dates through 2008. Future minimum payments under the leases are as follows:

Year Ending December 31,	
2004	\$ 1,958
2005	1,368
2006	624
2007	383
2008	395
	<u>\$ 4,728</u>

Minimum lease payments above are net of sublease rentals of \$73, \$95 and \$40 for the years ended December 31, 2004, 2005 and 2006, respectively. Rent expense for the years ended December 31, 2003, 2002 and 2001 was \$2,817, \$2,330 and \$1,112.

### CONTRACT MANUFACTURERS

In the normal course of business, we commit to purchase products from our contract manufacturers to be delivered within the next 90 days. In certain situations, should we cancel an order, we could be required to pay cancellation fees. Such obligations could impact our immediate results of operations but would not materially affect our business.

## Note 7. Shareholders' Equity

### PREFERRED STOCK

The Company is authorized to issue 50,000,000 shares of preferred stock with a par value of \$.001 per share. The Board of Directors is authorized to fix or alter the rights, preferences, privileges and restrictions granted to, or imposed on, each series of preferred stock.

As of December 31, 2003, there is one series of preferred stock designated as the Special Voting Share Series. As of December 31, 2003, there is one voting share issued and outstanding. The series was designated and the share was issued in 2002 in connection with our acquisition of Jaldi. The voting share entitles the holders of exchangeable shares (see below) to vote on any matters that come before the Pixelworks common shareholders.

The holder of the voting share is not entitled to receive dividends. In the event of any dissolution of the Company, the holder of the voting share is entitled to be paid out of the net assets of the Company an amount equal to \$0.001, before any payment is made to the holders of common stock.

#### **COMMON STOCK**

The Company is authorized to issue 250,000,000 shares of common stock with a par value of \$.001 per share. Shareholders of common stock have unlimited voting rights and are entitled to receive the net assets of the corporation upon dissolution, subject to the rights of the preferred shareholders.

#### **EXCHANGEABLE SHARES**

In connection with the Jaldi asset acquisition, Jaldi issued 1,731,099 exchangeable shares to its shareholders. The voting share described above is held in trust for the benefit of the holders of the exchangeable shares and provides the holders of the exchangeable shares with dividend, voting and other rights equivalent to those of Pixelworks' common shareholders. These exchangeable shares are the economic equivalent of Pixelworks' common shares, and may be exchanged at any time for Pixelworks common stock on a one-for-one basis.

#### **NOTE RECEIVABLE FOR COMMON STOCK**

During 1999, options to purchase 305,937 shares of common stock were exchanged for 305,937 shares of common stock subject to vesting in exchange for a note receivable. The note receivable was due and payable the earlier of (1) August 31, 2008 or (2) upon termination of the borrower's employment. Interest payments at the rate of 6% were due and payable annually. The note was secured by the shares of common stock issued thereunder. The note was paid in full in 2002 and as of December 31, 2003 all shares were fully vested.

#### **STOCK OPTION PLANS**

Under our 1997 Incentive Stock Option Plan and 2001 Non-qualified Stock Option Plan (the "option plans"), 16,840,116 and 4,000,000 stock options, respectively, may be granted. Options granted under the plans must generally be exercised while the individual is an employee and within ten years of the date of grant. The standard vesting schedule provides that each option becomes exercisable at a rate of 25% on the first anniversary date of the grant, and 2.08% on the last day of every month thereafter for a total of thirty-six additional increments. The alternative vesting schedule provides that options become exercisable monthly for a period of four years, with 10% becoming exercisable in the first year, 20% becoming exercisable in the second year, 30% becoming exercisable in the third year, and 40% becoming exercisable in the fourth year.

The following is a summary of stock option activity:

	Number of shares	Weighted average exercise price
Options outstanding as of December 31, 2000	2,832,881	\$ 3.99
Granted at market	1,414,325	15.67
Options exchanged in acquisition	777,042	0.21
Exercised	(784,694)	1.09
Canceled	(137,116)	7.82
Options outstanding as of December 31, 2001	4,102,438	7.73
Granted at market	2,231,102	10.62
Granted below market	729,500	10.25
Options exchanged in acquisition	118,858	2.07
Exercised	(635,766)	0.76
Canceled	(731,438)	8.23
Options outstanding as of December 31, 2002	5,814,694	9.74
Granted at market	1,592,099	7.52
Exercised	(650,766)	2.76
Canceled	(484,288)	10.20
Options outstanding as of December 31, 2003	<u>6,271,739</u>	9.86

The following table summarizes information about options outstanding at December 31, 2003:

Range of Exercise prices	Options Outstanding			Options Exercisable	
	Number outstanding at December 31, 2003	Weighted average remaining contractual life	Weighted average exercise price	Number exercisable at December 31, 2003	Weighted average exercise price
\$ 0.17 – \$ 1.49	658,876	5.03	\$ 0.60	648,972	\$ 0.60
1.85 – 6.25	819,503	7.54	4.34	433,781	3.20
6.30 – 7.57	1,177,745	9.20	7.06	165,152	7.12
7.62 – 9.22	945,322	8.52	8.63	218,838	8.53
9.26 – 10.25	831,768	8.05	10.10	450,256	10.15
10.26 – 16.50	1,161,923	8.05	14.23	436,194	14.01
16.64 – 39.00	<u>676,602</u>	7.07	24.38	<u>451,517</u>	24.83
\$ 0.17 – \$ 39.00	<u>6,271,739</u>	7.84	\$ 9.86	<u>2,804,710</u>	\$ 9.54

At December 31, 2002 there was a total of 1,683,963 options exercisable with a weighted average exercise price of \$6.46. At December 31, 2001 there was a total of 1,081,132 options exercisable with a weighted average exercise price of \$3.19.

As of December 31, 2003, 3,871,469 shares were available for grant under the option plans.

#### EMPLOYEE STOCK PURCHASE PLAN

A total of 1,500,000 shares of common stock have been reserved for issuance under the ESPP. During the years ended December 31, 2003, 2002 and 2001, the Company issued 220,203, 128,667 and 78,218 shares under our ESPP plan for proceeds of approximately \$1,141, \$887 and \$757, respectively. As of December 31, 2003, there were 1,060,537 shares available for issuance under this plan.

#### Note 8. Segment Information

In accordance with SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, we have identified a single operating segment: the design and development of integrated circuits for electronic display devices. Substantially all of our assets are located in the U.S.

#### GEOGRAPHIC INFORMATION

Revenue by geographic region, attributed to countries based on the domicile of the customer, was as follows:

Year Ended December 31,	2003	2002	2001
Japan	\$ 58,597	\$ 49,278	\$ 47,143
Taiwan	33,843	17,738	13,456
China	17,930	6,457	418
Korea	14,428	11,901	14,026
Europe	8,302	5,370	6,402
U.S.	1,928	2,411	7,854
Other	5,893	9,486	1,509
	<u>\$ 140,921</u>	<u>\$ 102,641</u>	<u>\$ 90,808</u>

#### SIGNIFICANT CUSTOMERS

Sales to distributors represented 69%, 68% and 61% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. The following distributors accounted for 10% or more of total revenue for the periods presented:

Year Ended December 31,	2003	2002	2001
Distributor A	39%	45%	52%
Distributor B	16%	12%	8%

Sales to our top five end customers represented 35%, 41% and 43% of total revenue for the years ended December 31, 2003, 2002 and 2001, respectively. For the years ended December 31, 2002 and 2001, one end customer represented 10% and 12% of total revenue, respectively. There were no end customers that represented 10% or more of total revenue for the year ended December 31, 2003. End customers include customers who purchase directly from the Company, as well as customers who purchase the Company's products indirectly through distributors and contract manufacturers.

The following accounts represented 10% or more of total accounts receivable:

December 31,	2003	2002
Account A	33%	17%
Account B	20%	48%
Account C	11%	2%

## Note 9. Restructuring

In September 2003, we initiated a restructuring to better position the Company to compete in the advanced television market. The restructuring included the discontinuation of research and development efforts related to two products.

As a result of these actions, we determined that certain tangible and intangible assets related to the discontinued development efforts were permanently impaired because there were no alternate uses for them. Impaired assets included tooling, licensed technology and prepaid royalties.

The restructuring also resulted in a reduction-in-force of 28 employees during the fourth quarter of 2003. These employees were given one-time severance benefits, which were expensed and paid in the fourth quarter of 2003 on the date of employee communication.

We also subleased approximately 4,000 square feet of our California office as a result of the restructuring. We included the present value of the difference between the future minimum lease payments and the non-cancelable sublease rentals in restructuring expense during the fourth quarter of 2003. The liability remaining at December 31, 2003 is included in accrued liabilities in the consolidated balance sheet.

The total costs associated with the restructuring were as follows:

Asset disposals	\$ 3,927
One-time termination benefits	916
Lease costs	188
Other	18
	<u>\$ 5,049</u>

We do not expect to incur any additional costs related to this restructuring in future periods.

## Note 10. Genesis Microchip Transaction

On March 17, 2003, we announced the execution of a definitive merger agreement with Genesis Microchip. On August 5, 2003, we entered into an agreement terminating the merger agreement. In the termination agreement, we agreed to pay a termination fee of \$5,500 to Genesis Microchip. The fee was payable upon execution of the termination agreement, and was recognized as an expense in the third quarter of 2003. Total expenses related to the proposed merger during the year ended December 31, 2003 were \$8,949.

## Note 11. Acquisitions

### **JALDI**

On January 30, 2001, we made an investment of \$7,500 in Jaldi, a development stage semiconductor company. On September 6, 2002, we acquired the remaining equity interest in Jaldi in exchange for an undertaking to issue 1,731,099 shares of Pixelworks' common stock upon the exchange of Jaldi exchangeable shares plus the assumption of all outstanding Jaldi stock options. The acquisition was accounted for as an asset purchase and the results of Jaldi's operations are included in Pixelworks' financial statements beginning on September 6, 2002.

The total purchase price of \$24,988 was allocated to assets acquired and liabilities assumed based on management's analysis and estimates of fair values. Assets acquired included in-process research and development ("IPR&D") valued at \$20,142 and an assembled workforce valued at \$2,909. The IPR&D was expensed on the date of the acquisition in accordance with FASB Interpretation No. 4 ("FIN 4"), *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method*. Jaldi had two products under development at the acquisition date contributing 70% and 30% of the total IPR&D value. As of the acquisition date, the development projects ranged from 70% to 90% complete. Since the date of the acquisition, both of the products in development have been completed.

**NDSP**

On January 14, 2002, we acquired all of the outstanding shares of nDSP, a fabless semiconductor company, in exchange for 1,185,995 shares of Pixelworks' common stock. The acquisition was accounted for using the purchase method of accounting and the results of nDSP's operations are included in Pixelworks' financial statements beginning on January 14, 2002.

The total purchase price of \$20,971 was allocated to assets acquired and liabilities assumed based on management's analysis and estimates of fair values. Assets acquired include IPR&D valued at \$4,200 and acquired developed technology valued at \$3,700. The IPR&D was expensed on the date of the acquisition in accordance with FIN 4. nDSP had three products under development at the acquisition date, each contributing from 7% to 64% of the total IPR&D value. As of the acquisition date, the development projects ranged from 20% to 80% complete. Since the date of the acquisition, two of the products in development have been completed. Development of the third product was discontinued, however the video and de-interlacing technology from this product was integrated into another Pixelworks product.

The excess purchase price over the identifiable tangible and intangible assets was \$14,371 and was allocated to goodwill.

**PANSTERA**

On January 30, 2001, we acquired all of the outstanding capital stock and stock options of Panstera, a privately held fabless semiconductor company, in exchange for 4,500,000 shares of Pixelworks common stock. The acquisition was accounted for using the purchase method of accounting and the results of Panstera's operations are included in Pixelworks' financial statements beginning on January 30, 2001.

The total purchase price of \$131,925 was allocated to assets acquired and liabilities assumed based on management's analysis and estimates of fair values. Assets acquired include IPR&D valued at \$32,400. The IPR&D was expensed on the date of the acquisition in accordance with FIN 4. Panstera had four main product groups under development at the acquisition date, each contributing from 11% to 41% of the total IPR&D value. As of the acquisition date, the development projects ranged from 50% to 85% complete. Development efforts on the four main product groups have been concluded. The excess purchase price over the identifiable tangible and intangible assets was \$84,175 and was allocated to goodwill.

**UNAUDITED PRO-FORMA DISCLOSURE OF COMBINED RESULTS**

The following table reflects the unaudited combined results of Pixelworks, Panstera and nDSP as if the acquisitions of Panstera and nDSP had taken place at the beginning of 2001. This pro forma information does not necessarily reflect the actual results that would have occurred, nor is it necessarily indicative of future results of operations of the combined companies.

Year Ended December 31,	2002	2001
Net revenue	\$ 102,702	\$ 92,954
Net loss	\$ (1,039)	\$ (24,408)
Basic and diluted net loss per share	\$ (0.02)	\$ (0.56)
Basic and diluted weighted average shares outstanding	44,580,570	43,884,731

Note 12. Quarterly Financial Data (Unaudited)

	March 31, 2003	June 30, 2003	September 30, 2003	December 31, 2003
Net revenue	\$ 32,005	\$ 32,559	\$ 35,516	\$ 40,841
Gross profit	14,713	14,679	15,063	18,938
Income (loss) from operations	594	470	(6,942)	3,264
Income (loss) before taxes	973	771	(6,695)	3,514
Net income (loss)	248	420	(4,141)	2,943
Net income (loss) per share, basic and diluted	0.01	0.01	(0.09)	0.06

	March 31, 2002	June 30, 2002	September 30, 2002	December 31, 2002
Net revenue	\$ 22,005	\$ 24,644	\$ 26,862	\$ 29,130
Gross profit	11,467	12,383	13,215	13,861
Income (loss) from operations	(4,400)	1,094	(19,298)	358
Income (loss) before taxes	(3,755)	1,688	(18,756)	852
Net income (loss)	(3,906)	1,361	(18,985)	679
Net income (loss) per share, basic	(0.09)	0.03	(0.44)	0.02
Net income (loss) per share, diluted	(0.09)	0.03	(0.44)	0.01

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

None.

Item 9A. Controls and Procedures

- (a) *Evaluation of Disclosure Controls and Procedures.* Our management, with the participation of our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), carried out an evaluation of the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by this report pursuant to Securities Exchange Act Rule 13a-15(e) and 15d-15(e). Based upon this evaluation, our CEO and CFO concluded that our controls and procedures are effective in timely alerting them to material information regarding the Company (including its consolidated subsidiaries) required to be included in our periodic SEC filings.
- (b) *Changes in Internal Controls.* There have been no significant changes in our internal controls over financial reporting that could significantly affect those controls subsequent to the date of the evaluation, and no significant deficiencies or material weaknesses were identified which required corrective action.

## PART III

### Item 10. Directors and Executive Officers of the Registrant

Information concerning the Directors of the Company is set forth in the Company's proxy statement for its 2004 annual meeting of shareholders (the "2004 Proxy Statement") and is incorporated herein by reference.

Information with respect to Executive Officers is included in the 2004 Proxy Statement and is incorporated herein by reference.

Information with respect to Section 16(a) of the Securities Exchange Act is in the 2004 Proxy Statement and is incorporated herein by reference.

Information relating to an audit committee financial expert, the identification of the audit committee of our board of directors and procedures of security holders to recommend nominees to our Board of Directors is contained in our 2004 Proxy Statement and is incorporated herein by reference.

We have adopted a written code of ethics that applies to our CEO, senior financial officers, financial vice presidents, directors and managers and disclosure committee members. We have also adopted a written code of business conduct and ethics that applies to all of our employees, officers and directors. Each code is available on our Web site at [www.pixelworks.com](http://www.pixelworks.com). Any person may request a copy of either code of ethics by writing to us at the following address:

Pixelworks, Inc.  
Investor Relations  
8100 SW Nyberg Road  
Tualatin, Oregon 97062

### Item 11. Executive Compensation

Information with respect to executive compensation is included in the 2004 Proxy Statement and is incorporated herein by reference.

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

Information with respect to security ownership of certain beneficial owners and management is included in the 2004 Proxy Statement and is incorporated herein by reference.

Information with respect to equity compensation plans is included in the 2004 Proxy statement and is incorporated herein by reference.

### Item 13. Certain Relationships and Related Transactions

Information with respect to certain relationships and related transactions with management is included in the 2004 Proxy Statement and is incorporated herein by reference.

### Item 14. Principal Accounting Fees and Services

Information with respect to principal accounting fees and services is included in the 2004 Proxy Statement and is incorporated herein by reference.

## PART IV

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

#### (A) 1. FINANCIAL STATEMENTS

The following financial statements are included in Item 8:

Independent Auditors' Report

Consolidated Balance Sheets as of December 31, 2003 and 2002

Consolidated Statements of Operations for the years ended December 31, 2003, 2002 and 2001

Consolidated Statements of Cash Flows for the years ended December 31, 2003, 2002 and 2001

Consolidated Statements of Shareholders' Equity for the years ended December 31, 2003, 2002 and 2001

Notes to Consolidated Financial Statements

#### (A) 2. FINANCIAL STATEMENT SCHEDULES

All schedules have been omitted as they are either not required or the information is otherwise included.

#### (A) 3. EXHIBITS

The exhibits are either filed with this report or incorporated by reference into this report.

Exhibit Number	Description
2.1	Agreement and Plan of Merger dated as of December 13, 2000 among Pixelworks, Inc., Panther Acquisition, Inc., Panstera, Inc. and those certain shareholders of Panstera, Inc. signatories thereto (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on February 13, 2001).
2.2	Amendment to Agreement and Plan of Merger dated as of January 26, 2001 among Pixelworks Inc., Panther Acquisition, Inc. and Panstera, Inc. (incorporated by reference to Exhibit 2.2 to the Company's Current Report on Form 8-K filed on February 13, 2001).
2.3	Agreement and Plan of Merger and Reorganization dated as of December 6, 2001 among Pixelworks, Inc., Nighthawk Acquisition Corp. and those certain shareholders of nDSP Delaware, Inc. who are signatories thereto (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on January 29, 2002).
2.4	Reorganization Agreement among Pixelworks, Inc., Pixelworks Nova Scotia Company, Certain Shareholders of Jaldi Semiconductor Corp. and Jaldi Semiconductor Corp. dated August 2, 2002 (incorporated by reference to Exhibit 99.1 to the Company's Registration Statement on Form S-3 filed on October 15, 2002).
2.5	Jaldi Semiconductor, Inc. Exchangeable Share Provisions (incorporated by reference to Exhibit 99.2 to the Company's Registration Statement on Form S-3 filed on October 15, 2002).
2.6	Exchangeable Share Support Agreement among Jaldi Semiconductor Corp., Pixelworks, Inc., Pixelworks Nova Scotia and Jaldi Semiconductor Corp. dated September 6, 2002 (incorporated by reference to Exhibit 99.3 to the Company's Registration Statement on Form S-3 filed on October 15, 2002).
2.7	Voting and Exchange Trust Agreement among Jaldi Semiconductor Corp., Pixelworks, Inc., Pixelworks Nova Scotia Company and CIBC Mellon Trust Company, dated September 6, 2002 (incorporated by reference to Exhibit 99.4 to the Company's Registration Statement on Form S-3 filed on October 15, 2002).
2.8	Agreement and Plan of Merger, dated as of March 17, 2003 among Pixelworks, Inc., Display Acquisition Corp. and Genesis Microchip Inc. (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on March 20, 2003).
2.9	Form of Pixelworks Voting Agreement, dated as of March 17, 2003 by and among each of the directors of Pixelworks Inc. and Genesis Microchip Inc. (incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed on March 20, 2003).

Exhibit Number	Description
2.10	Form of Genesis Voting Agreement, dated as of March 17, 2003 by and among each of the directors of Genesis Microchip Inc. and Pixelworks Inc. (incorporated by reference to Exhibit 99.3 to the Company's Current Report on Form 8-K filed on March 20, 2003).
3.1	Sixth Amended and Restated Articles of Incorporation of Pixelworks, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
3.2	Articles of Amendment to Sixth Amended and Restated Articles of Incorporation of Pixelworks Inc., as filed with the Secretary of State of Oregon on September 6, 2002 (incorporated by reference to Exhibit 99.5 to the Company's Registration Statement on Form S-3 filed on October 15, 2002).
3.3	First Restated Bylaws of Pixelworks, Inc. (incorporated by reference to Exhibit 3.3 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
4.1	Reference is made to Exhibit 3.1 above (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
4.2	Third Amended Registration Rights Agreement dated February 22, 2000 (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
10.1	Form of Indemnity Agreement between Pixelworks, Inc. and each of its Officers and Directors (incorporated by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000). +
10.2	Pixelworks, Inc. 1997 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
10.3	Registration Rights Agreement dated as of December 6, 2001 among Pixelworks, Inc., nDSP Delaware, Inc. and those certain shareholders of nDSP Delaware, Inc. who are signatories thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 29, 2002).
10.4	Sublease Agreement Dated September 7, 2001 between Epicor Software Corporation and Pixelworks Inc. (incorporated by reference to Exhibit 10.4 to the Company's Annual Report on Form 10-K filed on March 25, 2002).
10.5	2001 Nonqualified Stock Option Plan (incorporated by reference to Exhibit 99.1 to the Company's Registration Statement on Form S-8 filed on May 31, 2001). +
10.6	Pixelworks, Inc. 2000 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.6 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000). +
10.7	Lease Agreement Dated April 14, 1999 between Southcenter III and IV Investors LLC and Pixelworks, Inc. (incorporated by reference to Exhibit 10.7 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
10.8	VAutomation Incorporated Synthesizable Soft Core Agreement dated November 4, 1997 between VAutomation Incorporated and Pixelworks, Inc. (incorporated by reference to Exhibit 10.8 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
10.9	Intellectual Property Sublicense Agreement dated March 30, 1999 between VAutomation Incorporated and Pixelworks, Inc. (incorporated by reference to Exhibit 10.9 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
10.10	License Agreement dated February 22, 2000 between Pixelworks, Inc. and InFocus Systems, Inc. (incorporated by reference to Exhibit 10.10 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000).
10.11	Employment Agreement between Jeffrey B. Bouchard and Pixelworks, Inc. (incorporated by reference to Exhibit 10.11 to the Company's Registration Statement on Form S-1 declared effective May 19, 2000). +

Exhibit Number	Description
10.12	Shareholders Agreement dated as of January 15, 2001 among Pixelworks, Inc., Panstera, Inc., and those certain shareholders of Panstera, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 13, 2001).
10.13	Third Amendment to Lease dated March 1, 2002 between Copper Mountain Trust Corporation and Pixelworks, Inc. (incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K filed on March 25, 2002).
10.14	Form of Pixelworks, Inc. Change of Control Severance Agreement dated March 14, 2003 (incorporated by reference to Exhibit 10.4 to the Company's Registration Statement on Form S-4 filed on April 18, 2003). +
10.15	Change of Control Severance Agreement dated March 14, 2003 between Jeffrey Bouchard and Pixelworks, Inc. (incorporated by reference to Exhibit 10.5 to the Company's Registration Statement on Form S-4 filed on April 18, 2003). +
10.16	Change of Control Severance Agreement dated March 14, 2003 between Hans Olsen and Pixelworks, Inc. (incorporated by reference to Exhibit 10.6 to the Company's Registration Statement on Form S-4 filed on April 18, 2003). +
10.17	Relocation Agreement between Hans Olsen and Pixelworks, Inc. effective as of the date executed by both parties (incorporated by reference to Exhibit 10.7 to the Company's Registration Statement on Form S-4 filed on April 18, 2003). +
10.18	Form of Genesis Microchip Change of Control Severance Agreement dated March 14, 2003 (incorporated by reference to Exhibit 99.8 to the Company's Registration Statement on Form S-4 filed on April 18, 2003).
10.19	Fourth Amendment to lease dated June 23, 2003 between Pixelworks, Inc. and Quest Group Trust VI (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 14, 2003).
21	Subsidiaries of Pixelworks, Inc. (incorporated by reference to Exhibit 21 to the Company's Annual Report on Form 10-K/A filed on May 30, 2003).
23	Consent of KPMG LLP dated March 15, 2004
31.1	Certification of Chief Executive Officer
31.2	Certification of Chief Financial Officer
32.1	Certification of Chief Executive Officer
32.2	Certification of Chief Financial Officer

+ Indicates a management contract or compensation arrangement.

**(B) REPORTS ON FORM 8-K**

**Report Furnished**

On October 16, 2003, the Company furnished a report on Form 8-K to report under Item 7 and 12 that on October 16, 2003 the Company issued a press release announcing its financial results for the quarter ended September 30, 2003.

**Report Filed**

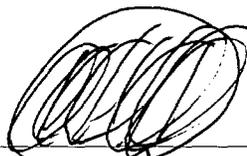
On October 29, 2003, the Company filed a report on Form 8-K to report under Item 5 that on October 24, 2003 Robert Y. Greenberg, Vice President and Chief Technology Officer, entered into a Rule 10b5-1 Plan with Citigroup Global Markets Inc. pursuant to which Citigroup will undertake to sell 320,000 shares of Pixelworks common stock owned by Mr. Greenberg at specified intervals from November 3, 2003 through August 5, 2005.

## SIGNATURES

Pursuant to the requirements of Sections 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PIXELWORKS, INC.

By: \_\_\_\_\_



Allen H. Alley  
Chairman of the Board,  
President and Chief Executive Officer

Dated: March 15, 2004

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Allen H. Alley</u> Allen H. Alley	Chairman, President and Chief Executive Officer	March 15, 2004
<u>/s/ Jeffrey B. Bouchard</u> Jeffrey B. Bouchard	Vice President, Finance and Chief Financial Officer	March 15, 2004
<u>/s/ Oliver D. Curme</u> Oliver D. Curme	Director	March 15, 2004
<u>/s/ C. Scott Gibson</u> C. Scott Gibson	Director	March 15, 2004
<u>/s/ Frank Gill</u> Frank Gill	Director	March 15, 2004
<u>/s/ Mark A. Stevens</u> Mark A. Stevens	Director	March 15, 2004

EXHIBIT 23

Consent of Independent Auditors

The Board of Directors and Shareholders  
Pixelworks, Inc.:

We consent to incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-89394, 333-62000, 333-41720 and 333-41722) and Form S-3 (No. 333-67838 and 333-100548) of Pixelworks, Inc. of our report dated January 16, 2004, relating to the consolidated balance sheets of Pixelworks, Inc. as of December 31, 2003 and 2002, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2003, which report appears in the December 31, 2003 annual report on Form 10-K of Pixelworks, Inc. Our report refers to a change in the accounting for goodwill.

**KPMG LLP**

Portland, Oregon  
March 15, 2004

## EXHIBIT 31.1

### Certification

I, Allen H. Alley, certify that:

1. I have reviewed this annual report on Form 10-K of Pixelworks, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2004

/s/ Allen H. Alley

Allen H. Alley  
Chairman of the Board,  
President and Chief Executive Officer

## EXHIBIT 31.2

### Certification

I, Jeffrey B. Bouchard, certify that:

1. I have reviewed this annual report on Form 10-K of Pixelworks, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2004

/s/ Jeffrey B. Bouchard

Jeffrey B. Bouchard  
Vice President,  
Finance and Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Pixelworks, Inc. (the "Company") on Form 10-K for the year ended December 31, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Allen H. Alley, Chief Executive Officer of the Company, and I, Jeffrey B. Bouchard, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 15, 2004

By:                   /s/ Allen H. Alley                    
                  Allen H. Alley  
                  Chairman of the Board,  
                  President and Chief Executive Officer

EXHIBIT 32.2

CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Pixelworks, Inc. (the "Company") on Form 10-K for the year ended December 31, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Allen H. Alley, Chief Executive Officer of the Company, and I, Jeffrey B. Bouchard, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 15, 2004

By:           /s/ Jeffrey B. Bouchard            
Jeffrey B. Bouchard  
Vice President, Finance and  
Chief Financial Officer

## DIRECTORS

Allen Alley, Chairman

Oliver Curme

C. Scott Gibson

Frank Gill

Mark Stevens

## OFFICERS

Allen Alley  
President, CEO  
and Chairman of the Board

Hans Olsen  
Executive Vice President  
and Chief Operating Officer

Marc Fleischmann  
Senior Vice President,  
Engineering

Robert Greenberg  
Senior Vice President  
and Chief Technology Officer

Jeffrey Bouchard  
Vice President, Finance  
and Chief Financial Officer

John Lau  
Vice President,  
Operations

Michael West  
Vice President  
and Fellow

Bob Zhang  
Vice President,  
DSP Development

## CORPORATE INFORMATION

### TRANSFER AGENT AND REGISTRAR, DIVIDEND DISBURSING AGENT

Mellon Investor Services LLC  
P.O. Box 3315  
South Hackensack, NJ 07606  
or

85 Challenger Rd.  
Ridgefield, NJ 07660  
T 800-522-6645

TDD for Hearing Impaired:  
T 800-231-5469

Foreign Shareholders:  
T 201-329-8660

TDD Foreign Shareholders:  
T 201-329-8354

[www.mellon-investor.com](http://www.mellon-investor.com)

### INDEPENDENT AUDITORS

KPMG LLP  
1300 SW 5th Avenue  
Suite 3800  
Portland, OR 97201

### CORPORATE HEADQUARTERS

Pixelworks, Inc.  
8100 S.W. Nyberg Road  
Tualatin, OR 97062  
T 503-454-1750  
F 503-612-6713

### ANNUAL MEETING

The annual meeting  
of shareholders is  
Tuesday, May 25, 2004  
at 2:00pm PDT at:

OMSI  
1945 S.E. Water Ave.  
Portland, OR 97214

### FORM 10-K

The Company files an Annual  
Report with the Securities and  
Exchange Commission on Form  
10-K. Shareholders may obtain  
a copy of this report without  
charge by writing:

Pixelworks, Inc.  
Attn: Investor Relations  
8100 S.W. Nyberg Road  
Tualatin, OR 97062

or email: [irinfo@pixelworks.com](mailto:irinfo@pixelworks.com)

### STOCK PRICE AND SHAREHOLDER DATA

The following table sets forth  
the high and low sale prices in  
the over-the-counter market for  
the Company's Common Stock  
as reported by The NASDAQ  
National Market System  
under the symbol PXLW.

### COMMON STOCK

Quarter	High	Low
<b>2002</b>		
Fourth	\$ 9.67	\$ 3.85
Third	\$ 8.37	\$ 3.50
Second	\$ 12.79	\$ 6.80
First	\$ 17.71	\$ 10.17
<b>2003</b>		
Fourth	\$ 14.65	\$ 8.68
Third	\$ 10.82	\$ 5.90
Second	\$ 8.83	\$ 5.46
First	\$ 8.95	\$ 5.25

