
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the Fiscal Year Ended December 31, 2002

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

Commission File No. 0-25826

HARMONIC INC.

(Exact name of Registrant as specified in its charter)

Delaware

77-0201147

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification Number)

**549 Baltic Way
Sunnyvale, CA 94089
(408) 542-2500**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

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

Securities registered pursuant to section 12(g) of the Act: Common Stock, par value \$.001 per share

Indicate by check mark 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 check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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 check mark whether the Registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2).

Yes No

Based on the closing sale price of the Registrant's Common Stock on the NASDAQ National Market System on June 28, 2002, the last business day of the Registrant's most recently completed second fiscal quarter, the aggregate market value of voting and non-voting Common Stock held by non-affiliates of the Registrant was \$214,377,235.

The number of shares outstanding of the Registrant's Common Stock, \$.001 par value, was 60,462,318 at March 13, 2003.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Registrant's 2003 Annual Meeting of Stockholders (which will be filed with the Securities and Exchange Commission within 120 days of the end of the fiscal year ended December 31, 2002) relating to Items 10 (as to Directors), 11 and 12 of Part III are incorporated by reference in Part III of this Form 10-K.

TABLE OF CONTENTS

PART I

Item 1. Business

Item 2. Properties

Item 3. Legal Proceedings

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

PART II

Item 5. Market for the Registrant's Common Stock and Related Security Holder Matters

Item 6. Selected Financial Data

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

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Item 8. Financial Statements and Supplementary Data

REPORT OF INDEPENDENT ACCOUNTANTS

Item 9. Changes In and Disagreements With Accountants on Accounting and Financial Disclosure

PART III

Item 10. Directors and Executive Officers of the Registrant

Item 11. Executive Compensation

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Item 13. Certain Relationships and Related Transactions

Item 14. Controls and Procedures

PART IV

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

EXHIBIT 10.22

EXHIBIT 10.23

EXHIBIT 21.1

EXHIBIT 23.1

EXHIBIT 99.1

EXHIBIT 99.2

PART I

Item 1. Business

Some of the statements contained in this Annual Report on Form 10-K are forward-looking statements that involve risks and uncertainties. The statements contained in this Annual Report on Form 10-K that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, including, without limitation, statements regarding our expectations, beliefs, intentions or strategies regarding the future. All forward-looking statements included in this Report on Form 10-K are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors, which may cause our actual results to differ materially from those implied by the forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “intends,” “estimates,” “predicts,” “potential,” or “continue” or the negative of these terms or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot offer any assurance of future results, levels of activity, performance or achievements. Important factors that may cause actual results to differ from expectations include those discussed in “Factors That May Affect Future Results of Operations” beginning on page 26 in this document. The terms “Harmonic,” “the Company,” “we,” “us,” “its” and “our” as used in this Annual Report on Form 10-K refer to Harmonic Inc. and its subsidiaries and its predecessors as a combined entity, except where the context requires otherwise.

Overview

Harmonic designs, manufactures and sells a variety of broadband solutions that allow communications service providers around the world to deliver video, voice and data to their subscribers. Harmonic’s fiber optic and digital video systems enable network operators to provide a range of interactive and advanced digital services that include digital video, high-speed Internet access, telephony, HDTV, video and audio streaming, and video-on-demand.

Historically, almost all of our sales were derived directly or indirectly from sales of fiber optic transmission systems to cable television operators. With the introduction of digital headend products beginning in 1997, we broadened our product offering to enable delivery of digital video, voice and data over satellite and wireless networks and cable systems.

In order to expand further our digital systems capability, Harmonic acquired C-Cube Microsystems Inc., or C-Cube, pursuant to the terms of a merger agreement dated October 27, 1999. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company, which was subsequently acquired by LSI Logic in June 2001. C-Cube merged into Harmonic and Harmonic therefore acquired C-Cube’s DiviCom business, which provides encoding products and systems for digital television.

Harmonic was initially incorporated in California in June 1988 and reincorporated into Delaware in May 1995. Our principal executive offices are located at 549 Baltic Way, Sunnyvale, California 94089. Our telephone number is (408) 542-2500.

Organization

Harmonic is organized as two operating segments, Broadband Access Networks, or BAN, for fiber optic systems, and Convergent Systems, or CS, for digital video systems. Each segment has its own management team directing its product development and marketing strategies and its customer service requirements. A separate sales force generally supports both divisions with appropriate product and market specialization as required.

Industry Background

Demand for Broadband Services

The demand for broadband services has increased significantly in recent years due in large part to the dramatic growth of the Internet, which has facilitated commercial applications such as telecommuting and electronic commerce as well as its widespread use for communicating and accessing information. Rapid growth in the number of Internet users and the demand for more bandwidth-intensive video, voice and data content has strained existing communications networks and created bottlenecks, especially in the “last mile” of the communications infrastructure where homes connect to the local

[Table of Contents](#)

network. In addition, changes in the broadcast television industry have led to a proliferation of new television channels and to the development of interactive and on-demand television services which have begun to be provided on an individual, as opposed to a broadcast basis. The delivery to subscribers of television programming and Internet-based information and communication services is converging, driven in part by advances in technology and in part by changes in the regulatory and competitive environment.

Competition and Deregulation

Recent and proposed regulatory reform has spurred competition among communication service providers worldwide to offer combinations of video, voice and data services. Historically, U.S. long distance carriers and regional Bell operating companies, or RBOCs, provided only telephony services in the residential market. Cable television multiple system operators, or MSOs, provided video programming. Direct broadcast satellite, or DBS, services, which became available in the U.S. in the early nineties, also provided only video programming and were initially further restricted by regulation from making local television channels available in local markets. As a result, none of these operators had networks conducive to providing high-speed data services to residential subscribers, or any other services that they had not been previously allowed to provide. The Telecommunications Act of 1996, however, generally permitted service operators to enter each other's markets and to provide a variety of voice, video and data services. As a result, most cable companies have begun to offer broadband services, including broadcast digital video, video-on-demand, internet access and telephony, over their cable systems in the last few years. Similarly, telcos are deploying various digital subscriber line, or DSL, technologies for high-speed data services over their existing copper networks. A small number of telcos also have deployed alternative delivery systems such as hybrid fiber coax, or HFC, fiber to the curb and broadband wireless for data and video transmission, and a few have also deployed video services over their DSL networks. Following regulatory changes, including the "must-carry" regulations, DBS operators have now introduced local channels in a substantial number of markets and have also deployed, on a limited basis, Internet services to the home and small businesses. Additionally, in many major metropolitan areas, new carriers have entered the communications services market, although many have scaled back or halted network construction because of funding limitations caused by conditions in capital markets.

Similar deregulation of telecommunications and broadcasting abroad has fostered substantial growth and competition in foreign communications markets. Many countries have liberalized the provision of broadcast television and abolished or exposed to competition incumbent broadcast and telecom monopolies. Several have encouraged digital broadcasting in order to provide more channel capacity, higher quality video, and the provision of other digital services, such as data and voice. These developments have led to the establishment of new cable television networks, the launch of new DBS services and the introduction of broadband wireless services, the latter two particularly in countries with little wired infrastructure, or large remote areas where wired networks are not economical.

Our Cable Market

To address increasing competition and demand for high-speed broadband services, cable operators are introducing digital video, voice and data services in addition to traditional analog video. By offering bundled packages of broadband services, cable operators are seeking to obtain a competitive advantage over telephone companies and DBS providers and to create additional revenue streams.

In order to provide high-speed Internet service, cable operators are deploying cable modems in an increasing number of their systems. According to the National Cable & Telecommunications Association, there were an estimated 11.3 million cable modem subscribers in the United States at the end of 2002.

Similarly, cable operators are upgrading and rebuilding their networks to offer digital video, which enables cable operators to provide more channels and better picture quality than analog video, allowing them to better compete against the increasing penetration of DBS services. In many areas, cable operators have rolled out new interactive services such as video-on-demand, or VOD, on their digital platforms. VOD allows subscribers to order, start, pause and stop selected movies and other content at their own discretion.

Some cable operators are also upgrading and building out their networks to provide telephony services. These operators have rolled out telephone services in a number of major markets and some have also targeted certain business markets for the delivery of high-bandwidth services.

[Table of Contents](#)

The ability of cable operators to deliver digital video, voice and high-speed data services on a broad scale, however, is constrained by the design of their legacy networks. These networks, which reach more than 90% of U.S. homes, were built initially for one-way broadcast analog television and have required substantial upgrades to make them capable of reliably supporting two-way digital services, such as high-speed Internet access and telephony. While some U.S. operators have substantially completed these network upgrades, certain others, as well as many international operators, have not yet completed significant network upgrades. In addition to upgrading and extending network infrastructure with fiber optics, in order to provide new services it is necessary for cable operators to invest in digital headend equipment that can receive, process and distribute content from a variety of sources in increasingly complex headends. For example, VOD services require video storage equipment and servers, complemented by devices capable of routing, multiplexing and modulation for delivering signals to individual subscribers over an HFC network. As these new services continue to attract increasing numbers of subscribers, cable operators will be required to continue to upgrade both headends and the transmission network to handle the greater volume and complexity of traffic. We expect that operators will invest capital to more effectively manage available bandwidth as well as continue network upgrades such as node segmentation, the support of fewer homes on a single optical node.

Our Satellite Market

Satellite operators around the world have established digital television services serving millions of subscribers. These services, which are capable of providing up to several hundred channels of high quality video, have become popular with consumers who want a wider choice of programming than is typically available from traditional cable or broadcast television. The increasing availability of digital set top boxes and small low cost receiving dishes for subscribers' homes has facilitated the rollout of DBS services.

DBS services, however, operate mostly in a one-way environment. Signals are transmitted from an uplink center to a satellite and then beamed to dishes located at subscribers' homes. This method is suited to the delivery of broadcast television, but does not lend itself easily to two-way services, such as Internet access.

As cable operators expand the number of channels offered and introduce services such as video-on-demand, DBS providers are seeking to protect and expand their subscriber base in a number of ways. DBS operators now have the right to provide local channels to local markets in the United States and provide local channels in most of the largest metropolitan markets. In the United States, "must-carry" regulations generally require DBS operators to transmit all local channels in any markets they serve, thereby adding constraints on channel capacity. Advances in digital compression technology allow DBS operators to cost-effectively add these new channels and to further expand their video entertainment offerings.

Other Markets

Telephone companies or, telcos, are also facing increasing competition and demand for high-speed residential broadband services. To date, their offerings in residential markets have been aimed mostly at providing Internet access in addition to traditional voice services. This is being accomplished principally by the deployment of DSL technology.

Like the cable networks, the telcos' legacy networks are not well equipped to offer new services. The substantial bandwidth and distance limitations of the copper-based "last mile" have limited DSL deployment and present an even greater barrier to providing video services. Although cable companies and certain new broadband service providers have networks equipped to deliver video and are moving to capture data and voice customers, few telcos have to date offered video services as a competitive response. Video delivered over DSL lines has major bandwidth limitations, but the use of video compression technology at very low bit rates has allowed certain operators to introduce video services.

Terrestrial broadcasters in many countries are now being required by regulation to convert from analog to digital transmission in order to free up broadcast spectrum. The conversion to digital often provides the opportunity to deliver new services, such as high-definition television, "HDTV," and data transmission. These broadcasters are faced with similar requirements to cable and satellite providers in that they need to convert analog signals to digital prior to transmission and must also effectively manage the available bandwidth to maximize their revenue streams.

The Market Opportunity

The construction of new networks or the upgrade and extension of existing networks to facilitate high-speed broadband video, voice and data services requires substantial expenditure and often the replacement of significant portions of the

[Table of Contents](#)

existing infrastructure. The economic success of incumbent and new operators will depend to a large extent on their ability to offer a choice of attractively priced packages of voice, video and data services to consumers, and to do so with high reliability and easy access to their network. As PC penetration continues to increase, we believe that interchanges of video and data via the Internet will increase. Personalized video services, such as video-on-demand, and the availability of TV sets equipped to handle HDTV, will require increasing amounts of bandwidth to the home in order to deliver maximum choice and flexibility. Compression of video and data to utilize effectively the available bandwidth, cost-effective transport of digital traffic within networks, and the construction of robust "fat pipes" for distribution of content to and from the home are all essential elements in operators' ability to maximize revenue and minimize capital and operating costs.

Current Industry Conditions

The telecommunications industry has been particularly impacted by the prolonged economic recession, adverse conditions in capital markets and financial difficulties in both the service and equipment sectors, including bankruptcies. Although large telecommunications service providers, such as WorldCom, and the many troubled data and voice-oriented start-ups, have not been traditional customers of Harmonic, the cable, satellite and broadcast sectors have experienced significant financial problems. Many of our domestic and international customers have accumulated significant levels of debt and have announced in recent quarters, or are expected to announce, reorganizations and financial restructurings, including bankruptcy filings. In particular, Adelphia Communications, a major domestic cable operator, declared bankruptcy in June 2002. The stock prices of other domestic cable companies came under pressure following the Adelphia bankruptcy due to concerns about debt levels and capital expenditure requirements for new and expanded services, thereby making the raising of capital more difficult and expensive. New competitors, such as RCN and WinFirst, also had difficulty in accessing capital markets. WinFirst subsequently filed for bankruptcy. In Europe, rapid consolidation of the cable industry through acquisition also led to significant levels of debt at the major MSOs, and companies such as NTL and UPC commenced bankruptcy proceedings. European digital broadcasters, such as ITV Digital, Kirsch and Quiero, have also filed for protection from creditors.

While the capital market concerns about the domestic cable industry have eased somewhat since the summer of 2002, market conditions remain difficult and capital spending plans are generally constrained. It is likely that further industry restructuring will take place via mergers or spin-offs, such as the recent Comcast/AT&T Broadband transaction and the proposed spin-off of Time-Warner Cable from AOL Time-Warner. In addition, EchoStar and DIRECTV, whose recent merger agreement was abandoned due to opposition from federal regulatory agencies, remain the subject of speculation about other potential mergers or acquisitions. Regulatory issues, financial concerns and business combinations among our customers are likely to significantly affect the industry, its capital spending plans, and our levels of business for the foreseeable future.

Products

Harmonic's products fall into two principal groups, Broadband Access Networks Products and Convergent Systems Products. In addition, Harmonic provides technical support services to its customers worldwide.

Broadband Access Networks Products. Our optical transmission products, node platforms and return path products, and element management hardware and software allow cable operators to deliver traditional broadcast video services while supporting the roll-out of emerging interactive services and managing the fiber network. Various types of optical transmitters enable cable operators to design network architectures which address the service and technical requirements of their systems. Our optical nodes are designed to incorporate a variety of modules which provide the operator with network flexibility and scalability to support increases in subscribers and the introduction of new services.

Convergent Systems Products. Our digital video products provide broadband operators with the ability to accept a variety of signals from different sources, in different protocols, and to organize, manage and distribute this content to maximize use of the available bandwidth. Our encoders, multiplexers and modulators allow our customers to convert analog video to digital and to process this output into a stream which can be delivered over a fiber or wireless network to subscribers. Our edge device, or gateway, products enable operators to deliver customized broadcast or narrowcast on-demand services to their subscribers.

Broadband Access Networks Products

The Broadband Access Networks Division applies its strengths in optics and electronics, including expertise with lasers, modulators, and radio frequency technology, to develop products which provide enhanced network reliability and allow broadband service providers to deliver advanced services, including two-way interactive services. We have provided the operator with end-to-end capability in the fiber portion of the network.

Optical Transmission Systems

We offer MAXLink transmitters and optical amplifiers, PWRLink transmitters and DWDM systems for a wide range of optical transmission requirements.

MAXLink Transmitters and Optical Amplifiers. The MAXLink transmitters and optical amplifiers operate at a wavelength of 1550 nm and serve long-haul applications and fiber dense architectures that are beyond the capability of shorter range 1310 nm transmitters. This system is suited to evolving cable networks employing such features as redundant rings, hub interconnects and broadcast layer transmission. The recently introduced MAXLink Plus further increases the channel capacity of cable and other networks and can transmit over distances in excess of 200 kilometers.

PWRLink Transmitters. The PWRLink series of optical transmitters provides optical transmission primarily for use at a headend or hub for local distribution to optical nodes and for narrowcasting, which is the transmission of programming to a select set of subscribers.

METROLink System. Our METROLink DWDM system allows operators to expand the capacity of a single strand of fiber and also to provide narrowcast services directly from the headend to nodes. This ability can significantly reduce the size of hubs and the associated building and equipment maintenance costs. By increasing the downstream and upstream capacity of existing optical fiber, METROLink can also eliminate the significant expense of laying additional fiber.

GIGALight. Our GIGALight is a DWDM system for the transport of Gigabit Ethernet traffic. It allows high-bandwidth services, such as video-on-demand, to be carried on a single fiber and targeted to particular segments of the network by optical wavelength.

Optical Nodes, Return Path Products and Ethernet Switching Products

We offer a number of optical nodes, return path transmitters and receivers to provide two-way transmission capability. Optical nodes are designed to allow the customer to add capacity and scale as the number of subscribers grows and new services are provided.

PWRBlazer Optical Nodes. Our family of PWRBlazer optical nodes supports network architectures which meet the varying demand for bandwidth delivered to a service area. By the addition of modules providing functions such as return path transmission and DWDM, our configurable nodes are easily segmented to handle increasing two-way traffic over a fiber network without major plant reconstruction.

Return Path Transmitters and Receivers. Our return path transmitters support two-way transmission capabilities by sending video, voice and data signals from the optical node back to the headend. These transmitters are available for either analog or digital transport.

CurbSwitch. Designed as a module for our PWRBlazer node platform, this hardened Ethernet switch enables operators to add high-bandwidth services in fiber-to-the-business or fiber-to-the-home applications. Initial commercial shipments of CurbSwitch were delivered in the third quarter of 2002.

Network Management

NETWatch Management System. Our NETWatch management system consists of transponders and network management software. The transponders operate in broadband networks to capture measurement data and our software enables the broadband service operator to monitor and control the HFC transmission network from a master headend or remote

locations. Our NETWatch software is designed to be integrated into larger network management systems through the use of simple network management protocol, or SNMP.

Convergent Systems Products

The Convergent Systems Division develops standards-based solutions that enable operators to increase the capacity of their broadband networks with advanced compression and stream processing technology. Our CS division's advanced digital video solutions enable satellite, cable, telco, broadcast, and wireless operators around the world to offer digital video services to their customers. As video, data and voice services continue to converge, effectively managing and processing these bandwidth-intensive applications becomes critical to the long-term viability of an operator's network.

Compression Products

DiviCom™ Encoders. This is a complete line of high performance encoders, which provide compression of video, audio and data channels. Using sophisticated signal pre-processing, noise reduction and encoding algorithms, these encoders produce high-quality video and audio at low data rates. Their compliance with widely adopted standards enables interoperability with other products and systems. The MV50 encoder, introduced in early 2001, has the highest compression efficiency of our encoder family, while the MV400 is designed for encoding of high definition television signals.

Edge Devices

Narrowcast Services Gateway. Our Narrowcast Services Gateway, or NSG, is a fully integrated server gateway, which interfaces with the output from a video server and integrates routing, multiplexing and modulation into a single package for the delivery of video-on-demand services to subscribers over cable networks. The NSG is usually supplied with Gigabit Ethernet inputs, allowing the operator to deliver IP signals from the headend to the edge of the network for subsequent modulation on to the HFC network.

Stream Processing Products

Media Node. Media Node is a flexible MPEG-2 networking, switching and multiplexing platform. In a broadcast facility, the video, audio and data streams must be combined or multiplexed into a single stream prior to transmission. Our multiplexing platform combines compressed streams from various sources into a single transport stream. Sources may include Harmonic encoders or third-party devices such as video servers.

Broadcast Network Gateway. Our Broadcast Network Gateway, or BNG, provides digital turnaround and remote modulation capability with a variety of flexible input and output options. The BNG allows operators to manage a variety of digital streams without expensive decoding and re-encoding.

Digital Turnaround Systems. Our digital turnaround system is a flexible, modular platform incorporating various cards for grooming, multiplexing and scrambling digital signals prior to transmission over broadband networks. It is especially well suited to "grooming" applications where a local operator wants to change a line-up of pre-packaged channels or content received from a regional or national feed. We also provide the Terayon "CherryPicker" digital stream management system under a reseller agreement with Terayon Communications.

Control and Automation Products

Modern digital networks are a diverse array of hardware and software components from a variety of vendors, using a number of network protocols and standards. Network management is a key tool that lets service providers monitor and control their networks. Our expertise in digital video, audio and data helps service providers with their network management requirements. Our product line includes a full range of software products that service providers can adapt and configure to meet the needs of their deployments.

Technical Services

We provide consulting, implementation and maintenance services to our customers worldwide, principally those which purchase CS division products or solutions. We draw upon our expertise in broadcast television, communications networking and compression technology to design, integrate and install complete solutions. We offer a broad range of services and support including program management, budget analysis, technical design and planning, parts inventory management, building and site preparation, integration and equipment installation, end-to-end system testing, comprehensive training and ongoing maintenance. Harmonic also has extensive experience in integrating our products with numerous third-party products and services.

Customers

We sell our products to a variety of broadband communications companies. Set forth below is a representative list of our significant end-user and integrator/distributor customers based on net sales during 2002.

| United States | International |
|------------------------------|----------------------------|
| Adelphia Communications | Bell Express Vu |
| Altrio | Canal Plus |
| AT&T Broadband (now Comcast) | Casema |
| Cablevision | Hong Kong Cable Television |
| Charter Communications | NTL |
| Comcast | Orbit Communications |
| Cox | Siemens |
| DIRECTV | Softbank |
| EchoStar | Sumitomo/BNMux |
| Insight Communications | Telewest |
| Paxson | Telefonica |
| Sinclair Broadcasting | TV Cabo |
| Thales | |
| Time-Warner Cable | |

Historically, a majority of our sales and sales of DiviCom have been to relatively few customers, and due in part to the consolidation of ownership of cable television and direct broadcast satellite systems, we expect this customer concentration to continue in the foreseeable future. Sales to our ten largest customers in 2002, 2001, and 2000 accounted for approximately 61%, 49%, and 52% of net sales, respectively. Although we are attempting to broaden our customer base by penetrating new markets such as the telco and broadcast markets, we expect to see continuing industry consolidation and customer concentration due in part to the significant capital costs of constructing broadband networks. For example, Comcast acquired AT&T Broadband in November 2002, thereby creating the largest U.S. cable operator, reaching approximately 22 million subscribers. In the DBS segment, the proposed acquisition of DIRECTV by EchoStar was opposed by the FCC and the Justice Department, and the two companies subsequently abandoned the merger. However, speculation regarding potential business combinations of both DIRECTV and EchoStar continues. In addition, financial restructurings of companies such as Adelphia Communications and several European operators may lead to further industry consolidation. See "Factors That May Affect Future Results of Operations — Our Customer Base Is Concentrated And The Loss of One or More of Our Key Customers Would Harm Our Business. The Loss of Any Key Customer Would Have a Negative Effect on Our Business." In 2002, sales to Charter Communications and Comcast accounted for 18% and 10% of net sales, respectively. If Comcast, which acquired AT&T Broadband in November 2002, and AT&T Broadband had been combined for all of 2002, total revenues would have been 17% of net sales. Charter represented 11% of net sales in 2001 and AT&T Broadband represented 12% of sales in 2000. In addition, in 2000 RCN represented 11% of net sales. The loss of Comcast or Charter Communications, or any other significant customer or any reduction in orders by Comcast, Charter Communications or any significant customer, or our failure to qualify our products with a significant customer could adversely affect our business, operating results and liquidity.

Sales to customers outside of the United States in 2002, 2001 and 2000, represented 29%, 40%, and 36% of net sales, respectively. We expect international sales to continue to account for a substantial portion of our net sales for the foreseeable future. International sales are subject to a number of risks, including changes in foreign government regulations and telecommunications standards, import and export license requirements, tariffs, taxes and other trade barriers, fluctuations in foreign currency exchange rates, difficulty in collecting accounts receivable, difficulty in staffing and managing foreign

[Table of Contents](#)

operations, managing distributor relations and political and economic instability. In addition, certain of our international customers have accumulated significant levels of debt and have recently announced, or are expected to announce, reorganizations and financial restructurings, including bankruptcy filings. International markets may not develop and we may not receive future orders to supply our products in international markets at rates equal to or greater than those experienced in recent periods. See “Factors That May Affect Future Results of Operations — We Depend On Our International Sales And Are Subject To The Risks Associated With International Operations, Which May Negatively Affect Our Operating Results.”

Sales and Marketing

In the United States we sell our products principally through our own direct sales force which is organized geographically and by major customer and market to support customer requirements. We sell to international customers through our own direct sales force as well as independent distributors and integrators. Principal sales offices outside of the United States are located in the United Kingdom, France, and China. International distributors are generally responsible for importing the products and providing certain installation, technical support and other services to customers in their territory. Our direct sales force and distributors are supported by a highly trained technical staff including application engineers who work closely with operators to develop technical proposals and design systems to optimize system performance and economic benefits to operators. Technical support provides a customized set of services, as required, for ongoing maintenance, support-on-demand and training for our customers and distributors both in our facilities and on-site.

Our marketing organizations develop strategies for product lines and, in conjunction with our sales force, identify evolving technical and application needs of customers so that our product development resources can be most effectively and efficiently deployed to meet anticipated product requirements. Our marketing organizations are also responsible for setting price levels, demand forecasting and general support of the sales force, particularly at major accounts. We have many programs in place to heighten industry awareness of Harmonic and our products, including participation in technical conferences, publication of articles in industry journals and exhibiting at trade shows.

Manufacturing and Suppliers

We use third party contract manufacturers, including Celestica and Paramit, to assemble a substantial majority of subassemblies and modules for our products. Increasingly we are using such manufacturers to supply full turnkey products and we expect to subcontract an increasing number of tasks to third parties in the future. Our increasing reliance on subcontractors involves several risks, and we may not be able to obtain an adequate supply of components, subassemblies, modules and turnkey systems on a timely basis.

Our manufacturing operations consist primarily of final assembly and test of fiber optic systems for our BAN division. These processes are performed by highly trained personnel employing technologically advanced electronic equipment and proprietary test programs. The manufacturing of our products and subassemblies is a complex process and we cannot assure you that we will not experience production problems or manufacturing delays in the future. Because we utilize our own manufacturing facilities for our BAN division fiber optic systems, and because such manufacturing capabilities are not readily available from third parties, any interruption in operations could materially and adversely affect our business, operating results, financial position and liquidity.

Many components, subassemblies and modules necessary for the manufacture or integration of our products are obtained from a sole supplier or a limited group of suppliers. Our reliance on sole or limited suppliers, particularly foreign suppliers, and our increased reliance on subcontractors since the merger with C-Cube involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules and reduced control over pricing, quality and timely delivery of components, subassemblies or modules. In particular, certain optical components have in the past been in short supply and are available only from a small number of suppliers, including sole source suppliers. While we expend considerable efforts to qualify additional optical component sources, consolidation of suppliers in the industry and the small number of viable alternatives have limited the results of these efforts. We do not generally maintain long-term agreements with any of our suppliers or subcontractors. An inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply could affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business. We attempt to limit this risk by maintaining safety stocks of these components, subassemblies and modules. As a result of this investment in inventories, we have in the past and in the future may be subject to risk of excess and obsolete inventories which could harm our business, operating results, financial position and liquidity. In this regard, our gross margins and operating results from

[Table of Contents](#)

the fourth quarter of 2000, through the third quarter of 2001 were adversely affected by provisions for excess and obsolete inventories of approximately \$49 million.

The power shortages that we experienced in California during the first half of 2001, if repeated, could disrupt our production schedules in the future or those of many of our suppliers. See "Factors That May Affect Future Results of Operations — We Rely On A Continuous Power Supply To Conduct Our Operations, And Any Electrical And Natural Gas Crisis Could Disrupt Our Operations And Increase Our Expenses."

Intellectual Property

We currently hold 43 issued United States patents and 10 issued foreign patents, and have a number of patent applications pending. Although we attempt to protect our intellectual property rights through patents, trademarks, copyrights, licensing arrangements, maintaining certain technology as trade secrets and other measures, we cannot assure you that any patent, trademark, copyright or other intellectual property rights owned by us will not be invalidated, circumvented or challenged, that such intellectual property rights will provide competitive advantages to us or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We cannot assure you that others will not develop technologies that are similar or superior to our technology, duplicate our technology or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We believe that the future success of our business will depend on our ability to translate the technological expertise and innovation of our personnel into new and enhanced products. We generally enter into confidentiality or license agreements with our employees, consultants, vendors and customers as needed, and generally limit access to and distribution of our proprietary information. Nevertheless, we cannot assure you that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively affect our business, operating results, financial position and liquidity.

In order to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. Although many companies are often willing to enter into such technology development or licensing agreements, we cannot assure you that such agreements will be negotiated on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements, when necessary, could limit our ability to develop and market new products and could cause our business to suffer.

Harmonic's industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. From time to time, third parties, including certain of these leading companies, have asserted and may assert exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. In this regard, since December 2000, we have been in communication with several of Harmonic's customers who have been contacted by one of these leading companies that believes certain of our products require a license under a number of their patents. We currently are reviewing the identified patents to examine whether we consider a license necessary. While it is our understanding that the third party is willing to grant our customers a non-exclusive license under the identified patents, there can be no assurance that the terms of any offered license would be acceptable to our customers or that failure to obtain a license or the costs associated with any license would not cause our business, operating results, financial position and liquidity to be materially adversely affected.

Backlog

We schedule production of our systems based upon our backlog, open contracts, informal commitments from customers and sales projections. Our backlog consists of firm purchase orders by customers for delivery within the next twelve months as well as deferred revenue which is expected to be recognized within the next twelve months. At December 31, 2002, backlog, including deferred revenue amounted to \$23.1 million, compared to \$25.3 million at December 31, 2001. Anticipated orders from customers may fail to materialize and delivery schedules may be deferred or canceled for a number of reasons, including reductions in capital spending by cable, satellite and other operators or changes in specific customer requirements. In addition, due to weather-related seasonal factors and annual capital spending budget cycles at many major end-users, our backlog at December 31, 2002 or any other date, is not necessarily indicative of actual sales for any succeeding period.

Competition

The markets for cable television fiber optics systems and digital video systems are extremely competitive and have been characterized by rapid technological change and declining average selling prices.

Harmonic's competitors in the cable television fiber optics systems business include corporations such as C-Cor.net, Motorola, and Scientific-Atlanta.

In the digital video systems business, we compete broadly with vertically integrated system suppliers including Motorola, Scientific-Atlanta, Tandberg Television, and ThomsonMultimedia, and in certain product lines with Cisco and a number of smaller companies.

Many of our competitors are substantially larger and have greater financial, technical, marketing and other resources than Harmonic. Many of these large organizations are in a better position to withstand any significant reduction in capital spending by customers in these markets. They often have broader product lines and market focus and will therefore not be as susceptible to downturns in a particular market. In addition, many of our competitors have been in operation longer than we have and therefore have more long standing and established relationships with domestic and foreign customers. We may not be able to compete successfully in the future and competition may harm our business, operating results, financial position and liquidity.

If any of our competitors' products or technologies were to become the industry standard, our business could be seriously harmed. For example, U.S. cable operators have to date mostly purchased proprietary digital systems from Motorola and Scientific-Atlanta. While certain operators have made limited purchases of the "open" systems provided by Harmonic, we cannot assure you that many of our digital products will find broad market acceptance with U.S. cable operators. In addition, companies that have historically not had a large presence in the broadband communications equipment market have expanded their market presence through mergers and acquisitions. The continued consolidation of our competitors could have a significant negative impact on us. In the cable television fiber optics segment, C-Cor.net has acquired certain assets from Philips and Scientific-Atlanta has acquired certain assets from Arris. Further, our competitors, particularly competitors of our digital and video broadcasting systems' business, may bundle their products or incorporate functionality into existing products in a manner that discourages users from purchasing our products or which may require us to lower our selling prices resulting in lower gross margins.

Research and Development

We have historically devoted a significant amount of our resources to research and development. Research and development expenses in 2002, 2001, and 2000 were \$40.8 million, \$51.3 million, and \$49.3 million, respectively.

Our success in designing, developing, manufacturing and selling new or enhanced products will depend on a variety of factors, including the identification of market demand for new products, product selection, timely implementation of product design and development, product performance, effective manufacturing and assembly processes and sales and marketing. Because of the complexity inherent in such research and development efforts, we cannot assure you that we will successfully develop new products, or that new products developed by us will achieve market acceptance. Our failure to successfully develop and introduce new products could harm our business and operating results.

Employees

As of December 31, 2002, we employed a total of 587 people, including 214 in sales, service and marketing, 174 in research and development, 109 in manufacturing operations and 90 in a general and administrative capacity. We also employ a number of temporary employees and consultants on a contract basis. During the last two years we have reduced our work force by approximately 40% in response to a significant slowing of industry spending and the consequent adverse impact on our operating results. None of our employees is represented by a labor union with respect to his or her employment by Harmonic. We have not experienced any work stoppages and we consider our relations with our employees to be good. Our future success will depend, in part, upon our ability to attract and retain qualified personnel. Competition for qualified personnel in the broadband communications industry and in our immediate geographic area remains strong, and we cannot assure you that we will be successful in retaining our key employees or that we will be able to attract skilled personnel in the future.

Executive Officers

The following table sets forth certain information regarding the executive officers of Harmonic and their ages as of March 1, 2003:

| Name | Age | Position |
|------------------|-----|---|
| Anthony J. Ley | 64 | Chairman of the Board of Directors, President & Chief Executive Officer |
| Robin N. Dickson | 55 | Chief Financial Officer |
| Patrick Harshman | 38 | President, Broadband Access Networks |
| Yaron Simler | 44 | President, Convergent Systems |
| Israel Levi | 63 | Senior Vice President, Operations and Quality |

Anthony J. Ley has served as Harmonic's President and Chief Executive Officer since November 1988. Mr. Ley was elected Chairman of the Board of Directors in February 1995. From 1963 to 1987, Mr. Ley was employed at Schlumberger, Limited both in Europe and the United States, holding various senior business management and research and development positions, most recently as Vice President, Research and Engineering at Fairchild Semiconductor/ Schlumberger in Palo Alto, California. Mr. Ley holds an M.A. in mechanical sciences from the University of Cambridge and an S.M.E.E. from the Massachusetts Institute of Technology. He is also named as an inventor in 29 patents, is a Fellow of the I.E.E.E. (U.K.) and a senior member of the I.E.E.E.

Robin N. Dickson joined Harmonic in April 1992 as Chief Financial Officer. From 1989 to March 1992, Mr. Dickson was corporate controller of Vitelic Corporation, a semiconductor manufacturer. From 1976 to 1989, Mr. Dickson held various positions at Raychem Corporation, a materials science company, including regional financial officer of the Asia-Pacific Division of the International Group. Mr. Dickson holds a Bachelor of Laws from the University of Edinburgh and is a member of the Institute of Chartered Accountants of Scotland.

Patrick Harshman joined Harmonic in 1993 and has served as President of Broadband Access Networks Division since January 2001. Over the last eight years, Dr. Harshman has had management responsibilities for Harmonic's digital video and fiber optic transmission product lines and most recently served as Vice President of Marketing for the same division. He has also served as Director of Product Line Management for Digital Systems. Dr. Harshman received a Ph.D. in Electrical Engineering from the University of California, Berkeley, where his graduate research focused on nonlinear optical phenomena in optical communication systems.

Yaron Simler joined Harmonic in 1991 and has served as President of the Convergent Systems Division (CSD) since February 2001. Previously, Dr. Simler served as Vice President of Marketing for CSD. Over the last 10 years, Dr. Simler has held several different positions within Harmonic, including Engineer, Technical Marketing Manager, Product Manager, Applications Engineer, International Sales Manager and Director of Applications and Technology. Dr. Simler received a Ph.D. in Electrical Engineering from the University of California, Berkeley with a focus in optical communications. He is also credited with 1 patent.

Israel Levi joined Harmonic in July 1989 and was appointed Senior Vice President of Operations and Quality in November 2002. Between January 2001 and October 2002, Mr. Levi served as the Senior Vice President of Systems and Technology. From May 1996 through December 2000, he was Vice President of Research & Development. Prior to that, Mr. Levi served in product development at DSC, a telecommunications systems company. From 1984 to 1988, Mr. Levi served as Director of CATV Products Division at Catel Communications, a telecommunications equipment manufacturer. Mr. Levi holds an M.S. in Electrical Engineering from Carleton University, Ottawa, Canada and a B.S. in Electrical Engineering from Technion-Israel Institute of Technology. He is also named as an inventor in 5 patents.

Available Information

Harmonic makes available free of charge on the Harmonic website the Company's 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 Harmonic files such material with, or furnishes it to, the Securities and Exchange Commission. The address of the Harmonic website is <http://www.harmonicinc.com>.

Item 2. Properties

Our principal operations and corporate headquarters are located in Sunnyvale, California. During the second quarter of 2001 we completed the relocation of the former DiviCom employees from facilities in Milpitas, California to the Sunnyvale campus. We also have a research and development center in Colorado, several sales offices in the United States, sales and support centers in the United Kingdom, France, and China, and a research and development center in Israel. Harmonic has entered into leases worldwide for approximately 500,000 square feet of space which expire at various dates through September 2010. Of the 500,000 square feet under lease, approximately 240,000 square feet is in excess of our requirements and we no longer occupy, do not intend to occupy, and plan to sublease. The estimated loss on subleases has been included in the excess facilities charges recorded in 2001 and 2002.

Item 3. Legal Proceedings

Shareholder Litigation

Between June 28 and August 25, 2000, several actions alleging violations of the federal securities laws by Harmonic and certain of its officers and directors (some of whom are no longer with Harmonic) were filed in or removed to the United States District Court for the Northern District of California. The actions subsequently were consolidated.

A consolidated complaint, filed on December 7, 2000, was brought on behalf of a purported class of persons who purchased Harmonic's publicly traded securities between January 19 and June 26, 2000. The complaint also alleged claims on behalf of a purported subclass of persons who purchased C-Cube securities between January 19 and May 3, 2000. In addition to Harmonic and certain of its officers and directors, the complaint also named C-Cube Microsystems Inc. and several of its officers and directors as defendants. The complaint alleged that, by making false or misleading statements regarding Harmonic's prospects and customers and its acquisition of C-Cube, certain defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934. The complaint also alleged that certain defendants violated section 14(a) of the Exchange Act and sections 11, 12(a)(2), and 15 of the Securities Act of 1933 by filing a false or misleading registration statement, prospectus, and joint proxy in connection with the C-Cube acquisition.

On July 3, 2001, the Court dismissed the consolidated complaint with leave to amend. An amended complaint alleging the same claims against the same defendants was filed on August 13, 2001. Defendants moved to dismiss the amended complaint on September 24, 2001. On November 13, 2002, the Court issued an opinion granting the motions to dismiss the amended complaint without leave to amend. Judgment for defendants was entered on December 2, 2002. On December 12, 2002, plaintiffs filed a motion to amend the judgment and for leave to file an amended complaint pursuant to Rules 59(e) and 15(a) of the Federal Rules of Civil Procedure. Although a hearing on that motion was set for February 5, 2003, the Court issued an order stating that it would decide the motion without a hearing. The Court has not yet decided the motion.

A derivative action purporting to be on behalf of Harmonic was filed against its then-current directors in the Superior Court for the County of Santa Clara on September 5, 2000. Harmonic also was named as a nominal defendant. The complaint is based on allegations similar to those found in the securities class actions and claims that the defendants breached their fiduciary duties by, among other things, causing Harmonic to violate federal securities laws. The derivative action was removed to the United States District Court for the Northern District of California on September 20, 2000. All deadlines in this action have been stayed pending resolution of the motions to dismiss the securities actions.

Based on its review of the complaints filed in the securities class action, Harmonic believes that it has meritorious defenses and intends to defend itself vigorously. There can be no assurance, however, that Harmonic will prevail. An unfavorable outcome of this litigation could have a material adverse effect on Harmonic's business, operating results, financial position and liquidity.

Other Litigation

In November 2001, we were sued in Tennessee state court by a company alleging breach of contract and breach of a Tennessee statute relating to retailers and suppliers. The suit has a claim for \$2.5 million and other unspecified damages, lost profits and attorneys' fees. The suit has since been removed to Federal Court and a trial date has been set for June 2003. Harmonic believes that it has meritorious defenses and will defend the suit vigorously. No liability has been provided at December 31, 2002, as Harmonic believes it is not probable that a liability has been incurred and the amount of loss, if any,

[Table of Contents](#)

cannot be estimated. However, we cannot assure you that an unfavorable outcome will not adversely impact our business, operating results, financial position and liquidity.

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

No matters were submitted to a vote of stockholders during the fourth quarter of the year ended December 31, 2002.

PART II

Item 5. Market for the Registrant's Common Stock and Related Security Holder Matters

- (a) Harmonic's Common Stock has been quoted on the Nasdaq National Market under the symbol HLIT since Harmonic's initial public offering on May 22, 1995. The following table sets forth, for the periods indicated, the high and low sales price per share of the Common Stock as reported on the Nasdaq National Market:

| | High | Low |
|----------------|----------|--------|
| 2001 | | |
| First quarter | \$ 12.75 | \$4.30 |
| Second quarter | 14.37 | 2.75 |
| Third quarter | 17.30 | 6.48 |
| Fourth quarter | 15.13 | 6.50 |
| 2002 | | |
| First quarter | \$ 14.15 | \$9.38 |
| Second quarter | 12.20 | 2.60 |
| Third quarter | 3.62 | 1.10 |
| Fourth quarter | 3.52 | 1.01 |

- (b) *Holders of record:* At March 13, 2003, there were 520 stockholders of record of Harmonic's Common Stock.
- (c) *Dividends:* Harmonic has never declared or paid any dividends on its capital stock. Harmonic currently expects to retain future earnings, if any, for the use in the operation and expansion of its business and does not anticipate paying any cash dividends in the foreseeable future. Harmonic's line of credit includes covenants prohibiting the payment of dividends.
- (d) The disclosure required by Item 201(d) of Regulation S-K is set forth in the 2003 Proxy Statement under the caption "Equity Plan Information" and is incorporated herein by reference.

Item 6. Selected Financial Data

The data set forth below are qualified in their entirety by reference to, and should be read in conjunction with, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements and related notes included elsewhere in this Annual Report on Form 10-K.

| | Year Ended December 31, | | | | |
|---|-------------------------|------------|-------------|------------|-----------|
| | 2002 | 2001 | 2000 | 1999 | 1998 |
| (In thousands, except per share data) | | | | | |
| Consolidated Statement of Operations Data | | | | | |
| Net sales | \$186,632 | \$ 203,810 | \$ 263,046 | \$ 184,075 | \$ 83,857 |
| Gross profit ⁽¹⁾ | 54,429 | 1,555 | 75,171 | 80,605 | 30,555 |
| Income (loss) from operations ⁽¹⁾⁽²⁾ | (77,349) | (168,787) | (1,683,035) | 29,017 | (21,943) |
| Net income (loss) ⁽¹⁾ | (76,918) | (166,407) | (1,654,008) | 23,680 | (21,453) |
| Basic net income (loss) per share | (1.29) | (2.84) | (34.06) | 0.84 | (0.92) |
| Diluted net income (loss) per share | (1.29) | (2.84) | (34.06) | 0.76 | (0.92) |
| Consolidated Balance Sheet Data | | | | | |
| Cash, cash equivalents and short-term investments | \$ 49,158 | \$ 54,277 | \$ 99,669 | \$ 89,699 | \$ 9,178 |
| Working capital | 31,246 | 66,608 | 194,618 | 129,416 | 32,318 |
| Total assets | 173,754 | 238,056 | 425,944 | 185,693 | 62,424 |
| Long term debt, including current portion | 2,572 | 2,746 | — | — | 577 |
| Stockholders' equity | 62,183 | 135,054 | 295,702 | 144,888 | 43,474 |

(1) The 2002 gross profit, loss from operations and net loss include special charges to cost of sales totaling \$0.8 million for severance and other costs, and credits of \$6.9 million for product sold during the year which had been written down in prior years. Special charges to operating expenses totaled \$22.5 million for excess facilities costs, a bad debt provision of \$2.7 million for probable losses on receivables for Adelpia Communications, and severance and other costs of \$0.9 million.

The 2001 gross profit, loss from operations and net loss include special charges to cost of sales totaling \$40.0 million for inventory and fixed asset write-downs and \$0.9 million for severance and other costs. Special charges to operating expenses include \$30.1 million for excess facilities costs, \$2.4 million for fixed asset provisions and \$1.6 million for severance and other costs and special charges of \$0.6 million to other income and expense.

The 2000 loss from operations and net loss include special charges to operating expenses of approximately \$1.42 billion, consisting of \$1.38 billion for impairment of goodwill and other intangible assets and \$39.8 million for acquired in-process technology. Special charges to cost of sales totaled \$10.0 million for excess and obsolete inventories.

The 1998 loss from operations and net loss include a charge to operating expenses of \$14.0 million for acquired in-process technology.

(2) Loss from operations for 2002, 2001 and 2000 include amortization of intangible assets of \$18.7 million, \$20.7 million and \$234.2 million, respectively.

See Notes 3, 4 and 5 of Notes to Consolidated Financial Statements.

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

Overview

Harmonic designs, manufactures and sells a variety of broadband solutions that allow communications service providers around the world to deliver video, voice and data to their subscribers. Harmonic's technically advanced fiber optic, digital video and data delivery systems enable network operators to provide a range of interactive and advanced digital services that include digital video, high-speed Internet access, telephony, HDTV, video and audio streaming, and video-on-demand.

Historically, almost all of our sales were derived directly or indirectly from sales of fiber optic transmission systems to cable television operators. With the introduction of digital headend products beginning in 1997, we have broadened our product offering to enable delivery of digital video, voice and data over satellite and wireless networks and cable systems.

In order to further expand our digital systems capability, Harmonic acquired C-Cube Microsystems Inc. in May 2000, pursuant to the terms of a merger agreement dated October 27, 1999. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company, which was subsequently acquired by LSI Logic in June 2001. C-Cube merged into Harmonic and Harmonic therefore acquired C-Cube's DiviCom business, which provides encoding products and systems for digital television. The merger was structured as a tax-free exchange of stock and has been accounted for under the purchase method of accounting. The purchase price, including merger-related costs, was approximately \$1.8 billion. As of December 31, 2000, the Company determined that there was an impairment and recorded an impairment charge of \$1.4 billion, eliminating goodwill and reducing identified intangibles acquired to \$79.3 million. See Notes 3 and 4 of the Notes to Consolidated Financial Statements. The merged company has been organized into two operating divisions, Broadband Access Networks, or BAN, for fiber optic systems and Convergent Systems, or CS, for digital headend systems.

Harmonic's net sales decreased 8% in 2002 following a 23% decrease in 2001, and since the middle of 2000, our sales have been well below pre-merger levels achieved by Harmonic and DiviCom in 1999 and early 2000 as industry capital spending has been and generally remains weak. In addition, certain of our domestic and international customers have accumulated significant levels of debt and have announced in recent quarters, or are expected to announce, reorganizations and financial restructurings, including bankruptcy filings. In particular, Adelphia Communications declared bankruptcy in June 2002, and as a result, we have recorded only nominal revenue from Adelphia since the first quarter of 2002 and established a \$2.9 million provision in the second quarter of 2002 for probable losses on receivables and deferred costs of sales determined to no longer be recoverable. Adelphia accounted for less than 5% of our net sales in 2001 and less than 2% of net sales in 2002. The stock prices of other domestic cable companies came under pressure following the Adelphia Communications bankruptcy due to concerns about debt levels and capital expenditure requirements for new and expanded services. These issues may further restrict our customers' access to capital and increase the cost of capital.

We believe that these capital market concerns about the cable industry and the associated pressures on capital spending contributed to the 31% decrease in sales during the second half of 2002 compared to the first half of 2002. We expect our business with domestic cable customers to remain at reduced levels at least through the first quarter of 2003. In addition, spending by our domestic satellite customers and European customers was weak in 2002, particularly in the second half of 2002. We believe that this was principally because of pending business consolidations, financial restructurings and regulatory issues. For example, we believe that the regulatory review of the proposed acquisition of DIRECTV by EchoStar depressed spending in 2002, particularly in the second half of 2002. During the fourth quarter the companies ultimately called off the proposed merger due to federal government opposition. While DIRECTV announced in January 2003 that they would launch local channels in an additional 50 markets, along with additional high definition services, there is continuing speculation about potential business combinations involving both DIRECTV and EchoStar. Any such transaction could negatively impact satellite capital spending in 2003.

As a result of uncertain market conditions and lower sales during the second half of 2002, the Company implemented a series of cost control measures that included workforce reductions totaling approximately 120 employees during the second half of 2002. Harmonic recorded severance charges of \$1.5 million during the second half of 2002 related to the work force reductions. This followed a workforce reduction of approximately 30% during 2001 for which the Company recorded severance and other costs of \$2.5 million at the time. These actions reduced headcount from over 1000 at the end of 2000 to 587 at the end of 2002.

[Table of Contents](#)

In light of the Company's reduced headcount, difficult business conditions, and a weak local commercial real estate market, we reassessed our accrual for the costs of excess facilities and recorded a charge of \$22.5 million during the third quarter of 2002. We changed our estimates with regard to the expected timing and amount of sublease income due to the substantial and growing surplus of vacant space in the San Francisco Bay Area. The excess facilities charge recorded during the third quarter of 2002 was for facilities that we no longer occupied, do not intend to occupy, plan to sublease, and followed charges of \$30.1 million recorded for excess facilities in 2001 when the initial accruals were established.

Our operating results in 2001 also included charges of \$39.2 million for excess and obsolete inventories and \$3.3 million for fixed asset impairment. The provisions for excess and obsolete inventories resulted from significant reductions in the demand for our products, principally BAN division products. In accordance with our policy, we wrote down inventory levels in excess of our demand forecasts.

Historically, a majority of our net sales have been to relatively few customers, and due in part to the consolidation of ownership of cable television and direct broadcast satellite systems, we expect this customer concentration to continue for the foreseeable future. In 2002, sales to Charter Communications and Comcast accounted for 18% and 10% of net sales, respectively. If Comcast, which acquired AT&T Broadband in November 2002, and AT&T Broadband had been combined for all of 2002, total revenues would have been 17% of net sales. Charter represented 11% of net sales in 2001 and AT&T Broadband represented 12% of sales in 2000. In addition, in 2000, RCN represented 11% of net sales. We expect sales to Charter to be significantly lower in 2003, both in absolute dollars and as a percentage of revenue, as it is now in the latter stages of its network upgrade program. In addition, our sales to Charter may be impacted by capital market concerns about the cable industry, in the aftermath of the Adelphia Communications bankruptcy filing in June 2002, and concerns about the financial condition of Charter, particularly its significant level of debt. As of December 31, 2002, Harmonic had accounts receivable of \$3.5 million due from Charter, which was subsequently collected.

In 2002, 2001 and 2000, sales of BAN products accounted for approximately 41%, 37% and 67% of net sales, respectively, while CS products accounted for approximately 59%, 63% and 33% of net sales, respectively. CS sales prior to the merger in May 2000 consisted of sales of our TRANsend and CyberStream product lines.

Sales to customers outside of the United States in 2002, 2001 and 2000 represented 29%, 40% and 36% of net sales, respectively. A significant portion of international sales are made to distributors and system integrators, which are generally responsible for importing the products and providing installation and technical support and service to customers within their territory. We expect international sales to continue to account for a substantial portion of our net sales for the foreseeable future.

Harmonic often recognizes a substantial portion of its revenues in the last month of the quarter. Harmonic establishes its expenditure levels for product development and other operating expenses based on projected sales levels, and expenses are relatively fixed in the short term. Accordingly, variations in timing of sales can cause significant fluctuations in operating results. In addition, because a significant portion of Harmonic's business is derived from orders placed by a limited number of large customers, the timing of such orders can also cause significant fluctuations in our operating results. Harmonic's expenses for any given quarter are typically based on expected sales and if sales are below expectations, our operating results may be adversely impacted by our inability to adjust spending to compensate for the shortfall. As a result of these and other factors, Harmonic's operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading price of our common stock would likely decline.

Due to lower than expected sales in several quarters during 2000 and 2001, and the third quarter of 2002, Harmonic failed to meet the expectations of securities analysts, and the price of our common stock declined, in some cases significantly. See "Factors That May Affect Results of Future Operations — Our Operating Results Are Likely To Fluctuate Significantly And May Fail To Meet Or Exceed The Expectations Of Securities Analysts Or Investors, Causing Our Stock Price To Decline."

Critical Accounting Policies, Judgments and Estimates

The preparation of financial statements and related disclosures requires Harmonic to make judgments, assumptions and estimates that affect the reported amounts of assets and liabilities, the disclosure of contingencies and the reported amounts of revenue and expenses in the financial statements and accompanying notes. Material differences may result in the amount and timing of revenue and expenses if different judgments or different estimates were made. See Note 1 of Notes to

[Table of Contents](#)

Consolidated Financial Statements for details of Harmonic's accounting policies. Critical accounting policies, judgments and estimates which we believe have the most significant impact on Harmonic's financial statements are set forth below:

- Revenue recognition;
- Allowances for doubtful accounts, returns and discounts;
- Valuation of inventories;
- Impairment of long-lived assets;
- Restructuring costs and accruals for excess facilities;
- Assessment of the probability of the outcome of current litigation; and
- Accounting for income taxes.

Revenue Recognition

Harmonic recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the sale price is fixed or determinable, collectibility is reasonably assured and risk of loss and title has transferred to the customer. Revenue from product sales is generally recognized upon shipment, and allowances are provided for estimated returns and discounts. Such allowances are adjusted periodically to reflect actual and anticipated experience. Revenue on solution sales, which principally include the design, manufacture, test, integration and installation of equipment to our customers' specifications, or acquired from third parties to be integrated with our products, is recognized using the percentage of completion method. Under the percentage of completion method, revenue recognized reflects the portion of the anticipated contract revenue that has been earned, equal to the ratio of labor costs expended to date to anticipated final labor costs, based on current estimates of labor costs to complete the project. If the estimated costs to complete a project exceed the total contract amount, indicating a loss, the entire anticipated loss is recognized. Revenue from services is generally recognized as services are performed. Maintenance services are recognized ratably over the maintenance term, which is typically one year. Deferred revenue represents billings in excess of revenue recognized.

Revenue recognition in each period is dependent on our application of these accounting policies. If we believe that any of the conditions to recognize revenue has not been met, we defer revenue recognition. For example, if collectibility is not reasonably assured we defer revenue recognition until subsequent cash receipt. Our application of percentage-of-completion accounting is subject to our estimates of labor costs to complete each project. In the event that actual results differ from these estimates or we adjust these estimates in future periods, our operating results for a particular period could be adversely affected.

Allowances for Doubtful Accounts, Returns and Discounts

We establish allowances for doubtful accounts, returns and discounts based on credit profiles of our customers, current economic trends, contractual terms and conditions and historical payment, return and discount experience, as well as for known or expected events. If there were to be a deterioration of a major customer's creditworthiness or if actual defaults, returns or discounts were higher than our historical experience our operating results and financial position could be adversely affected.

Valuation of Inventories

Harmonic states inventories at the lower of cost or market. We establish provisions for excess and obsolete inventories after evaluation of historical sales and future demand and market conditions, expected product lifecycles and current inventory levels. In the event that we adjust our estimates, such as future demand and expected product lifecycles, our operating results and financial position could be adversely affected.

Impairment of Long-lived Assets

We perform an evaluation of the carrying value of intangibles and long-lived assets whenever we become aware of an event or change in circumstances that would indicate potential impairment. We evaluate the recoverability of other intangible assets and long-lived assets on the basis of undiscounted cash flows from each asset group. If impairment is indicated, provisions for impairment are determined based on fair value, principally using discounted cash flows. Changes in industry and market conditions or the strategic realignment of our resources could result in an impairment of identified intangibles or long-lived assets. There can be no assurance that future impairment tests will not result in a charge to earnings.

Restructuring Costs and Accruals for Excess Facilities

For restructuring activities initiated prior to December 31, 2002 we recorded restructuring costs when Harmonic committed to an exit plan and significant changes to the exit plan were not likely. To determine our excess facility accrual we estimate expected sublease rental income on each excess facility. In the event we are unable to achieve expected levels of sublease rental income, we will need to revise our estimate of the liability which could materially impact our operating results, financial position and cash flows. For restructuring activities initiated after December 31, 2002 we will follow Statement of Financial Accounting Standards, or SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," as discussed under New Accounting Pronouncements below.

Assessment of the Probability of the Outcome of Current Litigation

Harmonic records accruals for loss contingencies when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Based on Harmonic's review of the complaints filed in the securities class action and other pending litigation, Harmonic believes that it has meritorious defenses and, accordingly, no loss contingencies have been accrued. There can be no assurance, however, that we will prevail. An unfavorable outcome of these legal proceedings could have a material adverse effect on our business, financial position, operating results and liquidity.

Accounting for Income Taxes

In preparation of our financial statements, we estimate our income taxes for each of the jurisdictions in which we operate. This involves estimating our actual current tax exposures and assessing temporary differences resulting from differing treatment of items, such as reserves and accruals, for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheet. Based on our judgment that the likelihood that our deferred tax assets will be recovered from future taxable income is not assured, we established a valuation allowance of \$63.0 million in 2001 which was increased to \$104.9 million in 2002. At December 31, 2002 we have fully reserved for our net deferred tax assets related to temporary differences, net operating loss and tax credit carryforwards.

Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and our future taxable income for purposes of assessing our ability to realize any future benefit from our deferred tax assets. In the event that actual results differ from these estimates or we adjust these estimates in future periods, our operating results and financial position could be materially affected.

Results of Operations

Harmonic's historical consolidated statements of operations data for each of the three years ended December 31, 2002, 2001, and 2000 as a percentage of net sales, are as follows:

| | Fiscal Year Ended December 31, | | |
|--|--------------------------------|-------|--------|
| | 2002 | 2001 | 2000 |
| Net sales | 100% | 100% | 100% |
| Cost of sales | 71 | 99 | 71 |
| Gross profit | 29 | 1 | 29 |
| Operating expenses | | | |
| Research and development | 22 | 25 | 19 |
| Selling, general and administrative | 43 | 53 | 25 |
| Impairment of goodwill and other intangibles | — | — | 525 |
| Amortization of intangibles | 5 | 6 | 84 |
| Acquired in-process technology | — | — | 15 |
| Total operating expenses | 70 | 84 | 668 |
| Loss from operations | (41) | (83) | (639) |
| Interest and other income, net | — | 1 | 4 |
| Loss before income taxes | (41) | (82) | (635) |
| Provision for (benefit from) income taxes | — | — | (6) |
| Net loss | (41)% | (82)% | (629)% |

Net Sales

Harmonic's net sales decreased 8% to \$186.6 million in 2002, from \$203.8 million in 2001. The lower net sales were due to a 15% decrease in CS division sales, partially offset by a 3% increase in BAN division sales. The CS sales decrease was principally attributable to significantly lower sales of encoders to domestic satellite customers. We believe these lower sales were due, in part, to purchasing delays created by the uncertainty of the regulatory review of the proposed acquisition of DIRECTV by EchoStar, which was ultimately called off in the fourth quarter. The lower CS division sales to satellite customers were partially offset by higher sales of the Narrowcast Services Gateway, or NSG, for video-on-demand deployments to cable operators. With regard to the BAN division, the modest increase was due to higher sales of node products, partially offset by lower transmitter sales, and generally higher unit volumes, offset by lower pricing. International sales represented 29% of net sales in 2002, compared to 40% in 2001 reflecting a 35% decrease in international sales. This international sales decrease was partially offset by a 9% increase in domestic sales. The significant decrease in international sales was due principally to depressed market conditions, particularly in Europe, which impacted both divisions.

Harmonic's net sales decreased 23% to \$203.8 million in 2001, from \$263.0 million in 2000. The lower net sales were due to a 57% decrease in BAN sales partially offset by a 47% increase in CS sales. The significant decrease in BAN sales in 2001 was principally due to weak capital spending on transmission upgrades, particularly reduced capital spending by AT&T Broadband and RCN. These two customers accounted for a combined total of less than 5% of net sales in 2001 compared to a combined total of 23% of net sales in 2000. The significant increase in CS sales during 2001 was principally due to sales of new next-generation digital products including the MV50 encoder and Narrowcast Services Gateway, or NSG, which commenced volume shipment in the second quarter of 2001. This increase was also attributable to the fact that net sales for 2000 included only eight months of sales for the DiviCom business as the C-Cube merger was accounted for as a purchase transaction and closed on May 3, 2000. International sales represented 40% of net sales in 2001, compared to 36% in 2000. The increase was principally due to the higher international sales mix of the DiviCom business.

Gross Profit

Gross profit increased to \$54.4 million (29% of net sales) in 2002 from \$1.6 million (1% of net sales) in 2001. The increase in gross profit was primarily attributable to special charges in 2001 of \$40.9 million, principally for excess and obsolete inventories, and credits in 2002 of \$6.9 million related to products sold for which the cost basis had been written down in prior years. Also contributing to the higher gross profit in 2002 were cost control measures, including a reduction in headcount in the factory and technical service and support organizations, associated with work force reductions throughout

[Table of Contents](#)

2001 and during the second half of 2002. These factors which contributed to higher gross margins in 2002 compared to 2001, were partially offset by lower pricing and a higher proportion of BAN division revenue which historically has had lower margins.

Gross profit decreased to \$1.6 million (1% of net sales) in 2001, from \$75.2 million (29% of net sales) in 2000. The decrease in gross profit was primarily due to decreased sales and associated lower fixed cost absorption as a result of lower production levels and purchasing volumes. Also contributing to the lower gross profit and margins in 2001 were lower pricing and changes in product mix. In addition, approximately \$40.9 million of the reduction in gross profit was attributable to the recording of provisions for excess and obsolete inventories, the impairment of certain fixed assets and severance and other costs resulting from streamlining our product lines in both divisions. The provisions for excess and obsolete inventories of \$39.2 million resulted from significant reductions in demand for our products, principally BAN division products. In accordance with our policy we established provisions for inventory levels in excess of our demand forecasts. The decreases in gross profit and gross margins were partially offset by the inclusion of DiviCom for the entire year in 2001.

Research and Development

Research and development expenses decreased to \$40.8 million (22% of net sales) in 2002, from \$51.3 million (25% of net sales) in 2001. The decreases in 2002 were primarily due to a reduction in headcount associated with the workforce reductions over the past two years and ongoing cost control measures. Research and development expenses increased to \$51.3 million (25% of net sales) in 2001 from \$49.3 million (19% of net sales) in 2000. The increase in absolute dollars was primarily due to inclusion of DiviCom for the entire year in 2001, which historically spent a higher percentage of net sales on research and development than Harmonic, partially offset by lower headcount and associated expenses. In 2001, the increase in research and development expenses as a percentage of net sales was primarily attributable to decreased net sales, but also attributable to the inclusion of DiviCom for the entire year.

Sales, General and Administrative

Selling, general and administrative expenses decreased to \$81.4 million (43% of net sales) in 2002, from \$106.3 million (53% of net sales) in 2001. The decreases were due principally to the reduction in headcount associated with the work force reductions and to lower promotional costs. In addition, selling, general and administrative expenses in 2001 included excess facilities charges of \$30.1 million compared to \$22.5 million in 2002. Selling, general and administrative expenses increased to \$106.3 million (53% of net sales) in 2001 from \$67.0 million (25% of net sales) in 2000. The increase in absolute dollars was due principally to \$32.8 million of excess facility, severance and other costs, and the inclusion of DiviCom for the entire year in 2001, partially offset by lower headcount and associated expenses. The increase as a percentage of net sales was also attributable to the decrease in net sales.

Amortization and Impairment of Intangibles

Amortization of intangibles decreased to \$9.5 million in 2002 from \$12.7 million in 2001. The decrease in 2002 was due principally to cessation of goodwill amortization on adoption of SFAS No. 142 "Goodwill and Other Intangible Assets" effective January 1, 2002. Harmonic expects to record approximately \$7.7 million in amortization of intangibles in 2003.

Amortization of intangibles decreased to \$12.7 million in 2001, from \$221.7 million in 2000. The decrease in 2001 was due to the recording of an impairment charge of \$1.4 billion as of December 31, 2000 to write down long-lived assets associated with the acquisition of the DiviCom business completed in May 2000. DiviCom was acquired in a tax-free exchange of stock at a time when the market values of telecommunications equipment manufacturers were substantially higher. The DiviCom business had experienced a significant decrease in the demand for its products and services as customers in the digital headend systems market reduced levels of current and planned capital expenditures and, as a result, revenues, cash flows and expected future growth rates decreased. Due to these significant changes, management performed an evaluation of the recoverability of the goodwill and other long-lived assets related to the DiviCom business in accordance with SFAS No. 121 "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of." Because the estimated future undiscounted cash flows of this operation were less than the carrying value of the related long-lived assets as of December 31, 2000, an impairment charge was required. The impairment charge represents the amount required to write-down long-lived assets to fair value based on management's best estimate of this operation's future

[Table of Contents](#)

discounted cash flows. As a result of the impairment charge, Harmonic wrote off the remaining unamortized goodwill and reduced the recorded value of other identified intangibles related to its acquisition of the DiviCom business to \$79.3 million.

Acquired in-Process Technology

Harmonic recorded charges to operations of \$39.8 million in 2000 for acquired in-process technology in connection with the C-Cube merger and Cogent acquisition. See Note 3 of Notes to Consolidated Financial Statements. These amounts were expensed on the acquisition dates in accordance with generally accepted accounting principles because the acquired technology had not yet reached technological feasibility and had no future alternative uses.

Interest and Other Income, Net

Interest and other income, net, was \$0.9 million in 2002, \$1.6 million in 2001 and \$10.5 million in 2000. The decrease in 2002 was due principally to lower interest income, and to a lesser extent higher interest expense on borrowings under Harmonic's equipment term loan. The decrease in interest income was due to lower average cash and short term investment balances as well as lower interest rates. The decrease in 2001 was principally due to lower average cash and short term investments. Lower interest rates also contributed to the decrease.

Income Taxes

Harmonic recorded a provision for income taxes of \$0.5 million in 2002 principally due to foreign income taxes despite a loss before income taxes of \$76.4 million. The valuation allowance was increased from \$63.0 million in 2001 to \$104.9 million in 2002. The valuation allowance is for the full amount of the net deferred tax asset, because realization of any future benefit from deductible temporary differences, net operating losses and tax credit carry forwards was uncertain at December 31, 2002. Harmonic recorded a benefit from income taxes of only \$0.8 million despite a loss before income taxes of \$167.2 million in 2001. This was principally due to the establishment of the valuation allowance for the full amount of Harmonic's net deferred tax assets of \$63.0 million. For 2000, Harmonic recorded a benefit from income taxes of only \$18.6 million, principally due to non-deductible goodwill impairment and amortization, and acquired in-process technology related to the acquisition of DiviCom.

In 2003, Harmonic expects to record a provision for income taxes of less than \$1.0 million due principally to foreign income taxes. This estimate is based on current tax laws, current estimates of 2003 operating results and the expected distribution of income among various tax jurisdictions, all of which is subject to change. In addition, Harmonic is liable for C-Cube's taxes for periods prior to the merger. See "Factors That May Affect Future Results of Operations — We Are Liable For C-Cube's Pre-Merger Tax Liabilities, Including Tax Liabilities Resulting From The Spin-Off of Its Semiconductor Business."

Segments

Harmonic's management uses income or loss from segment operations as its measure of segment profitability. Income or loss from segment operations excludes intangible amortization expense, corporate expenses, including excess facilities charges, and interest and other income. See Note 13 of Notes to Consolidated Financial Statements.

Fluctuations in net sales by operating segment are discussed more extensively in the section above entitled, *Net Sales*. With regard to losses from segment operations, BAN had a loss of \$4.0 million in 2002 compared to a loss of \$60.1 million in 2001. The improved results in 2002 were due to a 3% increase in sales, improved factory absorption and lower operating expenses, resulting primarily from lower headcount. In addition, BAN results included special charges in 2001 of \$28.6 million for excess and obsolete inventories and credits of \$5.9 million in 2002 related to products sold in 2002 for which the cost basis had been written down in prior years. BAN had a loss from segment operations of \$60.1 million in 2001 compared to \$4.4 million in 2000. The larger loss in 2001 was due primarily to a 57% decrease in sales and the recording of special charges impacting gross profits as discussed above.

CS had a loss from segment operations of \$15.7 million in 2002 compared to a loss of \$36.3 million in 2001. Despite a 15% decrease in sales in 2002, results improved, principally due to lower headcount and other cost control measures. In addition, CS results included special charges for excess and obsolete inventories in 2001 of \$10.6 million and credits of \$1.0 million in 2002 related to products sold in 2002 for which the cost basis had been written down in prior years. CS had a loss from segment operations of \$36.3 million in 2001 compared to a loss of \$25.1 million in 2000. Despite a 47% increase in sales, the loss from segment operations increased in 2001 due in part to the special charges for excess and obsolete

inventories which impacted gross profits. In addition, 2000 results only included eight months of operating results for the DiviCom business as the C-Cube merger closed on May 3, 2000.

Liquidity and Capital Resources

As of December 31, 2002, cash, cash equivalents and short term investments totaled \$49.2 million compared to \$54.3 million as of December 31, 2001. Cash used in operations was \$5.4 million in 2002 compared to \$24.8 million in 2001. The reduced use of cash in operations in 2002 was due to a significantly reduced net loss that was substantially offset by non-cash charges for depreciation and amortization and net cash provided through improved working capital management. Cash used in operations in 2001 was primarily due to the significant net loss, partially offset by depreciation and amortization, and net cash provided through improved working capital management compared to 2000. During 2001, Harmonic received income tax refunds of \$25.6 million, principally due to pre-merger tax liabilities.

Under the terms of the merger agreement with C-Cube, Harmonic is generally liable for C-Cube's pre-merger tax liabilities. As of December 31, 2002, approximately \$20.8 million of pre-merger tax liabilities remain outstanding and are included in accrued liabilities. Harmonic expects to negotiate final settlement and make payment of these obligations to a variety of taxing authorities or to LSI Logic during 2003. To the extent that these obligations are finally settled for less than the amount provided, Harmonic is required, under the terms of the merger agreement, to refund the difference to LSI Logic. Accordingly, we expect a significant reduction in cash, cash equivalents and short term investments during 2003.

Additions to property, plant and equipment were \$3.3 million during 2002 compared to \$29.1 million in 2001. The decrease from 2001 was due principally to expenditures during 2001 for leasehold improvements and related furniture, fixtures and equipment in connection with relocation of former DiviCom employees to new facilities in Sunnysvale, and the implementation of a new enterprise resource planning software system. These major capital programs commenced during the second half of 2000 and were substantially completed during the first half of 2001. As a result of these major programs, capital expenditures for the combined company were significantly higher during 2000 and 2001 than historic levels, in 2002, and levels expected in the future. Harmonic currently expects capital expenditures to be less than \$5 million during 2003.

The Company's previous credit facility, as modified in November 2002, provided for borrowings up to \$13.0 million including \$3.0 million for equipment under a secured term loan, contained financial and other covenants and expired in March 2003. Under the November modification agreement, a minimum cash covenant was established which required the Company to maintain at least 35% of its cash, cash equivalents and short-term investments with the bank. The Company was granted a grace period until January 31, 2003 to satisfy this covenant. After giving effect to this grace period, Harmonic was in compliance with the covenants under the previous credit facility as of December 31, 2002. During 2002, Harmonic borrowed an additional \$1.3 million under the secured equipment term loan portion of this facility. As of December 31, 2002, \$2.6 million was outstanding under the equipment term loan portion of this facility. The term loan interest rates were 7.25% to 10.0% annually on outstanding borrowings as of December 31, 2002. Borrowings under the facility mature at various dates through July 2005. Other than standby letters of credit and guarantees set forth in the contractual obligations and other commercial commitments table below, there were no other outstanding borrowings or commitments under the line as of December 31, 2002.

In March 2003, Harmonic entered into a new bank line of credit facility with Silicon Valley Bank, which provides for borrowings up to \$13.5 million including \$3.5 million for equipment under a secured term loan. This new facility, which expires in March 2004, contains financial and other covenants including the requirement for Harmonic to maintain on deposit with the bank the greater of 50% of total cash, cash equivalents and short-term investments or \$10.0 million, or satisfy a liquidity covenant requirement in the event cash, cash equivalents and short-term investments are less than \$10.0 million. If Harmonic is unable to maintain on deposit with the bank the minimum balance of \$10.0 million, or satisfy the liquidity covenant requirement, Harmonic would be in noncompliance with the facility. In the event of noncompliance by Harmonic with the covenants under the facility, Silicon Valley Bank would be entitled to exercise its remedies under the facility, including in the event amounts are outstanding under the facility, offset rights against the amounts Harmonic has maintained on deposit with the bank. Future borrowings pursuant to the line bear interest at the bank's prime rate plus 0.25%-1.75% (prime rate plus 2%-3.75% for equipment borrowings) depending upon the Company's total cash position. Borrowings are payable monthly, and are collateralized by all of Harmonic's assets. The Company has entered into an agreement with a financial institution holding amounts on deposit to allow, in the event of default, Silicon Valley Bank to control these deposits.

[Table of Contents](#)

Harmonic also has a facility with Silicon Valley Bank that provides for the sale of trade receivables on a non-recourse basis up to \$12.5 million and expires in March 2004. Trade receivables sold under the facility are discounted based on the bank's prime rate plus 1.5% for North American customers and at a negotiated rate for all other customers. This facility, which was amended in March 2003, was not utilized in 2002.

The Company's ability to utilize both facilities with Silicon Valley Bank depends to a significant extent on having a sufficient amount of qualified receivables, which may fluctuate depending on the level and timing of sales and the aging, customer concentration, international mix and credit quality of receivables. To the extent that the Company does not have sufficient qualified receivables, our ability to utilize these facilities could be significantly constrained. Based upon current levels of receivables, the Company believes that it would not be able to utilize a significant portion of these facilities at this time.

Future payments under contractual obligations, and other commercial commitments, as of December 31, 2002, were as follows (in thousands):

| Contractual Obligations | Payments Due by Period | | | | |
|--------------------------------------|-------------------------|------------------|-----------------|-----------------|-----------------|
| | Total Amounts Committed | Less than 1 year | 1 - 3 years | 4 - 5 years | Over 5 years |
| Long-Term Debt | \$ 2,572 | \$ 1,862 | \$ 710 | — | — |
| C-Cube Pre-Merger Tax Liabilities | 20,800 | 20,800 | — | — | — |
| Operating Leases ⁽¹⁾ | 89,187 | 10,979 | 30,895 | 24,904 | 22,409 |
| Inventory Purchase Commitments | 12,932 | 12,932 | — | — | — |
| Total Contractual Obligations | \$ 125,491 | \$46,573 | \$31,605 | \$24,904 | \$22,409 |

| Other Commercial Commitments | Amount of Commitment Expiration Per Period | | | | |
|-------------------------------------|--|------------------|--------------|-------------|--------------|
| | Total Amounts Committed | Less than 1 year | 1 - 3 years | 4 - 5 years | Over 5 years |
| Standby Letters of Credit | \$ 850 | \$ 850 | — | — | — |
| Indemnifications ⁽²⁾ | — | — | — | — | — |
| Guarantees | 1,908 | 1,285 | \$623 | — | — |
| Total Commercial Commitments | \$ 2,758 | \$2,135 | \$623 | — | — |

(1) Operating lease commitments include \$41.6 million of accrued excess facilities costs.

(2) Harmonic indemnifies some of its suppliers and customers for specified intellectual property rights pursuant to certain parameters and restrictions. The scope of these indemnities varies, but in some instances, includes indemnification for damages and expenses (including reasonable attorneys' fees). No amounts have been accrued in respect of the indemnification provisions at December 31, 2002.

Harmonic's cash and investment balances declined \$5.4 million in the fourth quarter of 2002 after increasing \$0.3 million through the first three quarters of 2002. We currently believe that our existing liquidity sources, including our bank line of credit and trade receivables facilities, as limited by qualified receivables, will satisfy our requirements for at least the next twelve months, including the final settlement and payment of C-Cube's pre-merger tax liabilities. However, we may need to raise additional funds if our expectations or estimates change or prove inaccurate, or to take advantage of unanticipated opportunities or to strengthen our financial position. Because our stock is currently trading at near historically low levels, any financing at these levels could be significantly dilutive to existing shareholders. On March 18, 2002, Harmonic filed a registration statement on Form S-3 with the Securities and Exchange Commission, or SEC. This shelf registration statement, which was declared effective by the SEC in April 2002, will allow Harmonic to issue various types of securities, including common stock, preferred stock, debt securities and warrants to purchase common stock from time to time, up to an aggregate of \$150 million, subject to market conditions and our capital needs.

In addition, from time to time, we review potential acquisitions that would complement our existing product offerings, enhance our technical capabilities or expand our marketing and sales presence. Any future transaction of this nature could require potentially significant amounts of capital or could require us to issue our stock and dilute existing stockholders. If adequate funds are not available, or are not available on acceptable terms, we may not be able to take advantage of market opportunities, to develop new products or to otherwise respond to competitive pressures.

[Table of Contents](#)

Our ability to raise funds may be adversely affected by a number of factors relating to Harmonic, as well as factors beyond our control, including increased market uncertainty surrounding the ongoing U.S. war on terrorism, and the outbreak of war in Iraq, as well as conditions in capital markets and the cable and satellite industries. There can be no assurance that any financing will be available on terms acceptable to us, if at all. See "Factors That May Affect Future Results of Operations — We May Need Additional Capital In The Future And May Not Be Able To Secure Adequate Funds On Terms Acceptable To Us."

New Accounting Pronouncements

In July 2002, the Financial Accounting Board ("FASB") issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities." The standard replaces Emerging Issues Task Force ("EITF") Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)" and requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS No. 146 is to be applied prospectively to exit or disposal activities initiated after December 31, 2002. Upon adoption, we do not expect a material impact on our financial position, results of operations, or cash flows.

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN 45"), "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others". FIN 45 requires the guarantor to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. It also expands on the disclosures by a guarantor in its financial statements about its obligations under certain guarantees that it has issued and to be made in regard to product warranties. Disclosures required under FIN 45 are included in these financial statements, however, the initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. We are evaluating the impact of the adoption of FIN 45.

In November 2002, the Emerging Issues Task Force ("EITF") reached a consensus on Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The company believes that the adoption of this standard will have no material impact on its financial statements.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities", which addresses accounting for the assets, liabilities and activities of another entity. Prior to the issuance of FIN 46, a company generally included another entity in its consolidated financial statements only if it controlled the entity through voting interests. FIN 46 now requires a variable interest entity, as defined in FIN 46, to be consolidated by a company if that company is subject to a majority of the risk of loss from the variable interest entity activities or is entitled to receive a majority of the entity's residual returns or both. FIN 46 also requires disclosures about variable interest entities that the company is not required to consolidate but in which it has a significant variable interest. The consolidation requirements of FIN 46 apply immediately to variable interest entities created after January 31, 2003 and to older entities in the first fiscal year or interim period beginning after June 15, 2003. Certain of the disclosure requirements apply to all financial statements issued after January 31, 2003, regardless of when the variable interest entity was established. The Company does not believe that the adoption of FIN 46 will have a material impact on the Company's financial position, results of operations or cash flows.

Factors That May Affect Future Results of Operations

We Depend On Cable And Satellite Industry Capital Spending For A Substantial Portion Of Our Revenue And Any Decrease Or Delay In Capital Spending In These Industries Would Negatively Impact Our Resources, Operating Results And Financial Condition and Cash Flows.

Prior to the merger with C-Cube in May 2000, almost all of Harmonic's historic sales had been derived from sales to cable television operators and we expect these sales to constitute a significant portion of net sales for the foreseeable future. Almost all of the DiviCom business' historic sales had been derived from sales to satellite operators, telephone companies and cable operators. Demand for our products will depend on the magnitude and timing of capital spending by cable television operators, satellite operators, broadcasters and telephone companies for constructing and upgrading of their systems.

[Table of Contents](#)

These capital spending patterns are dependent on a variety of factors, including:

- access to financing;
- annual budget cycles;
- the impact of industry consolidation;
- the status of federal, local and foreign government regulation of telecommunications and television broadcasting;
- overall demand for communication services and the acceptance of new video, voice and data services;
- evolving industry standards and network architectures;
- competitive pressures;
- discretionary customer spending patterns; and
- general economic conditions.

In the past, specific factors contributing to reduced capital spending have included:

- uncertainty related to development of digital video and cable modem industry standards;
- delays associated with the evaluation of new services and system architectures by many cable television operators;
- emphasis on generating revenue from existing customers by cable television operators instead of new construction or network upgrades;
- proposed business combinations by our customers and regulatory review thereof; and
- economic and financial conditions in domestic and international markets.

Developments in capital markets over the past several years have reduced access to funding for new and existing customers, causing delays in the timing and scale of deployments of our equipment, as well as the postponement or cancellation of certain projects by our customers. Our business has been negatively impacted by the prolonged economic recession. During this same period Harmonic and other vendors received notification from several customers that they were canceling new projects, or delaying new orders to allow them to reduce inventory levels which were in excess of their current deployment requirements.

Certain of our customers have accumulated significant levels of debt and have announced during the past year, or are expected to announce, reorganizations and financial restructurings, including bankruptcy filings. For example, two of our major domestic customers, Adelphia Communications and Winfirst, declared bankruptcy during the first half of 2002, while NTL, a major international customer, has just recently emerged from bankruptcy. Even if these restructurings are completed, we cannot assure you that these customers will be in a position to purchase new equipment at levels we have seen in the past. Our business has been negatively impacted by the prolonged economic recession and the bankruptcy of Adelphia Communications has further heightened concerns in the financial markets about the domestic cable industry. These concerns, coupled with the current uncertain and volatile capital markets, have further pressured the market values of domestic cable operators and may further restrict their access to capital.

The timing of deployment of our equipment can be subject to a number of other risks, including the availability of skilled engineering and technical personnel, the availability of other equipment such as digital set top boxes, and the need for local franchise and licensing approvals. We believe that changes in our customers' deployment plans have in recent quarters delayed, and may in the future delay, the receipt of new orders or the release of existing backlog.

[Table of Contents](#)

Cable television capital spending can be subject to the effects of seasonality, with fewer construction and upgrade projects typically occurring in winter months and otherwise being affected by inclement weather.

BAN division sales have decreased significantly from the third quarter of 2000 and were 57% lower in 2001 than in 2000. This was due in particular to reduced spending by AT&T Broadband, which was acquired by Comcast in November 2002, and RCN. These two customers accounted for a combined total of 23% of sales in 2000 compared to a combined total of less than 5% of sales in 2001. While BAN sales increased 3% in 2002, sales generally remain weak.

For a more detailed discussion regarding risks related to Comcast, and other major customers, see "Our Customer Base Is Concentrated And The Loss Of One Or More Of Our Key Customers Would Harm Our Business. The Loss Of Any Key Customer Would Have A Negative Effect On Our Business."

CS division sales from the second quarter of 2000 through the first quarter of 2001, consisting principally of DiviCom products, were below DiviCom's sales levels in 1999 and the first quarter of 2000, and were significantly below our expectations at the time the DiviCom merger was announced in October 1999. The lower CS sales were attributable principally to reduced spending by satellite operators.

CS division sales increased significantly from the first quarter of 2001 through the second quarter of 2002 due principally to demand for our next-generation digital systems such as the Narrowcast Services Gateway, or NSG, for video-on-demand deployments, and the MV50 encoder. CS sales of the MV50 encoder benefited during this period from the expansion of local channel offerings and compliance with FCC "must carry" regulations by domestic direct broadcast satellite, or DBS, operators. However, CS sales decreased 31% during the second half of 2002 compared to the first half of 2002 due principally to significantly lower sales to cable and satellite customers. We believe this decrease was the result, in part, of the prolonged regulatory review of the proposed acquisition of DIRECTV by EchoStar, a pause in NSG shipments as most major domestic cable operators focused on initial VOD service launches rather than new VOD deployments, and reduced cable industry spending in the aftermath of the Adelphia bankruptcy filing.

Due to more challenging market conditions during the second half of 2002, and uncertainty about the 2003 capital spending plans of certain of our domestic and international cable and satellite customers, it is difficult to estimate growth in the markets in which we participate. Accordingly, Harmonic expects sales to remain at levels similar to the second half of 2002 through at least the first quarter of 2003.

Our Customer Base Is Concentrated And The Loss Of One Or More Of Our Key Customers Would Harm Our Business. The Loss Of Any Key Customer Would Have A Negative Effect On Our Business.

Historically, a majority of our sales have been to relatively few customers, and due in part to the consolidation of ownership of cable television and direct broadcast satellite systems, we expect this customer concentration to continue in the foreseeable future. Sales to our ten largest customers in 2002, 2001, and 2000 accounted for approximately 61%, 49% and 52% of net sales, respectively. Although we are attempting to broaden our customer base by penetrating new markets such as the telco and broadcast markets, we expect to see continuing industry consolidation and customer concentration due in part to the significant capital costs of constructing broadband networks. For example, Comcast acquired AT&T Broadband in November 2002, thereby creating the largest U.S. cable operator, reaching approximately 22 million subscribers. In the DBS segment, the proposed acquisition of DIRECTV by EchoStar was opposed by the FCC and the Justice Department, and the two companies have subsequently called off the merger. However, speculation regarding potential business combinations of both DIRECTV and EchoStar continues. In addition, financial restructurings of companies such as Adelphia Communications and several European operators may lead to further industry consolidation. In 2002, sales to Charter Communications and Comcast accounted for 18% and 10% of net sales, respectively. If Comcast and AT&T Broadband had been combined for all of 2002, total revenues would have been 17% of net sales. Charter represented 11% of net sales in 2001 and AT&T Broadband represented 12% of sales in 2000. In addition, in 2000 RCN represented 11% of net sales. The loss of Charter Communications or Comcast or any other significant customer or any reduction in orders by Charter Communications or Comcast, or any significant customer, or our failure to qualify our products with a significant customer could adversely affect our business, operating results and liquidity. In this regard sales to Charter Communications are expected to be significantly lower in 2003, both in absolute dollars and as a percentage of revenue, as they are now in the latter stages of their network upgrade program. In addition, our sales to Charter may be impacted by capital market concerns about the cable industry and Charter in the aftermath of the Adelphia Communications bankruptcy filing in June 2002.

[Table of Contents](#)

We cannot currently predict the impact of the acquisition of AT&T Broadband by Comcast on our future sales nor can we predict the impact of the continuing speculation surrounding the sale of DIRECTV by Hughes on our future sales. Our sales are made on a purchase order or system contract basis, and none of our customers has entered into a long-term agreement requiring it to purchase our products. The loss of, or any reduction in orders from, a significant customer would harm our business.

Our Operating Results Are Likely To Fluctuate Significantly And May Fail To Meet Or Exceed The Expectations Of Securities Analysts Or Investors, Causing Our Stock Price To Decline.

Our operating results have fluctuated in the past and are likely to continue to fluctuate in the future, on an annual and a quarterly basis, as a result of several factors, many of which are outside of our control. Some of the factors that may cause these fluctuations include:

- the level and timing of capital spending of our customers, both in the U.S. and in foreign markets;
- changes in market demand;
- the timing and amount of orders, especially from significant customers;
- the timing of revenue from systems contracts which may span several quarters;
- competitive market conditions;
- our unpredictable sales cycles;
- new product introductions by our competitors or by us;
- changes in domestic and international regulatory environments;
- market acceptance of new or existing products;
- the cost and availability of components, subassemblies and modules;
- the mix of our customer base and sales channels;
- the mix of our products sold;
- our development of custom products and software;
- the level of international sales; and
- economic and financial conditions specific to the cable and satellite industries, and general economic conditions.

In addition, we often recognize a substantial portion of our revenues in the last month of the quarter. We establish our expenditure levels for product development and other operating expenses based on projected sales levels, and expenses are relatively fixed in the short term. Accordingly, variations in timing of sales can cause significant fluctuations in operating results. In addition, because a significant portion of our business is derived from orders placed by a limited number of large customers, the timing of such orders can also cause significant fluctuations in our operating results. Our expenses for any given quarter are typically based on expected sales and if sales are below expectations, our operating results may be adversely impacted by our inability to adjust spending to compensate for the shortfall. As a result of all these factors, our operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading price of our common stock would likely decline. In this regard, due to lower than expected sales in several quarters during 2000 and 2001, and during the third quarter of 2002, we failed to meet our internal expectations, as well as the expectations of securities analysts and investors, and the price of our common stock declined, in some cases significantly.

[Table of Contents](#)

The Terrorist Attacks Of 2001, The War In Iraq And The Ongoing Threat Of Terrorism Have Created Great Uncertainty And May Continue To Harm Our Business.

Current conditions in the U.S. and global economies are uncertain. The terrorist attacks in 2001 created many economic and political uncertainties that have severely impacted the global economy. We experienced a further decline in demand for our products after the attacks. The long-term effects of the attacks, the war in Iraq and the ongoing war on terrorism on our business and on the global economy remain unknown. Moreover, the potential for future terrorist attacks has created additional uncertainty and makes it difficult to estimate how quickly the U.S. and other economies will recover and our business will improve.

We May Need Additional Capital In The Future And May Not Be Able To Secure Adequate Funds On Terms Acceptable To Us.

Harmonic's cash and investment balances declined \$5.4 million in the fourth quarter of 2003 after increasing \$0.3 million through the first three quarters of 2002. We currently believe that our existing liquidity sources, including our bank line of credit and trade receivables sale facilities, will satisfy our capital requirements for at least the next twelve months. We may need to raise additional funds if our estimates change or prove inaccurate, or in order for us to take advantage of unanticipated opportunities or to strengthen our financial position. Because our stock is currently trading at near historically low levels, any financing at these levels could be significantly dilutive to existing shareholders. On March 18, 2002, Harmonic filed a registration statement on Form S-3 with the Securities and Exchange Commission, or SEC. This shelf registration statement, which was declared effective by the SEC in April 2002, will allow Harmonic to issue various types of securities, including common stock, preferred stock, debt securities and warrants to purchase common stock from time to time, up to an aggregate of \$150 million, subject to market conditions and our capital needs. Our ability to raise funds may be adversely affected by a number of factors relating to Harmonic, as well as factors beyond our control, including increased market uncertainty following the events of September 11, 2001, the outbreak of war in Iraq, and the ongoing U.S. war on terrorism as well as conditions in capital markets. There can be no assurance that such financing will be available on terms acceptable to us, if at all.

In addition, from time to time, we review potential acquisitions that would complement our existing product offerings, enhance our technical capabilities or expand our marketing and sales presence. Any future transaction of this nature could require potentially significant amounts of capital to finance the acquisition and related expenses as well as to integrate operations following a transaction, and could require us to issue our stock and dilute existing stockholders. If adequate funds are not available, or are not available on acceptable terms, we may not be able to take advantage of market opportunities, to develop new products or to otherwise respond to competitive pressures.

We Depend On Our International Sales And Are Subject To The Risks Associated With International Operations, Which May Negatively Affect Our Operating Results.

Sales to customers outside of the United States in 2000, 2001 and 2002 represented 36%, 40% and 29%, of net sales, respectively, and we expect that international sales will continue to represent a substantial portion of our net sales for the foreseeable future. Our international operations are subject to a number of risks, including:

- changes in foreign government regulations and telecommunications standards;
- import and export license requirements, tariffs, taxes and other trade barriers;
- fluctuations in currency exchange rates;
- difficulty in collecting accounts receivable;
- the burden of complying with a wide variety of foreign laws, treaties and technical standards;
- difficulty in staffing and managing foreign operations; and
- political and economic instability.

[Table of Contents](#)

Certain of our international customers have accumulated significant levels of debt and have recently announced, or are expected to announce, reorganizations and financial restructurings, including bankruptcy filings. Even if these restructurings are completed, we cannot assure you that these customers will be in a position to purchase new equipment at levels we have seen in the past.

While our international sales and operations have typically been denominated in U.S. dollars, fluctuations in currency exchange rates could cause our products to become relatively more expensive to customers in a particular country, leading to a reduction in sales or profitability in that country.

Following implementation of the Euro in January 2002, a higher portion of our European business is denominated in Euros, which may subject us to increased foreign currency risk. Gains and losses on the conversion to U.S. dollars of accounts receivable, accounts payable and other monetary assets and liabilities arising from international operations may contribute to fluctuations in operating results. Furthermore, payment cycles for international customers are typically longer than those for customers in the United States. Unpredictable sales cycles could cause us to fail to meet or exceed the expectations of security analysts and investors for any given period. In addition, foreign markets may not develop in the future.

If Sales Forecasted For A Particular Period Are Not Realized In That Period Due To The Unpredictable Sales Cycles Of Our Products, Our Operating Results For That Period Will Be Harmed.

The sales cycles of many of our products, particularly our newer products and products sold internationally, are typically unpredictable and usually involve:

- a significant technical evaluation;
- a commitment of capital and other resources by cable, satellite, and other network operators;
- time required to engineer the deployment of new technologies or new broadband services;
- testing and acceptance of new technologies that affect key operations; and
- test marketing of new services with subscribers.

For these and other reasons, our sales cycles generally last three to six months, but can last up to 12 months. If orders forecasted for a specific customer for a particular quarter do not occur in that quarter, our operating results for that quarter could be substantially lower than anticipated.

As a result of the merger with C-Cube, a significant portion of our revenue is derived from solution contracts that include a combination of product sales as well as design, installation and integration services. Revenue forecasts for solution contracts are based on the estimated timing of the design, installation and integration of projects. Because the solution contracts generally span several quarters and revenue recognition is based on progress under the contract, the timing of revenue is difficult to predict and could result in lower than expected revenue in any particular quarter.

We Face Risks Associated With Having Important Facilities And Resources Located In Israel.

Harmonic maintains a facility in Caesarea in the State of Israel with a total of approximately 60 employees, or 10% of our workforce. The employees at this facility consist principally of research and development personnel involved in development of certain products for the CS division. In addition, we have pilot production capabilities at this facility consisting of procurement of subassemblies and modules from Israeli subcontractors and final assembly and test operations. Accordingly, we are directly influenced by the political, economic and military conditions affecting Israel, and any major hostilities involving Israel or the interruption or curtailment of trade between Israel and its trading partners could significantly harm our business. The September 2001 terrorist attacks, the war in Iraq, the ongoing U.S. war on terrorism and the escalation of terrorist attacks and hostilities within Israel have heightened these risks. We cannot assure you that the protraction or escalation of current tensions in the Middle East will not adversely affect our business and results of operations.

[Table of Contents](#)

In addition, most of our employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Forces and several have been called for active military duty recently. We cannot predict the effect of these obligations on Harmonic in the future.

Pending Business Combinations And Other Financial And Regulatory Issues Among Our Customers Could Adversely Affect Our Business.

The telecommunications industry has been particularly impacted by the prolonged economic recession, adverse conditions in capital markets and financial difficulties in both the service and equipment sectors, including bankruptcies. Although large telecommunications service providers such as WorldCom and troubled data and voice-oriented start-ups have not been traditional customers of Harmonic, the cable, satellite and broadcast sectors have experienced significant financial problems. Many of our domestic and international customers have accumulated significant levels of debt and have announced in recent quarters, or are expected to announce, reorganizations and financial restructurings, including bankruptcy filings. In particular, Adelphia Communications, a major domestic cable operator, declared bankruptcy in June 2002. The stock prices of other domestic cable companies came under pressure following the Adelphia bankruptcy due to concerns about debt levels and capital expenditure requirements for new and expanded services, thereby making the raising of capital more difficult and expensive. New competitors, such as RCN and WinFirst, also had difficulty in accessing capital markets. WinFirst subsequently filed for bankruptcy. In Europe, rapid consolidation of the cable industry through acquisition also led to significant levels of debt at the major MSOs, and companies such as NTL and UPC commenced bankruptcy proceedings. European digital broadcasters, such as ITV Digital, Kirsch and Quiero, have also filed for protection from creditors.

While the capital market concerns about the domestic cable industry have eased somewhat since the summer of 2002, market conditions remain difficult and capital spending plans are generally constrained. It is likely that further industry restructuring will take place via mergers or spin-offs, such as the recent Comcast/AT&T Broadband transaction and the proposed spin-off of Time-Warner Cable from AOL Time-Warner. In addition, EchoStar and DIRECTV, whose recent merger agreement was abandoned due to opposition from federal regulatory agencies, remain the subject of speculation about other potential mergers or acquisitions. Regulatory issues, financial concerns and business combinations among our customers are likely to significantly affect the industry, its capital spending plans, and our levels of business for the foreseeable future.

We Must Be Able To Manage Expenses And Inventory Risks Associated With Meeting The Demand Of Our Customers.

From time to time, we receive indications from our customers as to their future plans and requirements to ensure that we will be prepared to meet their demand for our products. If actual orders differ materially from these indications, our ability to manage inventory and expenses may be affected. In addition, if we fail to meet customers' supply expectations, we may lose business from such customers. If we enter into purchase commitments to acquire materials, or expend resources to manufacture products and such products are not purchased by our customers, our business and operating results could suffer. In this regard, our gross margins and operating results for the fourth quarter of 2000 and in 2001 were adversely affected by provisions for excess and obsolete inventories of approximately \$49 million.

The Markets In Which We Operate Are Intensely Competitive And Many Of Our Competitors Are Larger And More Established.

The markets for cable television fiber optics systems and digital video broadcasting systems are extremely competitive and have been characterized by rapid technological change and declining average selling prices. Harmonic's competitors in the cable television fiber optics systems business include corporations such as C-Cor.net (which recently acquired Philips' fiber optics systems business), Motorola, and Scientific-Atlanta. In the digital and video broadcasting systems business, we compete broadly with vertically integrated system suppliers including Motorola, Scientific-Atlanta, Tandberg Television and Thomson Multimedia, and in certain product lines with Cisco and a number of smaller companies.

Many of our competitors are substantially larger and have greater financial, technical, marketing and other resources than Harmonic. Many of these large organizations are in a better position to withstand any significant reduction in capital spending by customers in these markets. They often have broader product lines and market focus and may not be as susceptible to downturns in a particular market. In addition, many of our competitors have been in operation longer than we have and therefore have more long standing and established relationships with domestic and foreign customers. We may not be able to compete successfully in the future which may harm our business.

[Table of Contents](#)

If any of our competitors' products or technologies were to become the industry standard, our business could be seriously harmed. For example, U.S. cable operators have to date mostly purchased proprietary digital systems from Motorola and Scientific-Atlanta. While certain operators have made limited purchases of the "open" systems provided by Harmonic, we cannot assure you that our digital products will find broad market acceptance with U.S. cable operators. In addition, companies that have historically not had a large presence in the broadband communications equipment market have begun recently to expand their market share through mergers and acquisitions. The continued consolidation of our competitors could have a significant negative impact on us. Further, our competitors, particularly competitors of our digital and video broadcasting systems' business, may bundle their products or incorporate functionality into existing products in a manner that discourages users from purchasing our products or which may require us to lower our selling prices resulting in lower gross margins.

Broadband Communications Markets Are Characterized By Rapid Technological Change.

Broadband communications markets are relatively immature, making it difficult to accurately predict the markets' future growth rates, sizes or technological directions. In view of the evolving nature of these markets, it is possible that cable television operators, telephone companies or other suppliers of broadband wireless and satellite services will decide to adopt alternative architectures or technologies that are incompatible with our current or future products. If we are unable to design, develop, manufacture and sell products that incorporate or are compatible with these new architectures or technologies, our business will suffer.

We Need To Develop And Introduce New And Enhanced Products In A Timely Manner To Remain Competitive.

Broadband communications markets are characterized by continuing technological advancement, changes in customer requirements and evolving industry standards. To compete successfully, we must design, develop, manufacture and sell new or enhanced products that provide increasingly higher levels of performance and reliability. However, we may not be able to successfully develop or introduce these products, if our products:

- are not cost effective;
- are not brought to market in a timely manner;
- are not in accordance with evolving industry standards and architectures; or
- fail to achieve market acceptance, or are ahead of the market.

Also, to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. We cannot assure you that we will be able to enter into any necessary technology development or licensing agreement on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements when necessary could limit our ability to develop and market new products and, accordingly, could materially and adversely affect our business and operating results.

We Need To Effectively Manage Our Operations And The Cyclical Nature Of Our Business.

The cyclical nature of our business has placed, and is expected to continue to place, a significant strain on our personnel, management and other resources. This strain has been exacerbated by the acquisition of DiviCom and the subsequent loss of numerous employees, including senior management. In addition, we reduced our work force by approximately 40% since the beginning of 2001 due to reduced industry spending and demand for our products. Our ability to manage our business effectively in the future, including any future growth, will require us to train, motivate and manage our employees successfully, to attract and integrate new employees into our overall operations, to retain key employees and to continue to improve our operational, financial and management systems. In particular, in April 2001 we implemented a new management information system. We believe this new system significantly affects many aspects of our business, including accounting, manufacturing operations, purchasing, sales and marketing functions. The successful operation of this system is critical to our business.

Competition For Qualified Personnel Can Be Intense, And We May Not Be Successful In Attracting And Retaining Personnel.

Our future success will depend, to a significant extent, on the ability of our management to operate effectively, both individually and as a group. We are dependent on our ability to retain and motivate high caliber personnel, in addition to attracting new personnel. In spite of the current worldwide economic slowdown, competition for qualified technical and other personnel can be intense, and we may not be successful in attracting and retaining such personnel. Competitors and others have in the past and may in the future attempt to recruit our employees. While our employees are required to sign standard agreements concerning confidentiality and ownership of inventions, we generally do not have employment contracts or non-competition agreements with any of our personnel. The loss of the services of any of our key personnel, the inability to attract or retain qualified personnel in the future or delays in hiring required personnel, particularly engineers and other technical personnel, could negatively affect our business.

We Are Liable For C-Cube's Pre-Merger Tax Liabilities, Including Tax Liabilities Resulting From The Spin-Off Of Its Semiconductor Business.

The spin-off of C-Cube's semiconductor business gave rise to a significant tax liability of approximately \$320 million based on a valuation of the semiconductor business of \$1.1 billion. The estimated liability was paid in 2000 by Harmonic. Under state law, Harmonic generally is liable for all of C-Cube's debts, including C-Cube's liability for taxes resulting from the spin-off and other pre-merger tax liabilities. C-Cube retained and transferred to Harmonic in the merger an amount of cash and other consideration sufficient to pay this liability as well as all other tax liabilities of C-Cube and its subsidiaries for periods prior to the merger. Approximately \$20.8 million of pre-merger tax liabilities remain outstanding and are included in accrued liabilities. Harmonic expects final settlement and payment of these obligations during 2003, to a variety of taxing authorities and LSI Logic, which acquired the spun-off semiconductor business in June 2001 and assumed its obligations. To the extent that these obligations are finally settled for less than the amounts provided, Harmonic is required, under the terms of the merger agreement, to refund the difference to LSI Logic.

The merger agreement stipulates that Harmonic will be indemnified by the spun-off semiconductor business if the cash reserves are not sufficient to satisfy all of C-Cube's tax liabilities for periods prior to the merger. If for any reason, the spun-off semiconductor business does not have sufficient cash to pay such taxes, or if there are additional taxes due with respect to the non-semiconductor business and Harmonic cannot be indemnified by C-Cube, Harmonic generally will remain liable, and such liability could have a material adverse effect on our financial condition, liquidity and results of operations.

We May Be Subject To Risks Associated With Other Acquisitions.

We have made and may make investments in complementary companies, products or technologies. If we make acquisitions, we could have difficulty assimilating or retaining the acquired companies' key personnel and operations or integrating the acquired technology or products into ours. We also may face challenges in achieving the strategic objectives, cost savings or other benefits from a proposed acquisition and difficulties in expanding our management information systems to accommodate the acquired business. These difficulties could disrupt our ongoing business, distract our management and employees and significantly increase our expenses. Moreover, our operating results may suffer because of acquisition-related expenses, amortization of intangible assets and impairment of acquired goodwill or intangible assets. Furthermore, we may have to incur debt or issue equity securities to pay for any future acquisitions, or to provide for additional working capital requirements, the issuance of which could be dilutive to our existing shareholders. If we are unable to successfully address any of these risks, our business, financial condition and operating results could be harmed.

Cessation Of The Development And Production Of Video Encoding Chips By C-Cube's Spun-off Semiconductor Business May Adversely Impact Us.

The DiviCom business and C-Cube semiconductor business collaborated on the production and development of two video encoding microelectronic chips prior to the merger. In connection with the merger, Harmonic and the spun-off semiconductor business entered into a contractual relationship under which Harmonic will have access to certain of the spun-off semiconductor business technologies and products which the DiviCom business previously depended for its product and service offerings. The spun-off semiconductor business is the sole supplier of these chips to Harmonic. Several of these products continue to be important to our business, and we have incorporated these chips into additional products that we have developed.

[Table of Contents](#)

However, under the contractual relationships between Harmonic and the spun-off semiconductor business, which was acquired by LSI Logic in June 2001, the semiconductor business does not have a firm commitment to continue the development of video encoding microelectronic chips. As a result, the semiconductor business may choose not to continue future development of the chips for any reason. The semiconductor business may also encounter in the future technological difficulties in the production and development of the chips. If the spun-off semiconductor business is not able to or does not sustain its development and production efforts in this area our business, financial condition, liquidity and results of operations could be harmed. Also, this agreement expires in 2004. See "Supply, License and Development Agreement" at page 60 of the joint proxy statement filed with the SEC on March 23, 2000, for further details of Harmonic's business relationship with the spun-off semiconductor business after the merger.

We Purchase Several Key Components, Subassemblies And Modules Used In The Manufacture Or Integration Of Our Products From Sole Or Limited Sources, And We Are Increasingly Dependent On Contract Manufacturers.

Many components, subassemblies and modules necessary for the manufacture or integration of our products are obtained from a sole supplier or a limited group of suppliers. Our reliance on sole or limited suppliers, particularly foreign suppliers, and our increased reliance on subcontractors since the merger with C-Cube involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules and reduced control over pricing, quality and timely delivery of components, subassemblies or modules. In particular, certain optical components have in the past been in short supply and are available only from a small number of suppliers, including sole source suppliers. While we expend considerable efforts to qualify additional optical component sources, consolidation of suppliers in the industry and the small number of viable alternatives have limited the results of these efforts. We do not generally maintain long-term agreements with any of our suppliers or subcontractors. An inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply could affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business. We attempt to limit this risk by maintaining safety stocks of these components, subassemblies and modules. As a result of this investment in inventories, we have in the past and in the future may be subject to risk of excess and obsolete inventories, which could harm our business, operating results, financial position and liquidity. In this regard, our gross margins and operating results from the fourth quarter of 2000 through the third quarter of 2001 were adversely affected by excess and obsolete inventory charges of approximately \$49 million.

Our Failure To Adequately Protect Our Proprietary Rights May Adversely Affect Us.

We currently hold 43 issued United States patents and 10 issued foreign patents, and have a number of patent applications pending. Although we attempt to protect our intellectual property rights through patents, trademarks, copyrights, licensing arrangements, maintaining certain technology as trade secrets and other measures, we cannot assure you that any patent, trademark, copyright or other intellectual property rights owned by us will not be invalidated, circumvented or challenged, that such intellectual property rights will provide competitive advantages to us or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We cannot assure you that others will not develop technologies that are similar or superior to our technology, duplicate our technology or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We believe that the future success of our business will depend on our ability to translate the technological expertise and innovation of our personnel into new and enhanced products. We generally enter into confidentiality or license agreements with our employees, consultants, vendors and customers as needed, and generally limit access to and distribution of our proprietary information. Nevertheless, we cannot assure you that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively affect our business, operating results, financial position and liquidity.

In order to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. Although many companies are often willing to enter into technology development or licensing agreements, we cannot assure you that such agreements will be negotiated on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements, when necessary, could limit our ability to develop and market new products and could cause our business to suffer.

We or Our Customers May Face Intellectual Property Infringement Claims From Third Parties.

Harmonic's industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. From time to time, third parties, including these leading companies, have asserted and may assert exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. Indeed, a number of third parties, including leading companies, have asserted patent rights to technologies that are important to us.

Our suppliers and customers may receive similar claims. We have agreed to indemnify some of our suppliers and customers for alleged patent infringement. The scope of this indemnity varies, but, in some instances, includes indemnification for damages and expenses (including reasonable attorney's fees). In this regard, since December 2000, we have been in communication with several of Harmonic's customers who have been contacted by one of these leading companies that believes certain of our products require a license under a number of their patents. We currently are reviewing the identified patents to examine whether we consider a license necessary. While it is our understanding that the third party is willing to grant our customers a non-exclusive license under the identified patents, there can be no assurance that the terms of any offered license would be acceptable to our customers or that failure to obtain a license or the costs associated with any license would not cause our operating results to be materially adversely affected.

We Are The Subject Of Securities Class Action Claims And Other Litigation Which, If Adversely Determined, Could Harm Our Business And Operating Results.

Between June 28 and August 25, 2000, several actions alleging violations of the federal securities laws by Harmonic and certain of its officers and directors (some of whom are no longer with Harmonic) were filed in or removed to the United States District Court for the Northern District of California. The actions subsequently were consolidated.

A consolidated complaint, filed on December 7, 2000, was brought on behalf of a purported class of persons who purchased Harmonic's publicly traded securities between January 19 and June 26, 2000. The complaint also alleged claims on behalf of a purported subclass of persons who purchased C-Cube securities between January 19 and May 3, 2000. In addition to Harmonic and certain of its officers and directors, the complaint also named C-Cube Microsystems Inc. and several of its officers and directors as defendants. The complaint alleged that, by making false or misleading statements regarding Harmonic's prospects and customers and its acquisition of C-Cube, certain defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934. The complaint also alleged that certain defendants violated section 14(a) of the Exchange Act and sections 11, 12(a)(2), and 15 of the Securities Act of 1933 by filing a false or misleading registration statement, prospectus, and joint proxy in connection with the C-Cube acquisition.

On July 3, 2001, the Court dismissed the consolidated complaint with leave to amend. An amended complaint alleging the same claims against the same defendants was filed on August 13, 2001. Defendants moved to dismiss the amended complaint on September 24, 2001. On November 13, 2002, the Court issued an opinion granting the motions to dismiss the amended complaint without leave to amend. Judgment for defendants was entered on December 2, 2002. On December 12, 2002, plaintiffs filed a motion to amend the judgment and for leave to file an amended complaint pursuant to Rules 59(e) and 15(a) of the Federal Rules of Civil Procedure. Although a hearing on that motion was set for February 5, 2003, the Court issued an order stating that it would decide the motion without a hearing. The parties are awaiting the Court's decision.

A derivative action purporting to be on behalf of Harmonic was filed against its then-current directors in the Superior Court for the County of Santa Clara on September 5, 2000. Harmonic also was named as a nominal defendant. The complaint is based on allegations similar to those found in the securities class actions and claims that the defendants breached their fiduciary duties by, among other things, causing Harmonic to violate federal securities laws. The derivative action was removed to the United States District Court for the Northern District of California on September 20, 2000. All deadlines in this action have been stayed pending resolution of the motions to dismiss the securities actions.

Based on its review of the complaints filed in the securities class action, Harmonic believes that it has meritorious defenses and intends to defend itself vigorously. There can be no assurance, however, that Harmonic will prevail. An unfavorable outcome of this litigation could have a material adverse effect on Harmonic's business, operating results, financial position and liquidity.

[Table of Contents](#)

In November 2001, we were sued in Tennessee state court by a company alleging breach of contract and breach of a Tennessee statute relating to retailers and suppliers. The suit has a claim for \$2.5 million and other unspecified damages, lost profits and attorneys' fees. The suit has since been removed to Federal Court and a trial date has been set for June 2003. Harmonic believes that it has meritorious defenses and will defend the suit vigorously. No liability has been provided at December 31, 2002, as Harmonic believes it is not probable that a liability has been incurred and the amount of loss, if any, cannot be estimated. However, we cannot assure you that an unfavorable outcome will not adversely impact our business, operating results, financial position and liquidity.

Our Stock Price May Be Volatile.

The market price of our common stock has fluctuated significantly in the past, particularly in recent years, and is likely to fluctuate in the future. In addition, the securities markets have experienced significant price and volume fluctuations and the market prices of the securities of technology companies have been especially volatile. Investors may be unable to resell their shares of our common stock at or above their purchase price. In the past, companies that have experienced volatility in the market price of their stock have been the object of securities class action litigation.

We Rely On A Continuous Power Supply To Conduct Our Operations, And Any Electrical And Natural Gas Crisis Could Disrupt Our Operations And Increase Our Expenses.

We rely on a continuous power supply for manufacturing and to conduct our business operations. Interruptions in electrical power supplies in California in the early part of 2001 could recur in the future. In addition, the cost of electricity and natural gas has risen significantly. Power outages could disrupt our manufacturing and business operations and those of many of our suppliers, and could cause us to fail to meet production schedules and commitments to customers and other third parties. Any disruption to our operations or those of our suppliers could result in damage to our current and prospective business relationships and could result in lost revenue and additional expenses, thereby harming our business and operating results.

Some Anti-Takeover Provisions Contained in Our Certificate of Incorporation, Bylaws and Stockholder Rights Plan, as well as Provisions of Delaware Law, Could Impair a Takeover Attempt.

Harmonic has provisions in its certificate of incorporation and bylaws, each of which could have the effect of rendering more difficult or discouraging an acquisition deemed undesirable by the Harmonic Board of Directors. These include provisions:

- authorizing blank check preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to Harmonic common stock;
- limiting the liability of, and providing indemnification to, directors and officers;
- limiting the ability of Harmonic stockholders to call and bring business before special meetings;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of Harmonic stockholders and for nominations of candidates for election to the Harmonic Board of Directors;
- controlling the procedures for conduct and scheduling of Board and stockholder meetings; and
- providing the board of directors with the express power to postpone previously scheduled annual meetings and to cancel previously scheduled special meetings.

These provisions, alone or together, could delay hostile takeovers and changes in control or management of Harmonic.

In addition, Harmonic has adopted a stockholder rights plan. The rights are not intended to prevent a takeover of Harmonic, and we believe these rights will help Harmonic's negotiations with any potential acquirors. However, if the Board of Directors believes that a particular acquisition is undesirable, the rights may have the effect of rendering more difficult or discouraging that acquisition. The rights would cause substantial dilution to a person or group that attempts to acquire Harmonic on terms or in a manner not approved by the Harmonic Board of Directors, except pursuant to an offer conditioned upon redemption of the rights.

[Table of Contents](#)

As a Delaware corporation, Harmonic also is subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock.

Any provision of our certificate of incorporation or bylaws, our stockholder rights plan or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for Harmonic stockholders to receive a premium for their shares of Harmonic common stock, and could also affect the price that some investors are willing to pay for Harmonic common stock.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk represents the risk of loss that may impact the operating results, financial position, or liquidity of Harmonic due to adverse changes in market prices and rates. Harmonic is exposed to market risk because of changes in interest rates and foreign currency exchange rates as measured against the U.S. Dollar and currencies of Harmonic's subsidiaries.

Foreign Currency Exchange Risk

Harmonic has a number of international subsidiaries each of whose sales are generally denominated in U.S. dollars. Following implementation of the Euro in January 2002, a higher proportion of our European business is denominated in Euros which may subject us to increased foreign currency exchange risk. In addition, the Company has various international branch offices which provide sales support and systems integration services. While Harmonic does not anticipate that near-term changes in exchange rates will have a material impact on Harmonic's operating results, financial position and liquidity, Harmonic cannot assure you that a sudden and significant change in the value of local currencies would not harm Harmonic's operating results, financial position and liquidity.

Interest Rate Risk

Exposure to market risk for changes in interest rates relate primarily to Harmonic's investment portfolio of marketable debt securities of various issuers, types and maturities and to Harmonic's borrowings under its bank line of credit facility. Harmonic does not use derivative instruments in its investment portfolio, and its investment portfolio only includes highly liquid instruments with an original maturity of less than two years. These investments are classified as available for sale and are carried at estimated fair value, with material unrealized gains and losses reported in other comprehensive income. There is risk that losses could be incurred if Harmonic were to sell any of its securities prior to stated maturity. A 10% change in interest rates would not have a material impact on financial conditions, results of operations and cash flows.

Item 8. Financial Statements and Supplementary Data

(a) *Index to Consolidated Financial Statements*

| | <u>Page</u> |
|--|-------------|
| Report of Independent Accountants | 40 |
| Consolidated Balance Sheets as of December 31, 2002, and 2001 | 41 |
| Consolidated Statement of Operations for the years ended December 31, 2002, 2001, and 2000 | 42 |
| Consolidated Statement of Stockholders' Equity for the years ended December 31, 2002, 2001, and 2000 | 43 |
| Consolidated Statement of Cash Flows for the years ended December 31, 2002, 2001, 2000 | 44 |
| Notes to Consolidated Financial Statements | 45 |

[Table of Contents](#)

(b) *Financial Statement Schedules:* The following are filed as part of this Annual Report on Form 10-K. See Item 14(a)(2):

Financial Statement Schedule II: Valuation and Qualifying Accounts and Reserves.

All other financial statement schedules have been omitted because the information is not required to be set forth herein, is not applicable or is included in the financial statements or notes thereto.

(c) *Selected Quarterly Financial Data:* The following table sets forth for the period indicated selected quarterly financial data for the Company.

Quarterly Data (Unaudited)

| | 2002 | | | | 2001 | | | |
|---------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 4th | 3rd | 2nd | 1st | 4th | 3rd | 2nd | 1st |
| (In thousands, except per share data) | | | | | | | | |
| Quarterly Data: | | | | | | | | |
| Net sales | \$ 39,272 | \$ 37,019 | \$ 56,309 | \$ 54,032 | \$ 56,733 | \$ 57,473 | \$ 49,330 | \$ 40,274 |
| Gross profit (loss) | 9,503 | 9,928 | 19,235 | 15,763 | 16,440 | (12,404) | 8,279 | (10,760) |
| Loss from operations ⁽¹⁾ | (13,994) | (38,436) | (11,414) | (13,505) | (13,713) | (69,374) | (34,660) | (51,040) |
| Net loss ⁽¹⁾ | (13,752) | (38,030) | (11,124) | (14,012) | (14,809) | (68,809) | (34,124) | (48,665) |
| Basic and Diluted net loss per share | (0.23) | (0.63) | (0.19) | (0.24) | (0.25) | (1.17) | (0.59) | (0.84) |

(1) The 2002 gross profit, loss from operations and net loss include credits to cost of sales of \$2.9 million, \$2.1 million, and \$1.9 million in the second, third and fourth quarters, respectively, for product sold during the periods which had been written down in prior years. Also included are charges of \$2.9 million, \$23.3 million and \$0.7 million in the second, third and fourth quarters, respectively, for probable losses on receivables and deferred cost of sales for Adelpia Communications, excess facilities and severance and other costs. See Note 5 of Notes to Consolidated Financial Statements.

In 2001, the gross profit, loss from operations and net loss include charges of \$14.0 million, \$8.4 million, \$52.6 million and \$0.6 million in the first, second, third and fourth quarters, respectively, for excess and obsolete inventories, fixed asset impairment, excess facilities and severance and other costs. See Note 5 of Notes to Consolidated Financial Statements.

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Harmonic Inc.

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Harmonic Inc. and its subsidiaries at December 31, 2002 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2002 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PRICEWATERHOUSECOOPERS LLP

PRICEWATERHOUSECOOPERS LLP

San Jose, CA

January 22, 2003, except as to Note 18, which is dated as of
March 28, 2003

HARMONIC INC.
CONSOLIDATED BALANCE SHEETS

| | December 31, | |
|--|--|-------------|
| | 2002 | 2001 |
| | (In thousands, except par value amounts) | |
| ASSETS | | |
| Current assets: | | |
| Cash and cash equivalents | \$ 21,542 | \$ 36,005 |
| Short-term investments | 27,616 | 18,272 |
| Accounts receivable, net | 25,380 | 34,402 |
| Inventories | 25,904 | 30,944 |
| Deferred income taxes | — | 9,065 |
| Prepaid expenses and other assets | 5,494 | 9,775 |
| | | |
| Total current assets | 105,936 | 138,463 |
| Property and equipment, net | 32,456 | 45,755 |
| Intangibles and other assets | 35,362 | 53,838 |
| | | |
| | \$ 173,754 | \$ 238,056 |
| | | |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Current portion of long-term debt | \$ 1,862 | \$ 1,281 |
| Accounts payable | 7,258 | 10,296 |
| Income taxes payable | 6,900 | 2,804 |
| Accrued liabilities | 58,670 | 57,474 |
| | | |
| Total current liabilities | 74,690 | 71,855 |
| Long-term debt, less current portion | 710 | 1,465 |
| Deferred income taxes | — | 9,065 |
| Accrued excess facility costs, long-term | 34,754 | 19,563 |
| Other non-current liabilities | 1,417 | 1,054 |
| | | |
| Total liabilities | 111,571 | 103,002 |
| | | |
| Commitments and contingencies (Notes 15, 16 and 17) | | |
| Stockholders' equity: | | |
| Preferred Stock, \$.001 par value, 5,000 shares authorized; no shares issued or outstanding | — | — |
| Common Stock, \$.001 par value, 150,000 shares authorized; 60,064 and 59,063 shares issued and outstanding | 60 | 59 |
| Capital in excess of par value | 1,963,234 | 1,959,043 |
| Accumulated deficit | (1,901,125) | (1,824,207) |
| Accumulated other comprehensive income | 14 | 159 |
| | | |
| Total stockholders' equity | 62,183 | 135,054 |
| | | |
| | \$ 173,754 | \$ 238,056 |
| | | |

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

HARMONIC INC.
CONSOLIDATED STATEMENT OF OPERATIONS

| | Year Ended December 31, | | |
|--|---------------------------------------|--------------|----------------|
| | 2002 | 2001 | 2000 |
| | (In thousands, except per share data) | | |
| Net sales | \$186,632 | \$ 203,810 | \$ 263,046 |
| Cost of sales | 132,203 | 202,255 | 187,875 |
| Gross profit | 54,429 | 1,555 | 75,171 |
| Operating expenses: | | | |
| Research and development | 40,829 | 51,319 | 49,315 |
| Selling, general and administrative | 81,427 | 106,340 | 67,036 |
| Impairment of goodwill and other intangibles | — | — | 1,380,328 |
| Amortization of intangibles | 9,522 | 12,683 | 221,727 |
| Acquired in-process technology | — | — | 39,800 |
| Total operating expenses | 131,778 | 170,342 | 1,758,206 |
| Loss from operations | (77,349) | (168,787) | (1,683,035) |
| Interest and other income, net | 931 | 1,574 | 10,456 |
| Loss before income taxes | (76,418) | (167,213) | (1,672,579) |
| Provision for (benefit from) income taxes | 500 | (806) | (18,571) |
| Net loss | \$ (76,918) | \$ (166,407) | \$ (1,654,008) |
| Net loss per share: | | | |
| Basic and Diluted | \$ (1.29) | \$ (2.84) | \$ (34.06) |
| Weighted average shares: | | | |
| Basic and Diluted | 59,779 | 58,540 | 48,564 |

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

HARMONIC INC.
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

| | Common Stock | | Capital in Excess of Par Value | Accumulated Deficit | Accumulated Other Comprehensive Income | Stockholders' Equity | Comprehensive Income (Loss) |
|--|--------------|--------|-----------------------------------|------------------------|---|-------------------------|--------------------------------|
| | Shares | Amount | | | | | |
| (In thousands) | | | | | | | |
| Balance at December 31, 1999 | 30,502 | \$ 31 | \$ 148,551 | \$ (3,792) | \$ 98 | \$ 144,888 | |
| Net loss | — | — | — | (1,654,008) | — | (1,654,008) | \$ (1,654,008) |
| Unrealized gain on investments | — | — | — | — | 271 | 271 | 271 |
| Currency translation | — | — | — | — | 291 | 291 | 291 |
| Comprehensive loss | | | | | | | \$ (1,653,446) |
| Issuance of Common Stock for acquisitions | 26,686 | 26 | 1,798,778 | — | — | 1,798,804 | |
| Issuance of Common Stock under option and purchase plans | 703 | 1 | 5,455 | — | — | 5,456 | |
| Balance at December 31, 2000 | 57,891 | 58 | 1,952,784 | (1,657,800) | 660 | 295,702 | |
| Net loss | — | — | — | (166,407) | — | (166,407) | \$ (166,407) |
| Unrealized loss on investments | — | — | — | — | (164) | (164) | (164) |
| Currency translation | — | — | — | — | (337) | (337) | (337) |
| Comprehensive loss | | | | | | | \$ (166,908) |
| Issuance of Common Stock under option and purchase plans | 1,172 | 1 | 6,259 | — | — | 6,260 | |
| Balance at December 31, 2001. | 59,063 | 59 | 1,959,043 | (1,824,207) | 159 | 135,054 | |
| Net loss | — | — | — | (76,918) | — | (76,918) | \$ (76,918) |
| Currency translation | — | — | — | — | (145) | (145) | (145) |
| Comprehensive loss | | | | | | | \$ (77,063) |
| Stock option charge | — | — | 422 | — | — | 422 | |
| Issuance of Common Stock under option and purchase plans | 1,001 | 1 | 3,769 | — | — | 3,770 | |
| Balance at December 31, 2002 | 60,064 | \$ 60 | \$ 1,963,234 | \$ (1,901,125) | \$ 14 | \$ 62,183 | |

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

HARMONIC INC.
CONSOLIDATED STATEMENT OF CASH FLOWS

| | Year Ended December 31, | | |
|---|-------------------------|-------------|---------------|
| | 2002 | 2001 | 2000 |
| | (In thousands) | | |
| Cash flows from operating activities: | | | |
| Net loss | \$(76,918) | \$(166,407) | \$(1,654,008) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | |
| Impairment of goodwill and other intangibles | — | — | 1,380,328 |
| Acquired in-process technology | — | — | 39,800 |
| Amortization of intangibles | 18,648 | 20,741 | 234,407 |
| Depreciation and amortization | 15,735 | 18,169 | 12,977 |
| Stock option charge | 422 | — | — |
| Provision for (benefit from) excess and obsolete inventories | (6,932) | 39,190 | 10,000 |
| Impairment and loss on disposal of fixed assets | 856 | 12,523 | — |
| Deferred income taxes | 156 | (2,806) | (19,021) |
| Changes in assets and liabilities, net of effect of acquisitions: | | | |
| Accounts receivable | 8,931 | 35,619 | 24,095 |
| Inventories | 11,907 | 10,038 | (17,553) |
| Prepaid expenses and other assets | 3,944 | 1,716 | (7,921) |
| Accounts payable | (3,038) | (22,487) | (2,752) |
| Income taxes payable | 4,126 | 1,763 | (330,928) |
| Accrued and other liabilities | (1,993) | 5,331 | (8,909) |
| Accrued excess facilities costs | 18,752 | 21,842 | — |
| Net cash used in operating activities | (5,404) | (24,768) | (359,485) |
| Cash flows provided by (used in) investing activities: | | | |
| Purchases of investments | (27,874) | (58,490) | (66,563) |
| Proceeds from sale of investments | 18,498 | 126,150 | 45,393 |
| Acquisition of property and equipment | (3,292) | (29,080) | (29,877) |
| Cash received from acquisitions, net | — | — | 393,739 |
| Net cash provided by (used in) investing activities | (12,668) | 38,580 | 342,692 |
| Cash flows from financing activities: | | | |
| Proceeds from issuance of Common Stock | 3,770 | 6,260 | 5,454 |
| Borrowings under bank line and term loan | 1,274 | 3,203 | — |
| Repayments under bank line and term loan | (1,448) | (457) | — |
| Net cash provided by financing activities | 3,596 | 9,006 | 5,454 |
| Effect of exchange rate changes on cash and cash equivalents | 13 | (318) | 22 |
| Net increase (decrease) in cash and cash equivalents | (14,463) | 22,500 | (11,317) |
| Cash and cash equivalents at beginning of period | 36,005 | 13,505 | 24,822 |
| Cash and cash equivalents at end of period | \$ 21,542 | \$ 36,005 | \$ 13,505 |
| Supplemental disclosure of cash flow information: | | | |
| Income tax payments (refunds), net | \$ (3,759) | \$ (25,623) | \$ 330,067 |
| Interest paid during the period | \$ 307 | \$ 125 | \$ 28 |

Non-cash financing activities:

| | | | | | |
|---|----|---|----|---|--------------|
| Issuance of Common Stock for acquisitions | \$ | — | \$ | — | \$ 1,798,804 |
|---|----|---|----|---|--------------|

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

HARMONIC INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1: Organization, Basis of Presentation and Summary of Significant Accounting Policies

Harmonic designs, manufactures and sells a variety of broadband solutions that allow communications service providers around the world to deliver video, voice and data to their subscribers. Harmonic's technically advanced fiber optic, digital video and data delivery systems enable network operators to provide a range of interactive and advanced digital services that include digital video, high-speed Internet access, telephony, HDTV, video and audio streaming, and video-on-demand.

Historically, almost all of our sales were derived directly or indirectly from sales of fiber optic transmission systems to cable television operators. With the introduction of our digital headend products beginning in 1997, we broadened our product offering to enable delivery of digital video, voice and data over satellite and wireless networks and cable systems.

In order to further expand our digital systems capability, Harmonic acquired C-Cube Microsystems Inc. in May 2000, pursuant to the terms of a merger agreement dated October 27, 1999. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company, which was subsequently acquired by LSI Logic in June 2001. C-Cube then merged into Harmonic and Harmonic therefore acquired C-Cube's DiviCom business, which provides encoding products and systems for digital television. The merger was structured as a tax-free exchange of stock and has been accounted for under the purchase method of accounting. The purchase price, including merger-related costs, was approximately \$1.8 billion. As of December 31, 2000, Harmonic determined that there was an impairment and recorded an impairment charge of \$1.4 billion, eliminating goodwill and reducing identified intangibles to \$79.3 million. See Note 4. The merged company has been organized into two operating divisions, Broadband Access Networks, or BAN, for fiber optic systems and Convergent Systems, or CS, for digital headend systems.

Basis of Presentation. The consolidated financial statements of Harmonic include the financial statements of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated. Harmonic's fiscal quarters end on the Friday nearest the calendar quarter end, except for the fourth quarter which ends on December 31.

Use of Estimates. The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates.

Cash Equivalents. Harmonic considers all highly liquid, investment-grade securities purchased with an original maturity date of three months or less at the date of purchase to be cash equivalents. Cash equivalents are stated at amounts that approximate fair value, based on quoted market prices.

Investments. Harmonic's investments are comprised of corporate debt securities with maturities ranging from three months to two years. Harmonic classifies its investments as "available for sale" and carries its investments at estimated fair value using quoted market prices, with unrealized gains and losses reported in other comprehensive income. Interest and realized gains and losses are included in interest income. Realized gain and losses are recognized based on the specific identification method. Investments are anticipated to be used for current operations and are, therefore, classified as current assets, even though maturities may extend beyond one year.

Fair Value of Financial Instruments. The carrying value of Harmonic's financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate fair value due to their short maturities.

Revenue Recognition. Harmonic recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the sale price is fixed or determinable, collectibility is reasonably assured, and risk of loss and title have transferred to the customer. Revenue from product sales are generally recognized upon shipment, and allowances are provided for estimated returns and discounts. Such allowances are adjusted periodically to reflect actual and anticipated experience. Revenue on solution sales, which principally include the design, manufacture, test, integration and installation of equipment to the specifications of Harmonic's customers, or acquired from third parties to be integrated with Harmonic's products, is recognized using the percentage of completion method. Under the percentage of completion method, revenue recognized reflects the portion of the anticipated contract revenue that has been earned, equal to the ratio of labor costs

[Table of Contents](#)

expended to date to anticipated final labor costs, based on current estimates of labor costs to complete the project. If the estimated costs to complete a project exceed the total contract amount, indicating a loss, the entire anticipated loss is recognized. Revenue from services is generally recognized as services are performed. Maintenance services are recognized ratably over the maintenance term, which is typically one year. Deferred revenue represents billings in excess of revenue recognized.

Inventories. Inventories are stated at the lower of cost, using the weighted average method, or market. Harmonic establishes provisions for excess and obsolete inventories to reduce such inventories to their estimated net realizable value. Such provisions are charged to cost of sales.

Property and Equipment. Property and equipment are recorded at cost. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the assets. Estimated useful lives are 5 years for furniture and fixtures, and up to 4 years for machinery and equipment. Depreciation and amortization for leasehold improvements are computed using the shorter of the remaining useful lives of the assets up to 10 years or the lease term of the respective assets. Depreciation and amortization expense related to equipment and improvements for the years ended December 31, 2002, 2001 and 2000 were \$15.7 million, \$18.2 million and \$13.0 million, respectively.

Goodwill and Intangible Assets. Intangible assets represent purchased intangible assets and the excess of acquisition cost over the fair value of tangible and identified intangible net assets of businesses acquired, or goodwill. Purchased intangible assets include customer base, developed technology, trademark and tradename, and supply agreements. On January 1, 2002, Harmonic adopted Statement of Financial Accounting Standards No. 142 ("SFAS 142"), "Goodwill and Other Intangible Assets," and in accordance with this statement, the Company reclassified assembled workforce, net of related deferred tax liabilities, to goodwill, ceased amortizing goodwill, and performed impairment tests of goodwill and intangible assets. See Note 4, "Goodwill and Other Intangibles".

Impairment of Long-Lived Assets. Long-lived assets, such as other intangibles and property and equipment, are evaluated for recoverability when indicators of impairment are present. On January 1, 2002, the Company adopted SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets", which addresses financial accounting and reporting for the impairment or disposal of long-lived assets. The Company evaluates the recoverability of other intangible assets and long-lived assets on the basis of undiscounted cash flows from each asset group. Under SFAS No. 144, if impairment is indicated, provisions for impairment are determined based on the fair value, using discounted cash flows.

Restructuring Costs and Accruals for Excess Facilities. For restructuring activities initiated prior to December 31, 2002 Harmonic recorded restructuring costs when the Company committed to an exit plan and significant changes to the exit plan were not likely. Harmonic determines the excess facility accrual based on estimates of expected sublease rental income for each excess facility. For restructuring activities initiated after December 31, 2002, the Company will follow SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," as discussed in Note 2.

Accrued warranties. The Company accrues for estimated warranty at the time of product shipment. Management periodically reviews the estimated fair value of its warranty liability and adjusts based on the terms of warranties provided to customers, historical and anticipated warranty claims experience, and estimates of the timing and cost of specified warranty claims.

Concentrations of Credit Risk. Financial instruments which subject Harmonic to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. Cash and cash equivalents are invested in short-term, highly liquid investment-grade obligations of commercial issuers, in accordance with Harmonic's investment policy. The investment policy limits the amount of credit exposure to any one financial institution or commercial issuer. Harmonic's accounts receivable are derived from sales to cable, satellite, and other network operators and distributors as discussed in Note 13. Harmonic generally does not require collateral and performs ongoing credit evaluations of its customers and provides for expected losses. At December 31, 2002, receivables from three customers represented 15%, 11%, and 11% of total receivables, respectively. At December 31, 2001, receivables from two customers represented 16% and 10% of total receivables, respectively.

Currency Translation. Harmonic has a number of international subsidiaries whose functional currency is the U.S. dollar. All other foreign subsidiaries use the respective local currency as the functional currency. When the local currency is the functional currency, gains and losses from translation of these foreign currency financial statements into U.S. dollars are recorded as a separate component of other comprehensive income (loss). For subsidiaries where the functional currency is the U.S. dollar, gains and losses resulting from remeasuring foreign currency denominated balances into U.S. dollars are included in other income.

[Table of Contents](#)

Income Taxes. Deferred income tax assets and liabilities are computed annually for differences between the financial statement and tax bases of assets and liabilities that will result in taxable or deductible amounts in the future based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

Accounting for Employee Stock Plans. The Company accounts for employee stock option plans based on the intrinsic value method in accordance with Accounting Principles Board No. 25 ("APB 25"), "Accounting for Stock Issued to Employees", and has adopted the disclosure requirements under SFAS No. 148, "Accounting for Stock-Based Compensation — Transition and Disclosure." which was issued in December 2002.

In accordance with SFAS No. 123, stock options granted to non-employees are valued using the Black-Scholes option-pricing model and stock-based compensation expense is recognized as earned. Stock-based compensation is recognized on an accelerated basis using the multiple option method presented in Financial Accounting Standards Board Interpretation No. 28 ("FIN 28"), "Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans".

Comprehensive Income (Loss). Comprehensive income (loss) includes net loss and other comprehensive income (loss). Other comprehensive income (loss) includes cumulative translation adjustments and unrealized gains and losses on available-for-sale securities. Harmonic's comprehensive income (loss) has been presented in the Consolidated Statement of Stockholders' Equity.

Accounting for Derivatives and Hedging Activities. Harmonic accounts for derivative financial instruments and hedging contracts in accordance with SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities" which requires that all derivatives be recognized at fair value in the statement of financial position, and that the corresponding gains or losses be reported either in the statement of operations or as a component of comprehensive income, depending on the type of hedging relationship that exists.

Periodically, Harmonic enters into foreign currency forward exchange contracts ("forward contracts") to manage exposure related to accounts receivable denominated in foreign currencies. The Company does not enter into derivative financial instruments for trading purposes. Harmonic had no forward contracts outstanding as of December 31, 2002. At December 31, 2001, Harmonic had forward contracts outstanding of approximately \$2.4 million.

Reclassification. Certain amounts in prior years' financial statements and related notes have been reclassified to conform to the 2002 presentation. These reclassifications are not material.

Note 2: Recent Accounting Pronouncements

In July 2002, the Financial Accounting Standards Board ("FASB") issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities." The standard replaces Emerging Issues Task Force ("EITF") Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)" and requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS No. 146 is to be applied prospectively to exit or disposal activity initiated after December 31, 2002. Upon adoption, the Company does not expect a material impact on its financial position, results of operations, or cash flows.

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN 45"), "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others". FIN 45 requires the guarantor to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. It also expands the disclosures to be made by a guarantor in its financial statements about its obligations under certain guarantees that it has issued and in regard to product warranties. Disclosures required under FIN 45 are included in these financial statements, however, the initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. We are evaluating the impact of the adoption of FIN 45 on our financial position, results of operations, and cash flows.

In November 2002, the Emerging Issues Task Force ("EITF") reached a consensus on Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF

[Table of Contents](#)

Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The company believes that the adoption of this standard will have no material impact on its financial statements.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities", which addresses accounting for the assets, liabilities and activities of another entity. Prior to the issuance of FIN 46, a company generally included another entity in its consolidated financial statements only if it controlled the entity through voting interests. FIN 46 now requires a variable interest entity, as defined in FIN 46, to be consolidated by a company if that company is subject to a majority of the risk of loss from the variable interest entity activities or is entitled to receive a majority of the entity's residual returns or both. FIN 46 also requires disclosures about variable interest entities that the company is not required to consolidate but in which it has a significant variable interest. The consolidation requirements of FIN 46 apply immediately to variable interest entities created after January 31, 2003 and to older entities in the first fiscal year or interim period beginning after June 15, 2003. Certain of the disclosure requirements apply to all financial statements issued after January 31, 2003, regardless of when the variable interest entity was established. The Company does not believe that the adoption of FIN 46 will have a material impact on the Company's financial position, results of operations or cash flows.

Note 3: Acquisitions*DiviCom Business*

On May 3, 2000, Harmonic acquired C-Cube Microsystems Inc., or C-Cube, pursuant to the terms of an Agreement and Plan of Merger and Reorganization (the "Merger Agreement") dated October 27, 1999. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company prior to the closing. C-Cube then merged into Harmonic, and Harmonic therefore acquired C-Cube's DiviCom business. The merger was structured as a tax-free exchange of stock and was accounted for using the purchase method of accounting.

The purchase price of \$1.8 billion included \$1.6 billion of stock issued, \$155 million in stock options assumed, and \$9.6 million of transaction expenses incurred. The issued stock reflected the conversion of each share of C-Cube common stock into 0.5427 shares of Harmonic stock, totaling 26.4 million shares at an average market price per share of \$62.00. The average market price per share was based on the average closing price of Harmonic common stock for a period three days before and after the October 27, 1999 announcement of the merger.

Following is a table of the purchase price allocation prior to the impairment charge discussed in Note 4 below (in thousands):

| | |
|--|-------------|
| Purchase price allocation: | |
| Net tangible assets of DiviCom business | \$ 138,400 |
| Fair value adjustments: | |
| Accounts receivable | (12,400) |
| Deferred tax asset | 15,500 |
| Inventory | 4,000 |
| Accrued liabilities | (27,700) |
| Total fair value of tangible net assets acquired | 117,800 |
| Identified intangible assets acquired: | |
| Customer base | 112,700 |
| Developed technology | 78,300 |
| Trademark and trade name | 13,900 |
| Assembled workforce | 22,700 |
| Supply agreement | 8,100 |
| Total intangibles (excluding goodwill) | 235,700 |
| In-process research and development | 38,700 |
| Goodwill | 1,505,700 |
| Deferred tax liabilities | (96,600) |
| Total purchase price allocation | \$1,801,300 |

[Table of Contents](#)

The tangible net assets acquired represented the historical net assets of the DiviCom business as of May 2, 2000 adjusted to eliminate intangibles of \$3.8 million arising from C-Cube's acquisition of the DiviCom business in 1996, plus additional cash of \$60 million received as a result of the merger. In addition, under the terms of the Merger Agreement, the Company is liable for all of C-Cube Microsystems' liabilities consisting principally of tax liabilities related to the spin-off of C-Cube's semiconductor business. The net assets acquired included \$333.7 million of cash and other consideration sufficient to pay these liabilities. As required under purchase accounting, the assets and liabilities have been adjusted to fair value.

The purchase price was allocated as set forth in the table above. The "Income Approach," which includes an analysis of the markets, cash flows and risks associated with achieving such cash flows, was the primary method used in valuing the identified intangibles acquired. The value of the assembled workforce was derived by estimating the costs to replace existing employees, including recruiting, hiring and training costs. Expected cash flows were discounted at the Company's weighted average cost of capital of approximately 17%. Because the in-process research and development had not reached the stage of technological feasibility at the acquisition date and had no alternative future use, the amount was immediately charged to operations. The amounts allocated to customer base, developed technology, trademark and tradename, assembled workforce and supply agreement are being amortized over an estimated useful life of five years. The excess amount of the purchase price over the fair market value of the identifiable assets acquired was accounted for as goodwill and was initially being amortized over its estimated useful life of five years prior to recording a \$1.4 billion impairment charge as of December 31, 2000 (See Note 4). The valuation of the intangible assets has been based on management's best estimate of discounted future cash flows.

The Supply, License and Development Agreement ("Supply Agreement") was entered into between Harmonic and C-Cube Semiconductor concurrent with the merger agreement. This separate agreement covers the supply, licensing and development of two encoder chips for Harmonic by the spun-off semiconductor business. The value of the Supply Agreement was derived by using the Income Approach.

As of December 31, 2001, the Company recorded an adjustment reducing identified intangibles by \$14.4 million to reflect the revised assessment of certain pre-merger liabilities, principally taxes, and the collection of certain pre-merger accounts receivable.

The following unaudited pro forma summary presents the combined statement of operations as if the merger had been completed on January 1, 2000 and does not purport to be indicative of what would have occurred had the merger actually been completed on such date or of results which may occur in the future. The impairment described in Note 4 occurred as of December 31, 2000, thus the pro forma summary below includes amortization of goodwill and other intangibles based on the purchase price allocation prior to the impairment charge. The impairment charge was reduced by \$109.8 million of amortization that was assumed to have occurred from January 2000 through acquisition in May 2000.

| | Pro Forma December 31, 2000 |
|---------------------------------------|-----------------------------------|
| (In thousands, except per share data) | (Unaudited) |
| Net sales | \$ 306,821 |
| Net loss | (1,666,655) |
| Net loss per share | |
| Basic and diluted | \$ (29.02) |
| Weighted average shares | |
| Basic and diluted | 57,430 |

Adjustments made in arriving at the pro forma unaudited results of operations include amortization of goodwill and other intangibles and related tax adjustments. No effect has been given to cost savings or operating synergies that may be realized as a result of the merger.

Cogent Technology, Inc.

On July 1, 2000, Harmonic completed the acquisition in a stock-for-stock transaction of privately-held Cogent Technology, Inc. ("Cogent") of Santa Cruz, California, a developer of advanced MPEG-2 technology for the migration from analog to digital television on PCI based platforms for a purchase price of \$7.9 million. The acquisition was accounted for as a

purchase and a one-time charge of \$1.1 million was recorded in the third quarter of 2000 for in-process research and development acquired. The results of operations of Cogent have been included in the consolidated financial statements of Harmonic from the date of acquisition. Pro forma financial information has not been presented as this acquisition was immaterial.

Note 4: Goodwill and Identified Intangibles

As of January 1, 2002, Harmonic adopted SFAS No. 142, "Goodwill and Other Intangible Assets", which requires, among other things, that goodwill and intangible assets with indefinite useful lives no longer be amortized. In addition, the standard includes provisions for the reclassification of certain existing recognized intangibles as goodwill, reassessment of the useful lives of existing recognized intangibles, and the testing for impairment of existing goodwill and other intangibles at least annually. Upon adoption, the Company reassessed the classification of its goodwill and intangible assets, and reclassified \$0.2 million of assembled workforce, net of accumulated amortization and tax effects, to goodwill and ceased the amortization of goodwill.

For purposes of applying SFAS No. 142, management believes the operating segments, BAN and CS, represent the Company's reporting units. CS is the only reporting unit with goodwill and intangible assets. The Company performed the transitional goodwill impairment test in the first quarter of 2002 and the annual impairment test of goodwill in the fourth quarter of 2002. In both instances, the fair value of CS, which was based on the operation's future discounted cash flows, exceeded its carrying amount, including goodwill, and therefore, goodwill was determined not to be impaired.

The following is a summary of reported net loss and loss per share as adjusted to exclude amortization of goodwill and assembled workforce, net of related tax effects, for the fiscal years ended on December 31, 2001, and 2000:

| | Year Ended December 31, | |
|--|--|---------------|
| | 2001 | 2000 |
| | (In thousands, except per share data) | |
| Reported net loss | \$(166,407) | \$(1,654,008) |
| Goodwill amortization | 673 | 201,743 |
| Assembled workforce amortization, net of tax | 1,092 | 1,818 |
| Adjusted net loss | \$(164,642) | \$(1,450,447) |
| Basic and diluted net loss per share: | | |
| Reported net loss | \$ (2.84) | \$ (34.06) |
| Goodwill amortization | 0.01 | 4.15 |
| Assembled workforce amortization, net of tax | 0.02 | 0.04 |
| Adjusted net loss per share | \$ (2.81) | \$ (29.87) |

[Table of Contents](#)

For the year ended December 31, 2002, the Company recorded a total of \$18.7 million of amortization expense for identified intangibles, of which \$9.1 million was included in cost of sales. Estimated future amortization expense for identified intangibles is \$13.9 million per year for 2003 and 2004, of which \$6.2 million per year will be included in cost of sales, and \$4.6 million for 2005, of which \$2.1 million will be included in cost of sales. The following is a summary of goodwill and intangible assets as of December 31, 2002 and December 31, 2001:

| (In thousands) | December 31, 2002 | | | December 31, 2001 | | |
|--------------------------------------|-----------------------|--------------------------|---------------------|-----------------------|--------------------------|---------------------|
| | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount |
| Identified intangibles: | | | | | | |
| Developed core technology | \$29,059 | \$ (16,186) | \$12,873 | \$29,059 | \$ (7,849) | \$21,210 |
| Customer base | 33,295 | (17,226) | 16,069 | 33,295 | (8,738) | 24,557 |
| Trademark and tradename | 4,076 | (2,103) | 1,973 | 4,076 | (1,068) | 3,008 |
| Assembled workforce | — | — | — | 2,285 | (1,907) | 378 |
| Supply agreement | 3,107 | (1,603) | 1,504 | 3,107 | (815) | 2,292 |
| Subtotal of identified intangibles | 69,537 | (37,118) | 32,419 | 71,822 | (20,377) | 51,445 |
| Goodwill | 1,780 | — | 1,780 | 1,557 | — | 1,557 |
| Total goodwill and other intangibles | \$71,317 | \$ (37,118) | \$34,199 | \$73,379 | \$ (20,377) | \$53,002 |

Impairment of Goodwill and Other Intangibles. As of December 31, 2000, the Company recorded an impairment charge of approximately \$1.4 billion to write-down the goodwill and other intangibles associated with the acquisition of the DiviCom business completed in May 2000. DiviCom was acquired in a tax-free exchange of stock at a time when the market values of telecommunications equipment manufacturers were substantially higher. The DiviCom business had experienced a significant decrease in the demand for its products and services as customers in the digital headend systems market reduced levels of current and planned capital expenditures and, as a result, revenues, cash flows and expected future growth rates decreased. Due to these significant changes, management performed an evaluation of the recoverability of the goodwill and other long-lived assets related to the DiviCom business in accordance with the SFAS No. 121 "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of." Because the estimated future undiscounted cash flows of this operation was less than the carrying value of the related long-lived assets as of December 31, 2000, an impairment charge was required. The impairment charge represents the amount required to write-down long-lived assets to fair value based on management's best estimate of this operation's future discounted cash flows. As a result of the impairment charge, Harmonic wrote off the remaining unamortized goodwill and reduced the recorded value of other identified intangibles related to its acquisition of the DiviCom business to \$79.3 million.

Note 5: Restructuring, Excess Facilities and Inventory Provisions

In response to a significant reduction in industry spending, principally weak cable spending on transmission upgrades and the resulting adverse impact on Harmonic's operating results during 2001, the Company implemented a series of measures to control costs and improve operating efficiencies. These measures included three work force reductions during 2001, reducing its workforce by approximately 30%, for which the Company recorded and paid severance and other costs of \$2.5 million.

In conjunction with the 2001 cost control measures, Harmonic evaluated its facility requirements and committed to a plan to exit excess facilities and consolidate its operations, principally on Harmonic's Sunnyvale, California campus. During 2001, Harmonic recorded a charge for fixed asset impairment of \$8.3 million and excess facilities costs of \$21.8 million for a combined total of \$30.1 million to selling, general and administrative expenses. The fixed asset impairment of \$8.3 million for unrecoverable leasehold improvements was recorded as a reduction of property, plant and equipment. The excess facilities charge of \$22.3 million was offset by \$0.5 million of deferred rent and was based on future facilities costs over the estimated vacancy period, reduced by estimated sublease income.

As a result of uncertain market conditions and lower sales during the second half of 2002, the Company implemented further workforce reductions of approximately 120 full-time employees. Harmonic recorded severance and other costs totaling \$1.5 million and paid \$1.1 million during 2002 associated with these actions. At December 31, 2002, remaining accrued severance costs were \$0.4 million, which will be paid during 2003.

[Table of Contents](#)

In addition to the work force reductions in the second half of 2002, management reassessed the accrual for the costs of excess facilities in light of the Company's reduced headcount, difficult business conditions, and a weak local commercial real estate market, and changed its estimates with regard to the expected timing and amount of sublease income due to the substantial and growing surplus of vacant commercial space in the San Francisco Bay Area. Harmonic recorded an additional excess facilities charge of \$22.5 million, net of sublease income, to selling, general and administrative expenses for facilities that Harmonic does not intend to occupy or has exited and does not expect to reoccupy. As of December 31, 2002, accrued excess facilities cost totaled \$41.6 million of which \$6.8 million was included in current accrued liabilities and \$34.8 million in other non-current liabilities. The Company incurred cash outlays of \$3.8 million, net of \$0.2 million of sublease income, during 2002 principally for lease payments, property taxes, insurance and other maintenance fees related to vacated facilities. In 2003, Harmonic expects to pay approximately \$6.8 million of excess facility lease costs, net of estimated sublease income, and to pay the remaining \$34.8 million, net of estimated sublease income, over the remaining lease terms through September 2010. Harmonic plans to reassess this liability quarterly and adjust as necessary based on changes in the timing and amounts of expected sublease rental income. In the event we are unable to achieve expected levels of sublease rental income, we will need to revise our estimate of the liability, which could materially impact our financial position, liquidity, cash flows and results of operations.

The following table summarizes restructuring activities:

| | Workforce Reduction | Fixed Asset Impairment | Excess Facilities | Total |
|---------------------------------------|------------------------|---------------------------|----------------------|-----------|
| | (In thousands) | | | |
| Balance at January 1, 2001 | \$ — | \$ — | \$ 1,000 | \$ 1,000 |
| Provisions | 2,513 | 8,263 | 22,355 | 33,618 |
| Asset impairment | — | (8,263) | — | (8,263) |
| Cash payments | (2,513) | — | (513) | (3,513) |
| Balance at December 31, 2001 | — | — | 22,842 | 22,842 |
| Provisions | 1,505 | — | 22,500 | 24,005 |
| Cash payments, net of sublease income | (1,091) | — | (3,748) | (4,839) |
| Balance at December 31, 2002 | \$ 414 | \$ — | \$ 41,594 | \$ 42,008 |

As a result of the significant reduction in demand for its products, principally BAN division products, Harmonic recorded provisions of \$39.2 million and \$10.0 million during 2001 and 2000, respectively, for excess and obsolete inventories in accordance with its policy and demand forecasts.

Note 6: Cash Equivalents and Investments

At December 31, 2002 and 2001, cash, cash equivalents and short-term investments are summarized as follows:

| | December 31, | |
|---|----------------|-----------|
| | 2002 | 2001 |
| | (In thousands) | |
| Cash and cash equivalents | \$ 21,542 | \$ 36,005 |
| Short-term investments: | | |
| Less than one year | 26,116 | 17,756 |
| Due in 1-2 years | 1,500 | 516 |
| Total short-term investments | 27,616 | 18,272 |
| Total cash, cash equivalents and short-term investments | \$ 49,158 | \$ 54,277 |

Harmonic's short-term investments are stated at fair value, which approximate the cost of investments and are comprised of principally corporate debt securities. Harmonic currently believes that its existing liquidity sources, including the bank line of credit and trade receivables facilities, as limited by qualified receivables, will satisfy the Company's requirements for at least the next twelve months, including, the final settlement and payment of C-Cube's pre-merger tax liabilities. However, Harmonic may need to raise additional funds if its expectations or estimates change or prove inaccurate, or to take advantage of unanticipated opportunities or to strengthen our financial position. Harmonic's ability to raise funds may be adversely affected by a number of factors relating to Harmonic, as well as factors beyond its control, including increased market

[Table of Contents](#)

uncertainty surrounding the ongoing U.S. war on terrorism, and the war in Iraq, as well as conditions in capital markets and the cable and satellite industries.

Note 7: Balance Sheet Details

| | December 31, | |
|--|----------------|-----------|
| | 2002 | 2001 |
| | (In thousands) | |
| Accounts receivable, net: | | |
| Accounts receivable | \$ 31,855 | \$ 41,642 |
| Unbilled accounts receivable | 166 | 1,355 |
| | 32,021 | 42,997 |
| Less: allowance for doubtful accounts, returns and discounts | (6,641) | (8,595) |
| | \$ 25,380 | \$ 34,402 |
| Inventories: | | |
| Raw materials | \$ 10,944 | \$ 12,302 |
| Work-in-process | 1,404 | 3,920 |
| Finished goods | 13,556 | 14,722 |
| | \$ 25,904 | \$ 30,944 |
| Property and equipment: | | |
| Furniture and fixtures | \$ 7,391 | \$ 7,449 |
| Machinery and equipment | 81,408 | 80,526 |
| Leasehold improvements | 25,700 | 25,927 |
| | 114,499 | 113,902 |
| Less: accumulated depreciation and amortization | (82,043) | (68,147) |
| | \$ 32,456 | \$ 45,755 |
| Intangibles and other assets: | | |
| Identified intangibles, net of amortization | \$ 32,419 | \$ 51,445 |
| Goodwill | 1,780 | 1,557 |
| Other assets | 1,163 | 836 |
| | \$ 35,362 | \$ 53,838 |
| Accrued liabilities: | | |
| Pre-merger tax liability and other taxes | \$ 24,344 | \$ 25,503 |
| Deferred revenue | 8,969 | 6,579 |
| Accrued excess facility costs — current | 6,840 | 3,279 |
| Accrued compensation | 6,512 | 6,533 |
| Accrued warranty | 5,866 | 4,073 |
| Other | 6,139 | 11,507 |
| | \$ 58,670 | \$ 57,474 |

Note 8: Net Loss Per Share

The basic net loss per share is computed by dividing the net loss attributable to common stockholders for the period by the weighted average number of the common shares outstanding during the period. The diluted net loss per share is the same as the basic net loss per share for 2002, 2001, and 2000 because common equivalent shares and common shares issuable upon the exercise of stock options, are only considered when their effect would be dilutive. In 2002, 2001 and 2000, 7,418,456, 4,901,394, and 4,888,223 of weighted average antidilutive securities, including options, were excluded from the net loss per share computations, respectively, because their effect is antidilutive.



[Table of Contents](#)

Following is a reconciliation of the numerators and denominators of the basic and diluted net loss per share computations:

| | Year ended December 31, | | |
|--|-------------------------|-------------|---------------|
| | 2002 | 2001 | 2000 |
| Net loss (numerator) | \$(76,918) | \$(166,407) | \$(1,654,008) |
| (In thousands, except per share data) | | | |
| Shares calculation (denominator): | | | |
| Weighted average shares outstanding — basic | 59,779 | 58,540 | 48,564 |
| Effect of Dilutive Securities: | | | |
| Potential Common Stock relating to stock options | — | — | — |
| Average shares outstanding — diluted | 59,779 | 58,540 | 48,564 |
| Net loss per share — basic and diluted | \$ (1.29) | \$ (2.84) | \$ (34.06) |

Note 9: Credit Facilities And Long-Term Debt

During 2002, Harmonic had a bank line of credit facility, as modified in November 2002, which provided for borrowings up to \$13.0 million including a \$3.0 million secured equipment term loan and was available until April 2003. The facility contained financial and other covenants including a minimum cash covenant established in the November 2002 modification which required the Company to maintain at least 35% of its cash, cash equivalents and short-term investments with the bank. The Company was granted a grace period until January 31, 2003 to satisfy this covenant. After giving effect to this grace period, Harmonic was in compliance with the covenants as of December 31, 2002. The facility was renegotiated in March 2003, as discussed in Note 18. Borrowings pursuant to the line bore interest at the bank's prime rate (prime rate plus 2.0%-3.0% under the equipment term loan) and were payable monthly, and were collateralized by all of Harmonic's assets. During 2002, Harmonic borrowed an additional \$1.3 million under the equipment term loan portion of this facility. As of December 31, 2002, \$2.6 million was outstanding under the equipment term loan portion of this facility. The term loan was payable monthly, including principal and interest at rates of 7.25% to 10.0% per annum on outstanding borrowings as of December 31, 2002 and matures at various dates through July 2005. Other than standby letters of credit and guarantees (Note 15) there were no other outstanding borrowings or commitments under the line of credit facility as of December 31, 2002. Harmonic also had a facility which provided for the sale of trade receivables on a non-recourse basis up to \$12.5 million. This facility, which was not utilized in 2002, was amended in March 2003 upon execution of a new facility as discussed in Note 18.

Note 10: Capital Stock

Preferred Stock. Harmonic has 5,000,000 authorized shares of preferred stock. On July 23 2002, The Company classified 100,000 of these shares as Series A Participating Preferred Stock in connection with the board's same day approval and adoption of a stockholder rights plan. Under the plan, Harmonic declared and paid a dividend of one preferred share purchase right for each share of Harmonic common stock held by our stockholders of record as of the close of business on August 7, 2002. Each preferred share purchase right entitles the holder to purchase from us one one-thousandth of a share of Series A Participating Preferred Stock, par value \$0.001 per share, at a price of \$25.00, subject to adjustment. The rights are not immediately exercisable, however, and will become exercisable only upon the occurrence of certain events. The stockholder rights plan may have the effect of deterring or delaying a change in control of Harmonic.

Stock Issuances. During 2000, Harmonic issued approximately 26,400,000 shares of common stock for acquisition of the DiviCom business and approximately 286,000 shares of common stock for the acquisition of Cogent. See Note 3, "Acquisitions" for further discussion.

Note 11: Benefit Plans

Stock Option Plans. Harmonic has reserved 9,640,000 shares of Common Stock for issuance under various employee stock option plans. The options are granted for periods not exceeding ten years and generally vest 25% at one year from date of grant, and an additional 1/48 per month thereafter. Stock options are granted at the fair market value of the stock at the date of grant.

[Table of Contents](#)

Director Option Plans. In May 2002, Harmonic's stockholders approved the 2002 Director Option Plan, replacing the 1995 Director Option Plan. Harmonic has a total of 428,000 shares of Common Stock reserved for issuance under the Director Plans. The Director Plans provide for the grant of non-statutory stock options to certain non-employee directors of Harmonic pursuant to an automatic, non-discretionary grant mechanism. Options are granted at the fair market value of the stock at the date of grant for periods not exceeding ten years. Initial grants generally vest monthly over three years, and subsequent grants generally vest monthly over one year.

The following table summarizes activities under the Plans:

| | Shares Available for Grant | Stock Options Outstanding | Weighted Average Exercise Price |
|--|--------------------------------------|------------------------------|------------------------------------|
| | (In thousands except exercise price) | | |
| Balance at December 31, 1999 | 1,320 | 3,732 | \$ 12.48 |
| Shares authorized | 4,741 | — | — |
| Options assumed in DiviCom acquisition | (2,703) | 2,703 | 37.60 |
| Options granted | (3,065) | 3,065 | 24.29 |
| Options exercised | — | (459) | 5.95 |
| Options canceled | 458 | (1,399) | 33.22 |
| Balance at December 31, 2000 | 751 | 7,642 | 22.73 |
| Shares authorized | 2,000 | — | — |
| Options granted | (2,717) | 2,717 | 9.06 |
| Options exercised | — | (447) | 5.50 |
| Options canceled | 1,777 | (1,777) | 19.72 |
| Options expired | — | (970) | 32.91 |
| Balance at December 31, 2001 | 1,811 | 7,165 | 17.99 |
| Shares authorized | 1,800 | — | — |
| Options granted | (1,871) | 1,871 | 9.78 |
| Options exercised | — | (205) | 3.00 |
| Options canceled | 1,038 | (1,038) | 14.59 |
| Options expired | (14) | (489) | 16.16 |
| Balance at December 31, 2002 | 2,764 | 7,304 | \$ 16.91 |

The following table summarizes information regarding stock options outstanding at December 31, 2002:

| Range of Exercise Prices | Stock Options Outstanding | | | Stock Options Exercisable | |
|-----------------------------|--|--|------------------------------------|---|------------------------------------|
| | Number Outstanding at December 31, 2002 | Weighted-Average Remaining Contractual Life (Years) | Weighted-Average Exercise Price | Number Exercisable at December 31, 2002 | Weighted Average Exercise Price |
| | (In thousands, except exercise price and life) | | | | |
| \$ 0.23 - 7.81 | 1,304 | 5.6 | \$ 5.96 | 1,012 | \$ 6.23 |
| 7.98 - 9.13 | 1,479 | 8.0 | 9.04 | 715 | 9.04 |
| 9.25 - 10.44 | 1,611 | 8.4 | 10.39 | 244 | 10.34 |
| 10.58 - 23.56 | 1,832 | 7.5 | 21.14 | 1,082 | 21.69 |
| 23.75 - 53.02 | 723 | 6.4 | 29.18 | 605 | 28.94 |
| 53.32 - 121.68 | 355 | 7.1 | 72.86 | 280 | 72.16 |
| | 7,304 | 7.3 | \$ 16.91 | 3,938 | \$ 19.41 |

The weighted-average fair value of options granted was \$7.24, \$6.33 and \$16.08 for 2002, 2001, and 2000, respectively.

Employee Stock Purchase Plan. As of December 31, 2001, Harmonic believed that it had insufficient shares reserved for issuance under its 1995 Employee Stock Purchase Plan (the "1995 Purchase Plan") to cover all expected purchases under commenced offering periods that ran through June 2003. The authorization of additional shares under the 1995 Purchase Plan would have resulted in future non-cash charges which, depending on the future market price per share of Harmonic's common stock, could have been significant. In May 2002, Harmonic's stockholders approved the 2002 Employee Stock Purchase Plan (the "2002 Purchase Plan") replacing the 1995 Employee Stock Purchase Plan effective for the offering



[Table of Contents](#)

period beginning on July 1, 2002. As a result, no charge was required. The 2002 Purchase Plan, which has reserved 1,500,000 shares for issuance, enables employees to purchase shares at 85% of the fair market value of the Common Stock at the beginning of the offering period or end of the purchase period, whichever is lower. Each offering period has a maximum duration of two years and consists of four six month purchase periods. Offering periods and purchase periods generally begin on the first trading day on or after January 1 and July 1 of each year. The 2002 Purchase Plan is intended to qualify as an "employee stock purchase plan" under Section 423 of the Internal Revenue Code. During 2002, 2001, and 2000, stock issued under the purchase plans was 780,670, 813,181, and 244,712 shares at weighted average prices of \$3.99, \$4.80, and \$11.22, respectively. The weighted-average fair value of each right to purchase shares of common stock granted under the purchase plans were \$5.21, \$6.30, and \$16.44, for 2002, 2001, and 2000, respectively.

Fair Value Disclosures. Harmonic accounts for its stock plans in accordance with the provisions of Accounting Principles Board Opinion No. 25. If charges for Harmonic's stock plans had been determined based on the fair value method at the grant dates, as prescribed in SFAS No. 123, the Company's net loss and net loss per share would have been as follows:

| | Year Ended December 31, | | |
|--|---------------------------------------|-------------|---------------|
| | 2002 | 2001 | 2000 |
| | (In thousands, except per share data) | | |
| Net loss as reported | \$(76,918) | \$(166,407) | \$(1,654,008) |
| Deduct: Stock expense included in net loss, net of related tax effects | 372 | — | — |
| Add: Total stock expense determined under fair value based method for all awards, net of related tax effects | (13,216) | (21,890) | (14,557) |
| Pro forma net loss | \$(89,762) | \$(188,297) | \$(1,668,565) |
| Basic and Diluted net loss per share: | | | |
| As reported | \$ (1.29) | \$ (2.84) | \$ (34.06) |
| Pro forma | \$ (1.50) | \$ (3.22) | \$ (34.36) |

The fair value of each option grant is estimated on the date of grant using the Black-Scholes multiple option pricing model with the following weighted average assumptions:

| | Employee Stock Options | | | Employee Stock Purchase Plan | | |
|-------------------------|------------------------|------|------|------------------------------|------|------|
| | 2002 | 2001 | 2000 | 2002 | 2001 | 2000 |
| Dividend yield | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Volatility | 122% | 112% | 101% | 139% | 142% | 127% |
| Risk-free interest rate | 3.2% | 4.2% | 6.2% | 3.4% | 3.9% | 6.2% |
| Expected life (years) | 3.4 | 3.3 | 3.4 | 1.4 | 1.2 | 1.4 |

Retirement/ Savings Plan. Harmonic has a retirement/savings plan which qualifies as a thrift plan under Section 401(k) of the Internal Revenue Code. This plan allows participants to contribute up to 20% of total compensation, subject to applicable Internal Revenue Service limitations. Harmonic makes discretionary contributions to the plan of 25% of the first 4% contributed by eligible participants up to a maximum contribution per participant of \$750 per year.

Note 12: Income Taxes

The provision for (benefit from) income taxes consists of the following:

| | December 31, | | |
|-----------|----------------|-----------------|--------------------|
| | 2002 | 2001 | 2000 |
| | (In thousands) | | |
| Current: | | | |
| Federal | \$ — | \$ — | \$ — |
| Foreign | 279 | 2,000 | 450 |
| State | 65 | — | — |
| | <u>344</u> | <u>2,000</u> | <u>450</u> |
| Deferred: | | | |
| Federal | 156 | (1,580) | (17,329) |
| Foreign | — | — | — |
| State | — | (1,226) | (1,692) |
| | <u>156</u> | <u>(2,806)</u> | <u>(19,021)</u> |
| | <u>\$ 500</u> | <u>\$ (806)</u> | <u>\$ (18,571)</u> |

Harmonic's provision for (benefit from) income taxes differed from the amount computed by applying the statutory U.S. federal income tax rate to the loss before income taxes as follows:

| | December 31, | | |
|--|----------------|-----------------|--------------------|
| | 2002 | 2001 | 2000 |
| | (In thousands) | | |
| Benefit from income taxes at statutory rate | \$(26,746) | \$(58,395) | \$(585,403) |
| Differential in rates on foreign earnings | 1,183 | 6,324 | 514 |
| State taxes, net of federal benefit | (4,620) | (10,782) | 39 |
| Acquired in-process technology and non-deductible goodwill | — | 791 | 567,192 |
| Research and development credit | (5,700) | — | — |
| Valuation allowance | 41,883 | 63,026 | — |
| Others | (5,500) | (1,770) | (913) |
| Net provision for (benefit from) income taxes | <u>\$ 500</u> | <u>\$ (806)</u> | <u>\$ (18,571)</u> |

Deferred tax assets (liabilities) comprise the following:

| | December 31, | | |
|--|----------------|---------------|---------------|
| | 2002 | 2001 | 2000 |
| | (In thousands) | | |
| Deferred tax assets: | | | |
| Reserves and accruals | \$ 52,121 | \$ 42,934 | \$ — |
| Net operating loss carryovers | 48,128 | 26,892 | 1,582 |
| Depreciation and amortization | 4,613 | 4,312 | — |
| Research and development credit carryovers | 10,898 | 2,265 | — |
| Other | 2,440 | 7,716 | 28,924 |
| Total deferred tax assets | <u>118,200</u> | <u>84,119</u> | <u>30,506</u> |
| Valuation allowance | (104,909) | (63,026) | — |
| Net deferred tax assets | <u>13,291</u> | <u>21,093</u> | <u>30,506</u> |

Deferred tax liabilities:

| | | | |
|---------------------------------------|----------|----------|------------|
| Intangibles | (13,291) | (21,093) | (35,215) |
| Total deferred tax liabilities | (13,291) | (21,093) | (35,215) |
| Net deferred tax assets (liabilities) | \$ — | \$ — | \$ (4,709) |

[Table of Contents](#)

As of December 31, 2002, Harmonic had approximately \$131.4 million and \$37.1 million of net operating loss carryovers for federal and state tax reporting purposes, respectively, to offset future taxable income; such federal and state carryovers will begin to expire on various dates after the year 2005 if not utilized.

Harmonic's net deferred tax assets increased due to nondeductible reserves, an increase in net operating losses and tax credit carry forwards. Harmonic has provided a valuation allowance for the full amount of its net deferred tax assets since realization of any future benefit from deductible temporary differences, net operating losses and tax credit carry forwards is uncertain at December 31, 2002.

Under the terms of the merger agreement with C-Cube, Harmonic is generally liable for C-Cube's pre-merger tax liabilities. Approximately \$20.8 million of pre-merger tax liabilities remain outstanding and Harmonic expects final settlement, and payment, of these obligations to a variety of taxing authorities and LSI Logic during 2003. These amounts have been included in accrued liabilities.

Note 13: Segment Information

Operating segments are defined as components of an enterprise that engage in business activities for which separate financial information is available and evaluated by the chief operating decision maker. Prior to the acquisition of the DiviCom business, Harmonic was organized as one operating segment ("Pre-Merger Harmonic"). On May 3, 2000, Harmonic completed the acquisition of the DiviCom business, thus changing its organizational structure. The merged company has been organized into two operating segments: BAN, for fiber optic systems, and CS, for digital headend systems. These segments do not correspond to the pre-merger companies in significant ways. For example, some of Harmonic's pre-merger product lines are now part of the CS segment. Each segment has its own management team directing its product development, marketing strategies and its customer service requirements. A separate sales force generally supports both divisions with appropriate product and market specialization as required.

The results of the reportable segments are derived directly from Harmonic's management reporting system. These results reported below are based on Harmonic's method of internal reporting and are not necessarily presented in conformity with generally accepted accounting principles. Following the acquisition of DiviCom, management commenced measuring the performance of each segment based on several metrics, including revenue and income or loss from segment operations. These results are used, in part, to evaluate the performance of, and allocate resources to each of the segments. Income (loss) from segment operations excludes intangible amortization expense, corporate expenses, excess facilities charges, eliminations, and interest and other income. Corporate expenses, excess facilities charges, and eliminations include human resources, legal, finance and other corporate departments, excess facility charges of \$22.5 million and \$30.1 million for the years ended December 31, 2002 and 2001, respectively, and intercompany eliminations. Net income or loss, and assets and liabilities are not internally reported by business segment.

Revenue for the periods prior to May 3, 2000 has been reclassified to reflect the new organizational structure. The reclassified revenue for the prior periods reflects only Harmonic's revenue, and not the historical revenue of the DiviCom business prior to its acquisition. However, income or loss from segments operations is not available and is impractical to prepare for the periods prior to the quarter ended June 30, 2000, and accordingly, has not been presented. Pre-merger Harmonic income from segment operations reflects Harmonic's net income, excluding goodwill amortization, for the three month period ended March 31, 2000.

Segment Sales and Profit:

| | Year Ended December 31, | | |
|---------------------------------|-------------------------|-----------|------------|
| | 2002 | 2001 | 2000 |
| | (In thousands) | | |
| Net sales: | | | |
| Broadband Access Networks (BAN) | \$ 76,914 | \$ 74,772 | \$ 175,111 |
| Convergent Systems (CS) | 109,718 | 129,038 | 87,935 |
| Total net sales | \$186,632 | \$203,810 | \$263,046 |

| | Year Ended December 31, | | |
|--|-------------------------|--------------------|----------------------|
| | 2002 | 2001 | 2000 |
| | (In thousands) | | |
| Income (loss) from segment operations: | | | |
| Broadband Access Networks | \$ (4,033) | \$ (60,103) | \$ (4,367) |
| Convergent Systems | (15,649) | (36,254) | (25,139) |
| Pre-Merger Harmonic | — | — | 13,999 |
| Loss from segment operations | (19,682) | (96,357) | (15,507) |
| Impairment of goodwill and other intangibles | — | — | (1,380,328) |
| Acquired in-process technology | — | — | (39,800) |
| Amortization of intangibles | (18,648) | (20,741) | (234,407) |
| Interest and other income, net | 931 | 1,574 | 10,456 |
| Excess facilities charges | (22,500) | (30,100) | — |
| Corporate expenses and eliminations | (16,519) | (21,591) | (12,993) |
| Loss before income taxes | <u>\$(76,418)</u> | <u>\$(167,213)</u> | <u>\$(1,672,579)</u> |

Geographic Information:

| | Year Ended December 31, | | |
|--------------------------------------|-------------------------|------------------|-------------------|
| | 2002 | 2001 | 2000 |
| | (In thousands) | | |
| Net sales: | | | |
| United States | \$133,222 | \$121,479 | \$167,077 |
| Foreign countries | 53,410 | 82,331 | 95,969 |
| Total | <u>\$186,632</u> | <u>\$203,810</u> | <u>\$263,046</u> |
| Property, equipment and intangibles: | | | |
| United States | \$ 64,863 | \$ 96,472 | \$ 131,746 |
| Foreign countries | 1,792 | 2,285 | 3,779 |
| Total | <u>\$ 66,655</u> | <u>\$ 98,757</u> | <u>\$ 135,525</u> |

Major Customers. To date, a substantial majority of Harmonic's net sales have been to relatively few customers, and Harmonic expects this customer concentration to continue in the foreseeable future. In 2002, sales to Charter Communications and Comcast Cable accounted for 18% and 10% of net sales, respectively. In 2001, sales to DIRECTV and Charter Communications accounted for 13% and 11% of net sales, respectively. In 2000, sales to AT&T Broadband and RCN accounted for 12% and 11% of net sales, respectively.

Note 14: Related Party

Lewis Solomon, a director of Harmonic since January 2002, is CEO of Broadband Services Inc. (BSI). BSI purchases products from Harmonic in connection with its supply chain management and fulfillment services business. Revenues from BSI were \$8.9 million for the year ended December 31, 2002. Accounts receivable from BSI were \$0.4 million as of December 31, 2002. Mr. Solomon is also a director of Terayon Communications, with whom the Company signed a reseller agreement for certain products during the second quarter of 2002. As of December 31, 2002, Harmonic had liabilities to Terayon of approximately \$0.5 million for inventory purchases.

Note 15: Guarantees

Warranties. Activity for the Company's warranty accrual, which is included in accrued liabilities is summarized below (in thousands):

| | |
|---------------------------------|----------|
| Balance as of January 1, 2002 | \$ 4,073 |
| Accrual for warranties | 6,251 |
| Warranty costs incurred | (4,458) |
| | <hr/> |
| Balance as of December 31, 2002 | \$ 5,866 |
| | <hr/> |

Standby Letters of Credit. As of December 31, 2002 the Company's financial guarantees consisted of standby letters of credit outstanding, which were related to customs bond requirements and purchase cards. The maximum amount of potential future payments under these arrangements was \$0.9 million.

Guarantees. As of December 31, 2002, Harmonic had other guarantees outstanding totaling \$1.9 million.

Indemnifications. Harmonic indemnifies some of its suppliers and customers for specified intellectual property rights pursuant to certain parameters and restrictions. The scope of these indemnities varies, but in some instances, includes indemnification for damages and expenses (including reasonable attorneys' fees). No amounts have been accrued in respect of the indemnifications provisions at December 31, 2002.

Note 16: Commitments and Contingencies

Commitments — Facilities Leases. Harmonic leases its facilities under noncancelable operating leases which expire at various dates through September 2010. Total lease payments related to these operating leases were \$11,506,000, \$10,513,000, and \$5,802,000, for 2002, 2001 and 2000, respectively. Future minimum lease payments under noncancelable operating leases at December 31, 2002, are as follows (in thousands):

| | |
|------------|-----------|
| 2003 | \$ 10,491 |
| 2004 | 9,847 |
| 2005 | 9,926 |
| 2006 | 11,034 |
| 2007 | 12,427 |
| Thereafter | 34,887 |
| | <hr/> |
| | \$88,612 |
| | <hr/> |

As of December 31, 2002, \$41.6 million of these lease costs were provided for as accrued excess facility costs. See Note 5 "Restructuring, Excess Facilities and Inventory Provisions."

Commitments — Royalties. Harmonic has obtained research and development grants under various Israeli government programs that require the payment of royalties on sales of certain products resulting from such research. During 2002, 2001 and 2000 royalty expenses were not material to results of operations.

Purchase Commitments with Contract Manufacturers and Suppliers — The Company uses several contract manufacturers and suppliers to provide manufacturing services for a substantial majority of its products. In addition, some components, sub-assembly and modules are obtained from a sole supplier or limited group of suppliers. During the normal course of business, in order to reduce manufacturing lead times and ensure adequate component supply, the Company enters into agreements with certain contract manufacturers and suppliers that allows them to procure inventory based upon criteria as defined by the Company. As of December 31, 2002, the Company has purchase commitments for inventory of approximately \$12.9 million.

Commitments — Contingencies. Harmonic's industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. From time to time, third parties, including these

[Table of Contents](#)

leading companies, have asserted and may assert exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. Such assertions and claims arise in the normal course of our operations. The resolution of assertions and claims cannot be predicted with certainty. Management believes that the final outcome of such matters would not have a material adverse effect on Harmonic's business, operating results, financial position and liquidity.

Note 17: Legal Proceedings

Between June 28 and August 25, 2000, several actions alleging violations of the federal securities laws by Harmonic and certain of its officers and directors (some of whom are no longer with Harmonic) were filed in or removed to the United States District Court for the Northern District of California. The actions subsequently were consolidated.

A consolidated complaint, filed on December 7, 2000, was brought on behalf of a purported class of persons who purchased Harmonic's publicly traded securities between January 19 and June 26, 2000. The complaint also alleged claims on behalf of a purported subclass of persons who purchased C-Cube securities between January 19 and May 3, 2000. In addition to Harmonic and certain of its officers and directors, the complaint also named C-Cube Microsystems Inc. and several of its officers and directors as defendants. The complaint alleged that, by making false or misleading statements regarding Harmonic's prospects and customers and its acquisition of C-Cube, certain defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934. The complaint also alleged that certain defendants violated section 14(a) of the Exchange Act and sections 11, 12(a)(2), and 15 of the Securities Act of 1933 by filing a false or misleading registration statement, prospectus, and joint proxy in connection with the C-Cube acquisition.

On July 3, 2001, the Court dismissed the consolidated complaint with leave to amend. An amended complaint alleging the same claims against the same defendants was filed on August 13, 2001. Defendants moved to dismiss the amended complaint on September 24, 2001. On November 13, 2002, the Court issued an opinion granting the motions to dismiss the amended complaint without leave to amend. Judgment for defendants was entered on December 2, 2002. On December 12, 2002, plaintiffs filed a motion to amend the judgment and for leave to file an amended complaint pursuant to Rules 59(e) and 15(a) of the Federal Rules of Civil Procedure. Although a hearing on that motion was set for February 5, 2003, the Court issued an order stating that it would decide the motion without a hearing. The court has not yet decided the motion.

A derivative action purporting to be on behalf of Harmonic was filed against its then-current directors in the Superior Court for the County of Santa Clara on September 5, 2000. Harmonic also was named as a nominal defendant. The complaint is based on allegations similar to those found in the securities class actions and claims that the defendants breached their fiduciary duties by, among other things, causing Harmonic to violate federal securities laws. The derivative action was removed to the United States District Court for the Northern District of California on September 20, 2000. All deadlines in this action have been stayed pending resolution of the motions to dismiss the securities actions.

Based on its review of the complaints filed in the securities class action, Harmonic believes that it has meritorious defenses and intends to defend itself vigorously. There can be no assurance, however, that Harmonic will prevail. An unfavorable outcome of this litigation could have a material adverse effect on Harmonic's business, operating results, financial position and liquidity.

In November 2001, we were sued in Tennessee state court by a company alleging breach of contract and breach of a Tennessee statute relating to retailers and suppliers. The suit has a claim for \$2.5 million and other unspecified damages, lost profits and attorneys' fees. The suit has since been removed to Federal Court and a trial date has been set for June 2003. Harmonic believes that it has meritorious defenses and will defend the suit vigorously. No liability has been provided at December 31, 2002, as Harmonic believes it is not probable that a liability has been incurred and the amount of loss, if any, cannot be estimated. However, we cannot assure you that an unfavorable outcome will not adversely impact our business, operating results, financial position and liquidity.

Note 18: Subsequent Event

In March 2003, Harmonic entered into a new bank line of credit facility with Silicon Valley Bank, which provides for borrowings up to \$13.5 million, including \$3.5 million for equipment under a secured term loan. This new facility, which expires in March 2004, contains financial and other covenants including the requirement for Harmonic to maintain on deposit with the bank the greater of 50% of total cash, cash equivalents and short-term investments or \$10.0 million, or satisfy a liquidity covenant in the event cash, cash equivalents and short-term investments are less than \$10.0 million. If

[Table of Contents](#)

Harmonic is unable to maintain on deposit with the bank the minimum balance of \$10.0 million, or satisfy the liquidity covenant requirement, Harmonic would be in noncompliance with the facility. Future borrowings pursuant to the line bear interest at the bank's prime rate plus 0.25%-1.75% (prime rate plus 2%-3.75% for equipment borrowings) depending upon the Company's total cash position. Borrowings are payable monthly and are collateralized by all of Harmonic's assets. The Company has entered into an agreement with a financial institution holding amounts on deposit to allow, in the event of default, Silicon Valley Bank to control these deposits. In March 2003 Harmonic also renewed a facility with Silicon Valley Bank that provides for the sale of trade receivables on a non-recourse basis up to \$12.5 million and expires in March 2004. Trade receivables sold under the facility are discounted based on the bank's prime rate plus 1.5% for North American customers and at a negotiated rate for all other customers. The Company's ability to utilize both facilities with Silicon Valley Bank depends to a significant extent on having a sufficient amount of qualified receivables, which may fluctuate depending on the level and timing of sales and the aging, customer concentration, international mix and credit quality of receivables. To the extent that the Company does not have sufficient qualified receivables, Harmonic's ability to utilize these facilities could be significantly constrained. Based upon current levels of receivables, the Company believes that it would not be able to utilize a significant portion of these facilities at this time.

Item 9. *Changes In and Disagreements With Accountants on Accounting and Financial Disclosure*

None.

PART III

Certain information required by Part III is omitted from this Report on Form 10-K in that the Registrant will file its definitive Proxy Statement for its 2003 Annual Meeting of Stockholders, pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended (the "2003 Proxy Statement"), not later than 120 days after the end of the fiscal year covered by this Report, and certain information included in the Proxy Statement is incorporated herein by reference.

Item 10. Directors and Executive Officers of the Registrant

- (a) *Directors* — The information required by this Item will be set forth in the 2003 Proxy Statement under the caption "Election of Directors" and is incorporated herein by reference.
- (b) *Executive Officers* — See the section entitled "Executive Officers" in Part I, Item 1 hereof.

Information relating to compliance with Section 16(a) of the Securities Exchange Act of 1934 will be set forth in the 2003 Proxy Statement under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by this Item will be set forth in the 2003 Proxy Statement under the caption "Executive Compensation" and is incorporated herein.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information related to security ownership of certain beneficial owners and security ownership of management and related stockholder matters will be set forth in the 2003 Proxy Statement under the captions "Security Ownership of Certain Beneficial Owners and Management" and "Equity Plan Information" and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions

Lewis Solomon, a director of Harmonic since January 2002, is CEO of Broadband Services Inc. (BSI). BSI purchases products from Harmonic in connection with its supply chain management and fulfillment services business. Revenues from BSI were \$8.9 million for the year ended December 31, 2002. Accounts receivable from BSI were \$0.4 million as of December 31, 2002. Mr. Solomon is also a director of Terayon Communications, with whom the Company signed a reseller agreement for certain products during the second quarter of 2002. As of December 31, 2002, Harmonic had liabilities to Terayon of approximately \$0.5 million for inventory purchases. We believe that our transactions with BSI and Terayon were on terms no more favorable than those with unrelated parties in similar circumstances.

Item 14. Controls and Procedures

- (a) *Evaluation of disclosure controls and procedures*

Our chief executive officer and our chief financial officer, after evaluating our "disclosure controls and procedures" (as defined in the Securities Exchange Act of 1934 (the "Exchange Act") Rules 13a-14(c) and 15-d-14(c) as of a date (the "Evaluation Date") within 90 days before the filing date of this Annual Report on Form 10-K, have concluded that as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms.

- (b) *Changes in Internal Controls*

Subsequent to the Evaluation Date, there were no significant changes in our internal controls or in other factors that could significantly affect our disclosure controls and procedures, nor were there any significant deficiencies or material weaknesses in our internal controls. As a result, no corrective actions were required or undertaken.

PART IV

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

- (a)(1) Financial Statements. See Index to Consolidated Financial Statements at Item 8 on page 38 of this Annual Report on Form 10-K:
- (a)(2) Financial Statement Schedules. The following are filed as part of this Annual Report on Form 10-K: Financial Statement Schedule II — Valuation and Qualifying Accounts and Reserves. All other financial statement schedules have been omitted because the information is not required to be set forth herein, is not applicable or is included in the financial statements or notes thereto.

Schedule II

Valuation and Qualifying Accounts and Reserves

Allowance for Doubtful Accounts, Returns and Discounts

| | Balance at Beginning of Period | Charges to Revenue | Charges to Expense | Deduction from Reserves | Balance at End of Period |
|------|---|-------------------------------|---------------------------|--|---|
| | | | (In thousands) | | |
| 2002 | 8,595 | 2,272 | 3,576 | (7,802) | 6,641 |
| 2001 | 6,920 | 9,776 | 3,988 | (12,089) | 8,595 |
| 2000 | 1,529 | 14,816 | 250 | (9,675) | 6,920 |

- (a)(3) Exhibits. The documents listed in the Exhibit Index of this Annual Report on Form 10-K are filed herewith. Copies of the exhibits listed in the Exhibit Index will be furnished, upon request, to holders or beneficial owners of Harmonic's Common Stock.
- (b) Reports on Form 8-K.
There were no Current Reports on Form 8-K during the fourth quarter of the year ended December 31, 2002.
- (c) See response to Item 15(a)(3) above.
- (d) See response to Item 15(a)(2) above.

SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Act of 1934, the Registrant, Harmonic Inc., a Delaware corporation, has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Sunnyvale, State of California, on March 31, 2003.

HARMONIC INC.

By: /s/ ANTHONY J. LEY

Anthony J. Ley
Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K, has been signed by the following persons on behalf of the Registrant in the capacities and on the dates indicated:

| Signature | Title | Date |
|--|---|----------------|
| <u>/s/ ANTHONY J. LEY</u> (Anthony J. Ley) | Chairman, President & Chief Executive Officer (Principal Executive Officer) | March 31, 2003 |
| <u>/s/ ROBIN N. DICKSON</u> (Robin N. Dickson) | Chief Financial Officer (Principal Financial and Accounting Officer) | March 31, 2003 |
| <u>/s/ E. FLOYD KVAMME</u> (E. Floyd Kvamme) | Director | March 31, 2003 |
| <u>/s/ WILLIAM REDDERSEN</u> (William Reddersen) | Director | March 31, 2003 |
| <u>/s/ LEWIS SOLOMON</u> (Lewis Solomon) | Director | March 31, 2003 |
| <u>/s/ MICHEL L. VAILLAUD</u> (Michel L. Vaillaud) | Director | March 31, 2003 |
| <u>/s/ DAVID R. VAN VALKENBURG</u> (David Van Valkenburg) | Director | March 31, 2003 |

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

**PURSUANT TO
SECTION 302(a) OF
THE SARBANES-OXLEY ACT OF 2002**

I, Anthony J. Ley, certify that:

1. I have reviewed this annual report on Form 10-K of Harmonic Inc.:
2. Based on my knowledge, this annual 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 annual 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 annual 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-14 and 15d-14) for the registrant and we have:
 - a. designed such disclosure controls and procedures 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 annual report is being prepared;
 - b. evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
 - c. presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
 - a. All significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 31, 2003

By: /s/ ANTHONY J. LEY

Anthony J. Ley
Chairman, President and Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER

**PURSUANT TO
SECTION 302(a) OF
THE SARBANES-OXLEY ACT OF 2002**

I, Robin N. Dickson, certify that:

1. I have reviewed this annual report on Form 10-K of Harmonic Inc.:
2. Based on my knowledge, this annual 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 annual 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 annual 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-14 and 15d-14) for the registrant and we have:
 - a. designed such disclosure controls and procedures 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 annual report is being prepared;
 - b. evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
 - c. presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
 - a. all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 31, 2003

By: /s/ ROBIN N. DICKSON

Robin N. Dickson
Chief Financial Officer

EXHIBIT INDEX

The following Exhibits to this report are filed herewith, or if marked with a (i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix) or (x) are incorporated herein by reference.

| Exhibit Number | |
|-------------------|--|
| 2.1(v) | Agreement and Plan of Merger and Reorganization by and among C-Cube Microsystems, Inc. and the Registrant dated October 27, 1999 |
| 3.1(ix) | Certificate of Incorporation of Registrant as amended |
| 3.2(x) | Certificate of Designation of Rights, Preferences and Privileges of Series A Participating in Preferred Stock of Registrant |
| 3.3(x) | Amended and Restated Bylaws of Registrant |
| 4.1(i) | Form of Common Stock Certificate |
| 4.2(x) | Preferred Stock Rights Agreement dated July 24, 2002 between the Registrant and Mellon Investor Services LLC |
| 10.1(i) | Form of Indemnification Agreement |
| 10.2(i) | 1988 Stock Option Plan and form of Stock Option Agreement |
| 10.3(i) | 1995 Stock Plan and form of Stock Option Agreement |
| 10.4(i) | 1995 Employee Stock Purchase Plan and form of Subscription Agreement |
| 10.5(i) | 1995 Director Option Plan and form of Director Option Agreement |
| 10.6(i) | Registration and Participation Rights and Modification Agreement dated as of July 22, 1994 among Registrant and certain holders of Registrant's Common Stock |
| 10.7(ii) | Business Loan Agreement, Commercial Security Agreement and Promissory Note dated August 26, 1993, as amended on September 14, 1995, between Registrant and Silicon Valley Bank |
| 10.8(ii) | Facility lease dated as of January 12, 1996 by and between Eastrich No. 137 Corporation and Company |
| 10.9(iii) | Change of Control Severance Agreement dated March 27, 1997 between Registrant and Anthony J. Ley |
| 10.10(iii) | Form of Change of Control Severance Agreement between Registrant and certain executive officers of Registrant |
| 10.11(iv) | 1997 Nonstatutory Stock Option Plan |
| 10.12(vi) | 1999 Nonstatutory Stock Option Plan |
| 10.13(vii) | Lease Agreement for 603-611 Baltic Way, Sunnyvale, California |
| 10.14(vii) | Lease Agreement for 1322 Crossman Avenue, Sunnyvale, California |
| 10.15(vii) | Lease Agreement for 646 Caribbean Drive, Sunnyvale, California |
| 10.16(vii) | Lease Agreement for 632 Caribbean Drive, Sunnyvale, California |
| 10.17(vii) | First Amendment to the Lease Agreement for 549 Baltic Way, Sunnyvale, California |
| 10.18(ix) | Restated Non-Recourse Receivables Purchase Agreement dated September 25, 2001 between Registrant and Silicon Valley Bank |
| 10.19(ix) | Modification dated December 14, 2001 to the Restated Non-Recourse Receivables Purchase Agreement dated September 25, 2001, between Registrant and Silicon Valley Bank |
| 10.22 | 2002 Director Option Plan and Form of Stock Option Agreement |
| 10.23 | 2002 Employee Stock Purchase Plan and Form of Subscription Agreement |
| 10.24(viii) | Supply Licence and Development Agreement, dated as of October 27, 1999, by and between C-Cube Microsystems and Harmonic |
| 21.1 | Subsidiaries of Registrant |
| 23.1 | Consent of Independent Accountants |
| 99.1 | Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 99.2 | Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |

- (i) Previously filed as an Exhibit to the Company's Registration Statement on Form S-1 No. 33-90752.
- (ii) Previously filed as an Exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 1995.
- (iii) Previously filed as an Exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 1996.
- (iv) Previously filed as an Exhibit to the Company's Registration Statement on Form S-8 dated January 14, 1998.
- (v) Previously filed as an Exhibit to the Company's Current Report on Form 8-K dated November 1, 1999.
- (vi) Previously filed as an Exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 1999.

[Table of Contents](#)

- (vii) Previously filed as an Exhibit to the Company's Amendment to its Quarterly Report on Form 10-Q/ A for the quarter ended June 30, 2000.
- (viii) Previously filed as an Exhibit to the Company's Registration Statement on Form S-4 No. 333-33148.
- (ix) Previously filed as an Exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2001.
- (x) Previously filed as an Exhibit to the Company's Current Report on Form 8-K dated July 25, 2002.

HARMONIC INC.

2002 DIRECTOR OPTION PLAN

1. Purposes of the Plan. The purposes of this 2002 Director Option Plan are to attract and retain the best available personnel for service as Outside Directors (as defined herein) of the Company, to provide additional incentive to the Outside Directors of the Company to serve as Directors, and to encourage their continued service on the Board.

All options granted hereunder shall be nonstatutory stock options.

2. Definitions. As used herein, the following definitions shall apply:

a). "Board" means the Board of Directors of the Company.

b). "Change-in-Control" means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets;

(iii) A change in the composition of the Board occurring within a two-year period, as a result of which fewer than a majority of the directors are Incumbent Directors. "Incumbent Directors" means directors who either (A) are Directors as of the date hereof, or (B) are elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the Incumbent Directors at the time of such election or nomination (but will not include an individual whose election or nomination is in connection with an actual or threatened proxy contest relating to the election of directors to the Company); or

(iv) The consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

c). "Code" means the Internal Revenue Code of 1986, as amended.

d). "Common Stock" means the common stock of the Company.

e). "Company" means Harmonic Inc., a Delaware corporation.

f). "Director" means a member of the Board.

g). "Disability" means total and permanent disability as defined in section 22(e)(3) of the Code.

h). "Employee" means any person, including officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. The payment of a Director's fee by the Company shall not be sufficient in and of itself to constitute "employment" by the Company.

i). "Exchange Act" means the Securities Exchange Act of 1934, as amended.

A-1

j). "Fair Market Value" means, as of any date, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, including without limitation the Nasdaq National Market or The Nasdaq SmallCap Market of The Nasdaq Stock Market, its Fair Market Value shall be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system for the last market trading day prior to the time of determination as reported in The Wall Street Journal or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, the Fair Market Value of a Share of Common Stock shall be the mean between the high bid and low asked prices for the Common Stock for the last market trading day prior to the time of determination, as reported in The Wall Street Journal or such other source as the Board deems reliable; or

(iii) In the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined in good faith by the Board.

k). "Inside Director" means a Director who is an Employee.

l). "Option" means a stock option granted pursuant to the Plan.

m). "Optioned Stock" means the Common Stock subject to an Option.

n). "Optionee" means a Director who holds an Option.

o). "Outside Director" means a Director who is not an Employee.

p). "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

q). "Plan" means this 2002 Director Option Plan.

r). "Securities Act" means the Securities Act of 1933, as amended.

s). "Share" means a share of the Common Stock, as adjusted in accordance with Section 10 of the Plan.

t). "Subsidiary" means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Internal Revenue Code of 1986.

3. Stock Subject to the Plan. Subject to the provisions of Section 10 of the Plan, the maximum aggregate number of Shares which may be optioned and sold under the Plan is 400,000 Shares (the "Pool"). The Shares may be authorized, but unissued, or reacquired Common Stock.

If an Option expires or becomes unexercisable without having been exercised in full, the unpurchased Shares which were subject thereto shall become available for future grant or sale under the Plan (unless the Plan has terminated). Shares that have actually been issued under the Plan shall not be returned to the Plan and shall not become available for future distribution under the Plan.

4. Administration and Grants of Options under the Plan.

a). Procedure for Grants. All grants of Options to Outside Directors under this Plan shall be automatic and nondiscretionary and shall be made strictly in accordance with the following provisions:

(i) No person shall have any discretion to select which Outside Directors shall be granted Options or to determine the number of Shares to be covered by Options.

A-2

(ii) Each Outside Director shall be automatically granted an Option to purchase 20,000 Shares (the "First Option") on the date on which the later of the following events occurs: (A) the effective date of this Plan, as determined in accordance with Section 6 hereof, or (B) the date on which such person first becomes an Outside Director, whether through election by the stockholders of the Company or appointment by the Board to fill a vacancy; provided, however, that an Inside Director who ceases to be an Inside Director but who remains a Director shall not receive a First Option.

(iii) Each Outside Director shall be automatically granted an Option to purchase 10,000 Shares (a "Subsequent Option") on the date such Outside Director is reelected to the Board by the stockholders of the Company at the Company's annual meeting of stockholders or otherwise; provided that he or she is then an Outside Director and if, as of such date, he or she shall have served on the Board for at least the preceding six (6) months.

(iv) Notwithstanding the provisions of subsections (ii) and (iii) hereof, any exercise of an Option granted before the Company has obtained stockholder approval of the Plan shall be conditioned upon obtaining such stockholder approval of the Plan.

(v) The terms of a First Option granted hereunder shall be as follows:

A. the term of the First Option shall be ten (10) years;

B. the First Option shall be exercisable only while the Outside Director remains a Director of the Company, except as set forth in Sections 8 and 10 hereof;

C. the exercise price per Share shall be 100% of the Fair Market Value per Share on the date of grant of the First Option;

D. subject to Section 10 hereof, the First Option shall become exercisable as to 1/36th of the Shares subject to the First Option at the end of each month following its date of grant, provided that the Optionee continues to serve as a Director on such dates.

(vi) The terms of a Subsequent Option granted hereunder shall be as follows:

A. the term of the Subsequent Option shall be ten (10) years;

B. the Subsequent Option shall be exercisable only while the Outside Director remains a Director of the Company, except as set forth in Sections 8 and 10 hereof;

C. the exercise price per Share shall be 100% of the Fair Market Value per Share on the date of grant of the Subsequent Option;

D. subject to Section 10 hereof, the Subsequent Option shall become exercisable as to 1/12th of the Shares subject to the Subsequent Option at the end of each month following its date of grant, provided that the Optionee continues to serve as a Director

on such dates.

(vii) In the event that any Option granted under the Plan would cause the number of Shares subject to outstanding Options plus the number of Shares previously purchased under Options to exceed the Pool, then the remaining Shares available for Option grant shall be granted under Options to the Outside Directors on a pro rata basis. No further grants shall be made until such time, if any, as additional Shares become available for grant under the Plan through action of the Board or the stockholders to increase the number of Shares which may be issued under the Plan or through cancellation or expiration of Options previously granted hereunder.

5. Eligibility. Options may be granted only to Outside Directors. All Options shall be automatically granted in accordance with the terms set forth in Section 4 hereof.

A-3

The Plan shall not confer upon any Optionee any right with respect to continuation of service as a Director or nomination to serve as a Director, nor shall it interfere in any way with any rights which the Director or the Company may have to terminate the Director's relationship with the Company at any time.

6. Term of Plan. The Plan shall become effective upon its approval by the stockholders of the Company. It shall continue in effect for a term of ten (10) years unless sooner terminated under Section 11 of the Plan.

7. Form of Consideration. The consideration to be paid for the Shares to be issued upon exercise of an Option, including the method of payment, shall consist of

a). cash;

b). check;

c). other shares which (x) in the case of Shares acquired upon exercise of an option, have been owned by the Optionee for more than six (6) months on the date of surrender, and (y) have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Option shall be exercised;

d). consideration received by the Company under a cashless exercise program implemented by the Company in connection with the Plan; or

e). any combination of the foregoing methods of payment.

8. Exercise of Option.

a). Procedure for Exercise; Rights as a Stockholder. Any Option granted hereunder shall be exercisable at such times as are set forth in Section 4 hereof; provided, however, that no Options shall be exercisable until stockholder approval of the Plan has been obtained.

An Option may not be exercised for a fraction of a Share.

An Option shall be deemed to be exercised when written notice of such exercise has been given to the Company in accordance with the terms of the Option by the person entitled to exercise the Option and full payment for the Shares with respect to which the Option is exercised has been received by the Company. Full payment may consist of any consideration and method of payment allowable under Section 7 of the Plan. Until the issuance (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company) of the stock certificate evidencing such Shares, no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. A share certificate for the number of Shares so acquired shall be issued to the Optionee as soon as

practicable after exercise of the Option. No adjustment shall be made for a dividend or other right for which the record date is prior to the date the stock certificate is issued, except as provided in Section 10 of the Plan.

Exercise of an Option in any manner shall result in a decrease in the number of Shares which thereafter may be available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

b). Termination of Continuous Status as a Director. Subject to Section 10 hereof, in the event an Optionee's status as a Director terminates (other than upon the Optionee's death or Disability), the Optionee may exercise his or her Option, but only within three (3) months following the date of such termination, and only to the extent that the Optionee was entitled to exercise it on the date of such termination (but in no event later than the expiration of its ten (10) year term). To the extent that the Optionee was not vested as to his or her entire Option on the date of such termination, the Shares covered by the unvested portion of the Option shall revert to the Plan. If, after termination, the Optionee does not exercise his or her Option within

A-4

the time specified herein, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

c). Disability of Optionee. In the event Optionee's status as a Director terminates as a result of Disability, the Optionee may exercise his or her Option, but only within twelve (12) months following the date of such termination, and only to the extent that the Optionee was entitled to exercise it on the date of such termination (but in no event later than the expiration of its ten (10) year term). To the extent that the Optionee was not vested as to his or her entire Option on the date of termination, the Shares covered by the unvested portion of the Option shall revert to the Plan. If, after termination, the Optionee does not exercise his or her Option within the time specified herein, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

d). Death of Optionee. In the event of an Optionee's death, the Optionee's estate or a person who acquired the right to exercise the Option by bequest or inheritance may exercise the Option, but only within twelve (12) months following the date of death, and only to the extent that the Optionee was entitled to exercise it on the date of death (but in no event later than the expiration of its ten (10) year term). To the extent that the Optionee was not vested as to his or her entire Option on the date of death, the Shares covered by the unvested portion of the Option shall revert to the Plan. To the extent that the Optionee's estate or a person who acquired the right to exercise such Option does not exercise such Option (to the extent otherwise so entitled) within the time specified herein, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

9. Non-Transferability of Options. The Option may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Optionee, only by the Optionee.

10. Adjustments Upon Changes in Capitalization, Dissolution, Merger or Change-in-Control.

a). Changes in Capitalization. Subject to any required action by the stockholders of the Company, the number of Shares covered by each outstanding Option, the number of Shares which have been authorized for issuance under the Plan but as to which no Options have yet been granted or which have been returned to the Plan upon cancellation or expiration of an Option, as well as the price per Share covered by each such outstanding Option, and the number of Shares issuable pursuant to the automatic grant

provisions of Section 4 hereof shall be proportionately adjusted for any increase or decrease in the number of issued Shares resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the Common Stock, or any other increase or decrease in the number of issued Shares effected without receipt of consideration by the Company; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of Shares subject to an Option.

b). Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, to the extent that an Option has not been previously exercised, it shall terminate immediately prior to the consummation of such proposed action.

c). Merger or Change-in-Control. In the event of a merger of the Company with or into another corporation or a Change-in-Control of the Company, outstanding Options may be assumed or equivalent options may be substituted by the successor corporation or a Parent or Subsidiary thereof (the "Successor Corporation"). If an option is assumed or substituted for, the Option or equivalent option shall continue to be exercisable as provided in Section 4 hereof for so long as the Optionee serves as a Director or a director of the Successor Corporation. In

A-5

addition, whether or not the Successor Corporation assumes an outstanding option or substitutes for it an equivalent option, immediately upon a Change-in-Control each Option or option shall become fully vested and exercisable, including as to Shares for which it would not otherwise be exercisable. Thereafter, the Option or option shall remain exercisable in accordance with Section 8(b) through (d) above. In such event the Board shall notify the Optionee that the Option shall be fully exercisable for a period of no shorter than 3 (three) months from the date of such Change-in-Control.

For the purposes of this Section 10(c), an Option shall be considered assumed if, following the merger or Change-in-Control, the Option confers the right to purchase or receive, for each Share of Optioned Stock subject to the Option immediately prior to the merger or Change-in-Control, the consideration (whether stock, cash, or other securities or property) received in the merger or Change-in-Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares). If such consideration received in the merger or Change-in-Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of the Option, for each Share of Optioned Stock subject to the Option, to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of Common Stock in the merger or Change-in-Control.

11. Amendment and Termination of the Plan.

a). Amendment and Termination. The Board may at any time amend, alter, suspend, or discontinue the Plan, but no amendment, alteration, suspension, or discontinuation shall be made which would impair the rights of any Optionee under any grant theretofore made, without his or her consent. In addition, to the extent necessary and desirable to comply with any applicable law, regulation or stock exchange rule, the Company shall obtain stockholder approval of any Plan amendment in such a manner and to such a degree as required.

b). Effect of Amendment or Termination. Any such amendment or termination of the Plan shall not affect Options already granted and such Options shall remain in full force and effect as if this Plan had not been amended or terminated.

12. Time of Granting Options. The date of grant of an Option shall, for all purposes, be the date determined in accordance with Section 4 hereof.

13. Conditions Upon Issuance of Shares. Shares shall not be issued pursuant to the exercise of an Option unless the exercise of such Option and the issuance and delivery of such Shares pursuant thereto shall comply with all relevant provisions of law, including, without limitation, the Securities Act of 1933, as amended, the Exchange Act, the rules and regulations promulgated thereunder, state securities laws, and the requirements of any stock exchange upon which the Shares may then be listed, and shall be further subject to the approval of counsel for the Company with respect to such compliance.

As a condition to the exercise of an Option, the Company may require the person exercising such Option to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares, if, in the opinion of counsel for the Company, such a representation is required by any of the aforementioned relevant provisions of law.

Inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained.

A-6

14. Reservation of Shares. The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements of the Plan.

15. Option Agreement. Options shall be evidenced by written option agreements in such form as the Board shall approve.

A-7

EXHIBIT #1

HARMONIC INC.

2002 DIRECTOR OPTION AGREEMENT

Harmonic Inc., (the "Company"), has granted to _____ (the "Optionee"), an option to purchase a total of _____ (____) shares of the Company's Common Stock (the "Optioned Stock"), at the price determined as provided herein, and in all respects subject to the terms, definitions and provisions of the Company's 2002 Director Option Plan (the "Plan") adopted by the Company which is incorporated herein by reference. The terms defined in the Plan shall have the same defined meanings herein.

1. Nature of the Option. This Option is a nonstatutory option and is not intended to qualify for any special tax benefits to the Optionee.

2. Exercise Price. The exercise price is \$ _____ for each share of Common Stock.

3. Exercise of Option. This Option shall be exercisable during its term in accordance with the provisions of Section 8 of the Plan as follows:

a). Right to Exercise.

(i) This Option shall become exercisable in installments cumulatively with respect to ___ percent (___%) of the Optioned Stock one month after the date of grant, and as to an additional ___ percent (___%) of the Optioned Stock on each monthly anniversary of the date of grant, so that one hundred percent (100%) of the Optioned Stock shall be exercisable ___ years after the date of grant; provided, however, that in no event shall any Option be exercisable prior to the date the stockholders of the Company approve the Plan.

(ii) This Option may not be exercised for a fraction of a share.

(iii) In the event of Optionee's death, disability or other termination of service as a Director, the exercisability of the Option is governed by Section 8 of the Plan.

b). Method of Exercise. This Option shall be exercisable by written notice which shall state the election to exercise the Option and the number of Shares in respect of which the Option is being exercised. Such written notice, in the form attached hereto as Exhibit 2, shall be signed by the Optionee and shall be delivered in person or by certified mail to the Secretary of the Company. The written notice shall be accompanied by payment of the exercise price.

4. Method of Payment. Payment of the exercise price shall be by any of the following, or a combination thereof, at the election of the Optionee:

a). cash;

b). check;

c). surrender of other shares which (x) in the case of Shares acquired upon exercise of an Option, have been owned by the Optionee for more than 6 (six) months on the date of surrender, and (y) have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Option shall be exercised;

d). delivery of a properly executed exercise notice together with such other documentation as the Company and the broker, if applicable, shall require to effect an exercise of the Option and delivery to the Company of the sale or loan proceeds required to pay the exercise price; or

e). Any other term of consideration permitted under the Plan.

A-8

5. Restrictions on Exercise. This Option may not be exercised if the issuance of such Shares upon such exercise or the method of payment of consideration for such shares would constitute a violation of any applicable federal or state securities or other law or regulations, or if such issuance would not comply with the requirements of any stock exchange upon which the Shares may then be listed. As a condition to the exercise of this Option, the Company may require Optionee to make any representation and warranty to the Company as may be required by any applicable law or regulation.

6. Non-Transferability of Option. This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Optionee only by the Optionee. The terms of this Option shall be binding upon the executors, administrators, heirs, successors and assigns of the Optionee.

7. Term of Option. This Option may not be exercised more than ten (10) years from the date of grant of this Option, and may be exercised during such period only in accordance with the Plan and the terms of this Option.

8. Taxation Upon Exercise of Option. Optionee understands that, upon exercise of this Option, he or she will recognize income for tax purposes in an

amount equal to the excess of the then Fair Market Value of the Shares purchased over the exercise price paid for such Shares. Since the Optionee is subject to Section 16(b) of the Securities Exchange Act of 1934, as amended, under certain limited circumstances the measurement and timing of such income (and the commencement of any capital gain holding period) may be deferred, and the Optionee is advised to contact a tax advisor concerning the application of Section 83 in general and the availability of a Section 83(b) election in particular in connection with the exercise of the Option. Upon a resale of such Shares by the Optionee, any difference between the sale price and the Fair Market Value of the Shares on the date of exercise of the Option, to the extent not included in income as described above, will be treated as capital gain or loss.

DATE OF GRANT:

HARMONIC INC.

a Delaware corporation

By:

Optionee acknowledges receipt of a copy of the Plan, a copy of which is attached hereto, and represents that he or she is familiar with the terms and provisions thereof, and hereby accepts this Option subject to all of the terms and provisions thereof. Optionee hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Board upon any questions arising under the Plan.

Dated:

Optionee

A-9

EXHIBIT #2

2002 DIRECTOR OPTION EXERCISE NOTICE

Harmonic Inc.
549 Baltic Way
Sunnyvale, CA 94089
Attention: Corporate Secretary

1. Exercise of Option. The undersigned ("Optionee") hereby elects to exercise Optionee's option to purchase _____ shares of Common Stock (the "Shares") of Harmonic Inc. (the "Company") under and pursuant to the Company's 2002 Director Option Plan and the Director Option Agreement dated _____ (the "Agreement").

2. Representations of Optionee. Optionee acknowledges that Optionee has received, read and understood the Agreement.

3. Federal Restrictions on Transfer. Optionee understands that the Shares must be held indefinitely unless they are registered under the Securities Act of 1933, as amended (the "1933 Act"), or unless an exemption from such registration is available, and that the certificate(s) representing the Shares may bear a legend to that effect. Optionee understands that the Company is under no obligation to register the Shares and that an exemption may not be available or may not permit Optionee to transfer Shares in the amounts or at the times proposed by Optionee.

4. Tax Consequences. Optionee understands that Optionee may suffer

adverse tax consequences as a result of Optionee's purchase or disposition of the Shares. Optionee represents that Optionee has consulted with any tax consultant(s) Optionee deems advisable in connection with the purchase or disposition of the Shares and that Optionee is not relying on the Company for any tax advice.

5. Delivery of Payment. Optionee herewith delivers to the Company the aggregate purchase price for the Shares that Optionee has elected to purchase and has made provision for the payment of any federal or state withholding taxes required to be paid or withheld by the Company.

6. Entire Agreement. The Agreement is incorporated herein by reference. This Exercise Notice and the Agreement constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Optionee with respect to the subject matter hereof. This Exercise Notice and the Agreement are governed by Delaware law except for that body of law pertaining to conflict of laws.

Submitted by:

Accepted by:

OPTIONEE:

HARMONIC INC.

By:

By:

Its:

Address:

Dated:

HARMONIC INC.

2002 EMPLOYEE STOCK PURCHASE PLAN

The following constitute the provisions of the 2002 Employee Stock Purchase Plan (the "Plan") of Harmonic Inc.

1. Purpose. The purpose of the Plan is to provide employees of the Company and its Designated Subsidiaries with an opportunity to purchase Common Stock of the Company through accumulated payroll deductions. It is the intention of the Company to have the Plan qualify as an "Employee Stock Purchase Plan" under Section 423 of the Code. The provisions of the Plan, accordingly, shall be construed so as to extend and limit participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423.

2. Definitions.

a). "Administrator" shall mean the Board or any Committee designated by the Board to administer the Plan pursuant to Section 14.

b). "Board" shall mean the Board of Directors of the Company.

c). "Change-of-Control" shall mean the occurrence of any of the following events:

(i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) the consummation of a merger or consolidation of the Company, with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company, or such surviving entity or its parent outstanding immediately after such merger or consolidation;

(iv) a change in the composition of the Board, as a result of which fewer than a majority of the Directors are Incumbent Directors. "Incumbent Directors" shall mean Directors who either (A) are Directors of the Company, as applicable, as of the date hereof, or (B) are elected, or nominated for election, to the Board with the affirmative votes of at least a majority of those Directors whose election or nomination was not in connection with any transaction described in subsections (i), (ii) or (iii) or in connection with an actual or threatened proxy contest relating to the election of Directors of the Company.

d). "Code" shall mean the Internal Revenue Code of 1986, as amended.

e). "Committee" means a committee of the Board appointed by the Board in accordance with Section 14 hereof.

f). "Common Stock" shall mean the common stock of the Company.

g). "Company" shall mean Harmonic Inc., a Delaware corporation and

any Designated Subsidiary of the Company.

B-1

h). "Compensation" shall mean all base straight time gross earnings, including commissions and payments for overtime and shift premiums, but exclusive of payments for incentive compensation, incentive payments, bonuses and other compensation.

i). "Designated Subsidiary" shall mean any Subsidiary selected by the Administrator as eligible to participate in the Plan.

j). "Director" shall mean a member of the Board.

k). "Eligible Employee" shall mean any individual who is a common law employee of the Company or any Designated Subsidiary and whose customary employment with the Company or Designated Subsidiary is at least twenty (20) hours per week and more than five (5) months in any calendar year. For purposes of the Plan, the employment relationship shall be treated as continuing intact while the individual is on sick leave or other leave of absence approved by the Company. Where the period of leave exceeds 90 days and the individual's right to reemployment is not guaranteed either by statute or by contract, the employment relationship shall be deemed to have terminated on the 91st day of such leave.

l). "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

m). "Exercise Date" shall mean the first Trading Day on or after July 1 and January 1 of each year. The first Exercise Date under the Plan shall be on January 1, 2003.

n). "Fair Market Value" shall mean, as of any date, the value of Common Stock determined as follows:

(i) if the Common Stock is listed on any established stock exchange or a national market system, including without limitation the Nasdaq National Market or The Nasdaq SmallCap Market of The Nasdaq Stock Market, its Fair Market Value shall be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the date of determination, as reported in The Wall Street Journal or such other source as the Board deems reliable;

(ii) if the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, its Fair Market Value shall be the mean of the closing bid and asked prices for the Common Stock on the date of determination, as reported in The Wall Street Journal or such other source as the Board deems reliable;

(iii) in the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined in good faith by the Board.

o). "Offering Date" shall mean the first Trading Day of each Offering Period.

p). "Offering Periods" shall mean the periods of approximately 24 (twenty-four) months during which an option granted pursuant to the Plan may be exercised, commencing on the first Trading Day on or after July 1 and January 1 of each year and terminating on the first Trading Day on or after the January 1 and July 1 Offering Period commencement date approximately 24 (twenty-four) months later. The duration and timing of Offering Periods may be changed pursuant to Section 4 of this Plan.

q). "Plan" shall mean this 2002 Employee Stock Purchase Plan.

r). "Purchase Period" shall mean the approximately six (6) month

period commencing on one Exercise Date and ending with the next Exercise Date, except that the first Purchase Period of any Offering Period shall commence on the Offering Date and end with the next Exercise Date.

s). "Purchase Price" shall mean 85% (eighty-five percent) of the Fair Market Value of a share of Common Stock on the Offering Date or on the Exercise Date, whichever is lower;

B-2

provided however, that the Purchase Price may be adjusted by the Administrator pursuant to Section 20.

t). "Subsidiary" shall mean a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code.

u). "Trading Day" shall mean a day on which national stock exchanges and the Nasdaq System are open for trading.

3. Eligibility.

a). Offering Periods. Any Eligible Employee on a given Offering Date shall be eligible to participate in the Plan.

b). Limitations. Any provisions of the Plan to the contrary notwithstanding, no Eligible Employee shall be granted an option under the Plan (i) to the extent that, immediately after the grant, such Eligible Employee (or any other person whose stock would be attributed to such Eligible Employee pursuant to Section 424(d) of the Code) would own capital stock of the Company and/or hold outstanding options to purchase such stock possessing 5% (five percent) or more of the total combined voting power or value of all classes of the capital stock of the Company or of any Subsidiary, or (ii) to the extent that his or her rights to purchase stock under all employee stock purchase plans of the Company and its subsidiaries accrues at a rate which exceeds \$25,000 (twenty-five thousand dollars) worth of stock (determined at the fair market value of the shares at the time such option is granted) for each calendar year in which such option is outstanding at any time.

4. Offering Periods. The Plan shall be implemented by consecutive, overlapping Offering Periods with a new Offering Period commencing on the first Trading Day on or after July 1 and January 1 each year, or on such other date as the Board shall determine, and continuing thereafter until terminated in accordance with Section 20 hereof. The Board shall have the power to change the duration of Offering Periods (including the commencement dates thereof) with respect to future offerings without stockholder approval if such change is announced prior to the scheduled beginning of the first Offering Period to be affected thereafter.

5. Participation.

a). Offering Periods. An Eligible Employee may become a participant in the Plan by completing a subscription agreement authorizing payroll deductions in the form of Exhibit 1 to this Plan and filing it with the Company's payroll office at least 5 (five) days prior to the applicable Offering Date or as otherwise determined by the Administrator.

b). Payroll Deductions. Payroll deductions for a participant shall commence on the first payroll following the first day of the applicable Offering Period and shall end on the last payroll in the Offering Period to which such authorization is applicable, unless sooner terminated by the participant as provided in Section 10 hereof.

6. Payroll Deductions.

a). At the time a participant files his or her subscription agreement, he or she shall elect to have payroll deductions made on each

pay day during the Offering Period in an amount not exceeding 10% (ten percent) of the Compensation which he or she receives on each pay day during the Offering Period; provided, however, that should a pay day occur on an Exercise Date, a participant shall have the payroll deductions made on such day applied to his or her account under the new Offering Period or Purchase Period, as the case may be. A participant's subscription agreement shall remain in effect for successive Offering Periods unless terminated as provided in Section 10 hereof.

b). Payroll deductions for a participant shall commence on the first payday following the Offering Date and shall end on the last payday in the Offering Period to which such

B-3

authorization is applicable, unless sooner terminated by the participant as provided in Section 10 hereof, for any Offering Period as determined.

c). All payroll deductions made for a participant shall be credited to his or her account under the Plan and shall be withheld in whole percentages only. A participant may not make any additional payments into such account.

d). A participant may discontinue his or her participation in the Plan as provided in Section 10 hereof, or may increase or decrease the rate of his or her payroll deductions during the Offering Period by completing or filing with the Company a new subscription agreement authorizing a change in payroll deduction rate. The Administrator may, in its discretion, limit the nature and/or number of participation rate changes during any Offering Period. The change in rate shall be effective with the first full payroll period following 5 (five) business days after the Company's receipt of the new subscription agreement unless the Company elects to process a given change in participation more quickly.

e). Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 3(b) hereof, a participant's payroll deductions may be decreased to zero percent (0%) at any time during a Purchase Period. Payroll deductions shall recommence at the rate provided in such participant's subscription agreement at the beginning of the first Purchase Period which is scheduled to end in the following calendar year, unless terminated by the participant as provided in Section 10 hereof.

f). At the time the option is exercised, in whole or in part, or at the time some or all of the Company's Common Stock issued under the Plan is disposed of, the participant must make adequate provision for the Company's federal, state, or other tax withholding obligations, if any, which arise upon the exercise of the option or the disposition of the Common Stock. At any time, the Company may, but shall not be obligated to, withhold from the participant's compensation the amount necessary for the Company to meet applicable withholding obligations, including any withholding required to make available to the Company any tax deductions or benefits attributable to sale or early disposition of Common Stock by the Eligible Employee.

7. Grant of Option. On the Offering Date of each Offering Period, each Eligible Employee participating in such Offering Period shall be granted an option to purchase on each Exercise Date during such Offering Period (at the applicable Purchase Price) up to a number of shares of the Company's Common Stock determined by dividing such Eligible Employee's payroll deductions accumulated prior to such Exercise Date and retained in the Participant's account as of the Exercise Date by the applicable Purchase Price; provided that in no event shall an Eligible Employee be permitted to purchase during each Purchase Period more than 3,000 shares of the Company's Common Stock (subject to any adjustment pursuant to Section 19), and provided further that such purchase shall be subject to the limitations set forth in Sections 3(b), 7 and 12 hereof. The Eligible Employee may accept the grant of such option by turning in a completed Subscription Agreement (attached hereto as Exhibit 1) to the Company at least 5 (five) days prior to an Offering Date or as otherwise determined by

the Administrator. The Administrator may, for future Offering Periods, increase or decrease, in its absolute discretion, the maximum number of shares of the Company's Common Stock an Eligible Employee may purchase during each Purchase Period of such Offering Period. Exercise of the option shall occur as provided in Section 8 hereof, unless the participant has withdrawn pursuant to Section 10 hereof. The option shall expire on the last day of the Offering Period.

8. Exercise of Option.

a). Unless a participant withdraws from the Plan as provided in Section 10 hereof, his or her option for the purchase of shares shall be exercised automatically on the Exercise Date, and the maximum number of full shares subject to option shall be purchased for such participant at the applicable Purchase Price with the accumulated payroll deductions in his or her account. No

B-4

fractional shares shall be purchased; any payroll deductions accumulated in a participant's account which are not sufficient to purchase a full share shall be retained in the participant's account for the subsequent Purchase Period or Offering Period, subject to earlier withdrawal by the participant as provided in Section 10 hereof. Any other funds left over in a participant's account after the Exercise Date shall be returned to the participant. During a participant's lifetime, a participant's option to purchase shares hereunder is exercisable only by him or her.

b). If the Administrator determines that, on a given Exercise Date, the number of shares with respect to which options are to be exercised may exceed (i) the number of shares of Common Stock that were available for sale under the Plan on the Offering Date of the applicable Offering Period, or (ii) the number of shares available for sale under the Plan on such Exercise Date, the Administrator may in its sole discretion (x) provide that the Company shall make a pro rata allocation of the shares of Common Stock available for purchase on such Offering Date or Exercise Date, as applicable, in as uniform a manner as shall be practicable and as it shall determine in its sole discretion to be equitable among all participants exercising options to purchase Common Stock on such Exercise Date, and continue all Offering Periods then in effect, or (y) provide that the Company shall make a pro rata allocation of the shares available for purchase on such Offering Date or Exercise Date, as applicable, in as uniform a manner as shall be practicable and as it shall determine in its sole discretion to be equitable among all participants exercising options to purchase Common Stock on such Exercise Date, and terminate any or all Offering Periods then in effect pursuant to Section 20 hereof. The Company may make pro rata allocation of the shares available on the Offering Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional shares for issuance under the Plan by the Company's stockholders subsequent to such Offering Date.

9. Delivery. As soon as reasonably practicable after each Exercise Date on which a purchase of shares occurs, the Company shall arrange the delivery to each participant the shares purchased upon exercise of his or her option in a form determined by the Administrator.

10. Withdrawal.

a). A participant may withdraw all but not less than all the payroll deductions credited to his or her account and not yet used to exercise his or her option under the Plan at any time by giving written notice to the Company in the form of Exhibit 2 to this Plan. All of the participant's payroll deductions credited to his or her account shall be paid to such participant as promptly as practicable after receipt of notice of withdrawal and such participant's option for the Offering Period shall be automatically terminated, and no further payroll deductions for the purchase of shares shall be made for such Offering Period. If a participant withdraws from an Offering Period, payroll deductions shall not resume at

the beginning of the succeeding Offering Period unless the participant delivers to the Company a new subscription agreement.

b). A participant's withdrawal from an Offering Period shall not have any effect upon his or her eligibility to participate in any similar plan that may hereafter be adopted by the Company or in succeeding Offering Periods which commence after the termination of the Offering Period from which the participant withdraws.

11. Termination of Employment. In the event a participant ceases to be an Eligible Employee of the Company or any Designated Subsidiary, as applicable, he or she will be deemed to have elected to withdraw from the Plan and the payroll deductions credited to such participant's account during the Offering Period but not yet used to exercise the option will be returned to such participant or, in the case of his or her death, to the person or persons entitled thereto under Section 15 hereof, and such participant's option will be automatically terminated. The preceding sentence notwithstanding, a participant who receives payment in lieu of notice of termination of employment shall be treated as continuing to be an Employee for the participant's customary

B-5

number of hours per week of employment during the period in which the participant is subject to such payment in lieu of notice.

12. Interest. No interest shall accrue on the payroll deductions of a participant in the Plan.

13. Stock.

a). Subject to adjustment upon changes in capitalization of the Company as provided in Section 19 hereof, the maximum number of shares of the Company's Common Stock which shall be made available for sale under the Plan shall be 1,500,000 shares.

b). Until the shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), a participant shall only have the rights of an unsecured creditor with respect to such shares, and no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to such shares.

c). Shares to be delivered to a participant under the Plan shall be registered in the name of the participant or in the name of the participant and his or her spouse.

14. Administration. The Administrator shall administer the Plan and shall have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to determine eligibility and to adjudicate all disputed claims filed under the Plan. Every finding, decision and determination made by the Administrator shall, to the full extent permitted by law, be final and binding upon all parties.

15. Designation of Beneficiary.

a). A participant may file a written designation of a beneficiary who is to receive any shares and cash, if any, from the participant's account under the Plan in the event of such participant's death subsequent to an Exercise Date on which the option is exercised but prior to delivery to such participant of such shares and cash. In addition, a participant may file a written designation of a beneficiary who is to receive any cash from the participant's account under the Plan in the event of such participant's death prior to exercise of the option. If a participant is married and the designated beneficiary is not the spouse, spousal consent shall be required for such designation to be effective.

b). Such designation of beneficiary may be changed by the participant

at any time by written notice. In the event of the death of a participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such participant's death, the Company shall deliver such shares and/or cash to the executor or administrator of the estate of the participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares and/or cash to the spouse or to any one or more dependents or relatives of the participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

c). All beneficiary designations shall be in such form and manner as the Administrator may designate from time to time.

16. Transferability. Neither payroll deductions credited to a participant's account nor any rights with regard to the exercise of an option or to receive shares under the Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 15 hereof) by the participant. Any such attempt at assignment, transfer, pledge or other disposition shall be without effect, except that the Company may treat such act as an election to withdraw funds from an Offering Period in accordance with Section 10 hereof.

17. Use of Funds. All payroll deductions received or held by the Company under the Plan may be used by the Company for any corporate purpose, and the Company shall not be obligated to

B-6

segregate such payroll deductions. Until shares are issued, participants shall only have the rights of an unsecured creditor.

18. Reports. Individual accounts shall be maintained for each participant in the Plan. Statements of account shall be given to participating Eligible Employees at least annually, which statements shall set forth the amounts of payroll deductions, the Purchase Price, the number of shares purchased and the remaining cash balance, if any.

19. Adjustments Upon Changes in Capitalization, Dissolution, Liquidation, Merger or Change-in-Control.

a). Changes in Capitalization. Subject to any required action by the stockholders of the Company, the maximum number of shares of the Company's Common Stock which shall be made available for sale under the Plan, the maximum number of shares each participant may purchase each Purchase Period (pursuant to Sections 3(b), and 7), as well as the price per share and the number of shares of Common Stock covered by each option under the Plan which has not yet been exercised shall be proportionately adjusted for any increase or decrease in the number of issued shares of Common Stock resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the Common Stock, or any other change in the number of shares of Common Stock effected without receipt of consideration by the Company; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." Such adjustment shall be made by the Administrator, whose determination in that respect shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Common Stock subject to an option.

b). Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Offering Period then in progress shall be shortened by setting a New Exercise Date (the "New Exercise Date"), and shall terminate immediately prior to the consummation of such proposed dissolution or liquidation, unless provided otherwise by

the Administrator. The New Exercise Date shall be before the date of the Company's proposed dissolution or liquidation. The Administrator shall notify each participant in writing, at least 10 (ten) business days prior to the New Exercise Date, that the Exercise Date for the participant's option has been changed to the New Exercise Date and that the participant's option shall be exercised automatically on the New Exercise Date, unless prior to such date the participant has withdrawn from the Offering Period as provided in Section 10 hereof.

c). Merger or Change-of-Control. In the event of a merger or Change-of-Control, each outstanding option shall be assumed or an equivalent option substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the option, any Purchase Periods then in progress shall be shortened by setting a New Exercise Date and any Offering Periods then in progress shall end on the New Exercise Date. The New Exercise Date shall be before the date of the Company's proposed merger or Change-of-Control. The Administrator shall notify each participant in writing, at least 10 (ten) business days prior to the New Exercise Date, that the Exercise Date for the participant's option has been changed to the New Exercise Date and that the participant's option shall be exercised automatically on the New Exercise Date, unless prior to such date the participant has withdrawn from the Offering Period as provided in Section 10 hereof.

20. Amendment or Termination.

a). The Administrator may at any time and for any reason terminate or amend the Plan. Except as otherwise provided in the Plan, no such termination can affect options previously

B-7

granted, provided that an Offering Period may be terminated by the Administrator on any Exercise Date if the Administrator determines that the termination of the Offering Period or the Plan is in the best interests of the Company and its stockholders. Except as provided in Section 19 and this Section 20 hereof, no amendment may make any change in any option theretofore granted which adversely affects the rights of any participant. To the extent necessary to comply with Section 423 of the Code (or any successor rule or provision or any other applicable law, regulation or stock exchange rule), the Company shall obtain stockholder approval in such a manner and to such a degree as required.

b). Without stockholder consent and without regard to whether any participant rights may be considered to have been "adversely affected," the Administrator shall be entitled to change the Offering Periods, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a participant in order to adjust for delays or mistakes in the Company's processing of properly completed withholding elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each participant properly correspond with amounts withheld from the participant's Compensation, and establish such other limitations or procedures as the Administrator determines in its sole discretion advisable which are consistent with the Plan.

c). In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Board may, in its discretion and, to the extent necessary or desirable, modify or amend the Plan to reduce or eliminate such accounting consequence including, but not limited to:

(i) increasing the Purchase Price for any Offering Period including

an Offering Period underway at the time of the change in Purchase Price;

(ii) shortening any Offering Period so that Offering Period ends on a new Exercise Date, including an Offering Period underway at the time of the Board action; and

(iii) allocating shares.

Such modifications or amendments shall not require stockholder approval or the consent of any Plan participants.

21. Notices. All notices or other communications by a participant to the Company under or in connection with the Plan shall be deemed to have been duly given when received in the form and manner specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

22. Conditions Upon Issuance of Shares. Shares shall not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such shares pursuant thereto shall comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act of 1933, as amended, the Exchange Act, the rules and regulations promulgated thereunder, and the requirements of any stock exchange upon which the shares may then be listed, and shall be further subject to the approval of counsel for the Company with respect to such compliance.

As a condition to the exercise of an option, the Company may require the person exercising such option to represent and warrant at the time of any such exercise that the shares are being purchased only for investment and without any present intention to sell or distribute such shares if, in the opinion of counsel for the Company, such a representation is required by any of the aforementioned applicable provisions of law.

B-8

23. Term of Plan. The Plan shall become effective upon the earlier to occur of its adoption by the Board of Directors or its approval by the stockholders of the Company. It shall continue in effect until terminated under Section 20 hereof.

24. Automatic Transfer to Low Price Offering Period. To the extent permitted by any applicable laws, regulations, or stock exchange rules if the Fair Market Value of the Common Stock on any Exercise Date in an Offering Period is lower than the Fair Market Value of the Common Stock on the Offering Date of such Offering Period, then all participants in such Offering Period shall be automatically withdrawn from such Offering Period immediately after the exercise of their option on such Exercise Date and automatically re-enrolled in the immediately following Offering Period.

B-9

EXHIBIT 1

HARMONIC INC.

2002 EMPLOYEE STOCK PURCHASE PLAN

SUBSCRIPTION AGREEMENT

____ Original Application
____ Change in Payroll Deduction Rate
____ Change of Beneficiary(ies) Offering Date

1.
----- hereby elects to participate in the Harmonic, Inc. 2002 Employee Stock Purchase Plan (the "Employee Stock Purchase Plan") and

subscribes to purchase shares of the Company's Common Stock in accordance with this Subscription Agreement and the Employee Stock Purchase Plan.

2. I hereby authorize payroll deductions from each paycheck in the amount of ___% of my Compensation on each payday (from 0% to 10%) during the Offering Period in accordance with the Employee Stock Purchase Plan. (Please note that no fractional percentages are permitted.)

3. I understand that said payroll deductions shall be accumulated for the purchase of shares of Common Stock at the applicable Purchase Price determined in accordance with the Employee Stock Purchase Plan. I understand that if I do not withdraw from an Offering Period, any accumulated payroll deductions will be used to automatically exercise my option.

4. I have received a copy of the complete Employee Stock Purchase Plan. I understand that my participation in the Employee Stock Purchase Plan is in all respects subject to the terms of the Plan. I understand that my ability to exercise the option under this Subscription Agreement is subject to stockholder approval of the Employee Stock Purchase Plan.

5. Shares purchased for me under the Employee Stock Purchase Plan should be issued in the name(s) of (Eligible Employee or Eligible Employee and Spouse only).

6. I understand that if I dispose of any shares received by me pursuant to the Plan within 2 years after the Offering Date (the first day of the Offering Period during which I purchased such shares) or one year after the Exercise Date, I will be treated for federal income tax purposes as having received ordinary income at the time of such disposition in an amount equal to the excess of the fair market value of the shares at the time such shares were purchased by me over the price which I paid for the shares. I hereby agree to notify the Company in writing within 30 days after the date of any disposition of my shares and I will make adequate provision for Federal, state or other tax withholding obligations, if any, which arise upon the disposition of the Common Stock. The Company may, but will not be obligated to, withhold from my compensation the amount necessary to meet any applicable withholding obligation including any withholding necessary to make available to the Company any tax deductions or benefits attributable to sale or early disposition of Common Stock by me. If I dispose of such shares at any time after the expiration of the 2-year and 1-year holding periods, I understand that I will be treated for federal income tax purposes as having received income only at the time of such disposition, and that such income will be taxed as ordinary income only to the extent of an amount equal to the lesser of (1) the excess of the fair market value of the shares at the time of such disposition over the purchase price which I paid for the shares, or (2) 15% of the fair market value of the shares on the first day of the Offering Period. The remainder of the gain, if any, recognized on such disposition will be taxed as capital gain.

7. I hereby agree to be bound by the terms of the Employee Stock Purchase Plan. The effectiveness of this Subscription Agreement is dependent upon my eligibility to participate in the Employee Stock Purchase Plan.

B-10

8. In the event of my death, I hereby designate the following as my beneficiary(ies) to receive all payments and shares due me under the Employee Stock Purchase Plan:

NAME: (Please print)

(First) (Middle) (Last)

Relationship

Percentage Benefit (Address)

NAME: (Please print)

(First) (Middle) (Last)

Relationship

Percentage Benefit (Address)

Employee's Social Security Number: -----

Employee's Address: -----

I UNDERSTAND THAT THIS SUBSCRIPTION AGREEMENT SHALL REMAIN IN EFFECT THROUGHOUT
SUCCESSIVE OFFERING PERIODS UNLESS TERMINATED BY ME.

Dated: -----
Signature of Employee

Spouse's Signature (If beneficiary other than spouse)

B-11

EXHIBIT 2

HARMONIC INC.

2002 EMPLOYEE STOCK PURCHASE PLAN

NOTICE OF WITHDRAWAL

The undersigned participant in the Offering Period of the Harmonic Inc. 2002 Employee Stock Purchase Plan which began on _____, ____ (the "Offering Date") hereby notifies the Company that he or she hereby withdraws from the Offering Period. He or she hereby directs the Company to pay to the undersigned as promptly as practicable all the payroll deductions credited to his or her account with respect to such Offering Period. The undersigned understands and agrees that his or her option for such Offering Period will be automatically terminated. The undersigned understands further that no further payroll deductions will be made for the purchase of shares in the current

Offering Period and the undersigned shall be eligible to participate in succeeding Offering Periods only by delivering to the Company a new Subscription Agreement. Name and Address of Participant:

Signature:

Date:

HARMONIC INC. AND SUBSIDIARIES

SUBSIDIARIES OF THE REGISTRANT

THE FOLLOWING TABLE SHOWS CERTAIN INFORMATION WITH RESPECT TO THE ACTIVE SUBSIDIARIES OF THE COMPANY AS OF DECEMBER 31, 2002

| NAME | STATE OR OTHER JURISDICTION OF INCORPORATION | PERCENT OF VOTING SECURITIES OWNED BY HARMONIC |
|-----------------------------------|--|--|
| Harmonic (Asia Pacific) Ltd. | Hong Kong, China | 100% |
| Harmonic Data Systems Ltd. | Israel | 100% |
| Harmonic Europe S.A.S. | France | 100% |
| Harmonic Germany GmbH | Germany | 100% |
| Harmonic International Inc. | U.S.A. | 100% |
| Harmonic International Limited | Bermuda | 100% |
| Harmonic Lightwaves (Israel) Ltd. | Israel | 100% |
| Harmonic (UK) Ltd. | United Kingdom | 100% |

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-91464, 333-84720, 333-59248, 333-43160, 333-86649, 333-65051, 333-44265, 333-38025, and 033-94138) and Form S-3 (No. 333-84430) of Harmonic Inc. of our report dated January 22, 2003, except as to Note 18, which is dated as of March 28, 2003, relating to the financial statements and financial statement schedule, which appears in this Annual Report on Form 10-K.

/s/ PRICEWATERHOUSECOOPERS LLP

PRICEWATERHOUSECOOPERS LLP

San Jose, CA
March 28, 2003

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

I, Anthony J. Ley, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Harmonic Inc. on Form 10-K for the fiscal year ended December 31, 2002 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of Harmonic Inc.

By: /s/Anthony J. Ley

Name: Anthony J. Ley
Title: Chairman, President & Chief Executive Officer
Dated: March 31, 2003

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

I, Robin N. Dickson, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Harmonic Inc. on Form 10-K for the fiscal year ended December 31, 2002 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of Harmonic Inc.

By: /s/Robin N. Dickson

Name: Robin N. Dickson
Title: Chief Financial Officer
Dated: March 31, 2003