AMPEX CORP /DE/
Form 10-K
March 30, 2006
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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2005

OR

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

For the transition period from _____ to _____

Commission File No. 0-20292

Ampex Corporation

(Exact name of Registrant as specified in its charter)

Delaware	**13-3667696**
(State of incorporation)	**(I.R.S. employer identification number)**

1228 Douglas Avenue

Redwood City, California 94063-3199

(Address of principal executive offices, including zip code)

(650) 367-2011

(Registrant s telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

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

Class A Common Stock, par value $.01 per share

Indicate by check mark if Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No x

Indicate by check mark if Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No x

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 x No ¨

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨ Accelerated filer x Non-accelerated filer ¨

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the Registrant as of June 30, 2005 was approximately $126,335,941.50, based on a price of $39.30 per share, which was the closing price of the Registrant s Class A Common Stock on the Nasdaq National Market on that date. The Class A Common Stock is the only class of common stock outstanding.

As of February 28, 2006 there were 3,809,273 outstanding shares of Class A Common Stock and no outstanding shares of Class C Common Stock.

DOCUMENTS INCORPORATED BY REFERENCE

The Registrant s Proxy Statement for its 2006 Annual Meeting of Stockholders is incorporated by reference into Part III (Items 10, 11, 12 and 13) of this Form 10-K.

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AMPEX CORPORATION

FORM 10-K

Year Ended December 31, 2005

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PART I

ITEM 1. BUSINESS

Introduction

Ampex Corporation (Ampex or the Company) is a leading innovator and licensor of visual information technology. During our 61-year history, we have developed substantial proprietary technology relating to the electronic storage, processing and retrieval of data, particularly images. We currently hold approximately 550 patents and patent applications covering digital image processing, digital image compression and recording technologies. We leverage our investment in technology through our corporate licensing division that licenses our patents to manufacturers of consumer electronics products. Through our wholly-owned subsidiary, Ampex Data Systems Corporation (Data Systems), we also incorporate this technology in the design and manufacture of very high performance data storage products, principally used in defense applications to gather digital images and other data from aircraft, satellites and submarines. These products are also used in flight and sensor test applications.

We have two business segments, which we refer to as our Recorders segment and our Licensing segment. Our Recorders segment primarily includes the sale and service of data acquisition and instrumentation recorders (which record data and images rather than computer information), and to a lesser extent mass data storage products, all of which are made by our manufacturing subsidiary, Data Systems. Our Licensing segment involves the licensing of our intellectual property to manufacturers of consumer digital video products through our corporate licensing division. Our products and licensing activities are described below under Patent Licensing Segment, Recorders Segment and Patents, Licenses and Trademarks. For information regarding revenues, income or loss, assets and other financial data for each business segment for each of our last three fiscal years, see Note 19 of the Notes to Consolidated Financial Statements and Business Segments under Item 7 below. For financial information relating to our operations in various geographic areas, see Note 20 of the Notes to Consolidated Financial Statements.

We incorporated in Delaware in January 1992 as the successor to a business originally organized in 1944. References to Ampex include subsidiaries and predecessors of Ampex Corporation, unless the context indicates otherwise. Our principal executive offices are located at 1228 Douglas Avenue, Redwood City, California 94063, and our telephone number is (650) 367-2011. Our Class A Common Stock is quoted on the NASDAQ National Market under the symbol AMPX. We also maintain a website on the Internet at www.ampex.com.

Our trademarks used in this report include Ampex , DCT , DST , DCRsi , DIS , DDRs and DSRs , which are trademarks of Ampex Corpo other trademarks and service marks used in this report are the property of Ampex or their respective owners.

Where You Can Find More Information

You are advised to read this Form 10-K in conjunction with other reports and documents that we file from time to time with the Securities and Exchange Commission (SEC). In particular, please read our Quarterly Reports on Form 10-Q, any Current Reports on Form 8-K that we may file from time to time and our proxy statements. You may obtain copies of these reports directly from us or from the SEC at the SEC s Public Reference Room at 450 Fifth Street, N.W. Washington, D.C. 20549, and you may obtain information about obtaining access to the Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site that contains reports, proxy and information statements, and other information for electronic filers (including us) at its website www.sec.gov. We make available free of charge on or through our Internet website located at www.ampex.com our SEC filings on Forms 10-K, 10-Q and 8-K and any amendments to those filings as soon as reasonably practicable after electronic filing with the SEC, our Code of Ethics, and certain other documents.

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Forward-Looking Statements

This Form 10-K contains predictions, projections and other statements about the future that are intended to be forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause our actual results, performance or achievements, or industry results, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements. Such risks, uncertainties and other important factors include, among others, those described under Risk Factors , below. These forward-looking statements speak only as of the date of this Report. We disclaim any obligation or undertaking to disseminate updates or revisions of any expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. IN ASSESSING FORWARD-LOOKING STATEMENTS CONTAINED IN THIS FORM 10-K, READERS ARE URGED TO READ CAREFULLY ALL SUCH CAUTIONARY STATEMENTS.

Licensing Segment

Overview

Ampex has a significant portfolio of patents that results from investments in research, development and engineering that we have made to design and improve the products made by our manufacturing subsidiary, Data Systems. In general, our products have been designed for demanding and specialized professional television or intelligence gathering use and have, therefore, been too expensive for sale to individual consumers. However, we have found that, in many instances, patented innovations in performance or features developed for the professional markets have later been adopted in consumer products, typically 7-10 years later.

In order to generate revenues from the consumer markets that we do not sell in directly, we license our patents to manufacturers of consumer electronics in return for royalties based on the value of their sales. In 1968, we licensed our first manufacturer of consumer videocassette recorders (VCRs) and subsequently we licensed essentially every significant manufacturer of VCRs in the world. As our earlier patents expired, we developed new patented inventions and licensees continued to pay royalties to be able to incorporate these new patents in their VCRs. As a result, our royalty income has continued. In the period 1990 to 2000, our licensing income fluctuated significantly but averaged $16 million per year. VCRs were based on analog video technology. We ceased to develop analog technology many years ago. Most of the relevant patents expired by 2001 and our licensees no longer pay significant royalties on analog products. However, Ampex s research and development in the field of digital video recording resulted in patents which have found application in digital camcorders, digital still cameras and we believe other products that record still or motion video images. All significant manufacturers of these products, except one, have now taken licenses under certain of our patents. We are in active negotiations with several of our licensees and other manufacturers regarding their use of certain additional patents on which we are not receiving royalties, which we believe they currently infringe.

Technology

In the 1980 s Ampex was a leader in the development of digital video technology for use in such products as digital special effects, digital graphics, digital time base correctors and many others. We received limited royalty income from licensing these patents for use in broadcast television products, but the markets were small and image-based consumer products did not employ digital technology at that time for various reasons, including cost.

As part of our digital video technology development, Ampex made developments in digital image compression, and in the mid 1990 s we introduced the first professional videotape recorder to successfully use digital image compression. These devices were part of a family of products marketed by Ampex under the DCT

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trademark. The patents that we received as a result of designing these products are now, we believe, among the most potentially valuable to our licensing program with the manufacturers of digital video consumer products.

Digital image compression, which was developed by Ampex and by several other companies, has been a key factor making it possible to produce new generations of digital consumer imaging products at affordable prices. Products that store images without compression have remained too inefficient and expensive. Compression lowers component costs and also reduces size, power consumption and data storage requirements, which are crucial to making devices that are portable.

The adoption of digital technology in consumer markets also resulted in a technical convergence among consumer products. For example, in the analog era, still video images were captured on chemical film while motion video was captured on magnetic videotape. Today s digital products use common technologies so that digital still cameras can record motion video as well as still video images, digital video recorders can record still video images as well as motion video, and some digital cellular telephones can record and transmit both types of video images. This convergence has been important to Ampex because it has enabled us to broaden the markets that our licensing program can address. During the period that we licensed analog technology, substantially all of our royalties came from VCRs. Most of our analog VCR patents expired in 2001 and we no longer receive significant licensing revenues on these patents. In 2003 most of our royalties were from digital video camcorders. In 2004 and 2005, we continued to generate significant royalties from digital video camcorders but the majority of our licensing revenues came from digital still cameras, and we also generated royalties from DVD recorders. These are markets in which Ampex had never previously licensed its patents.

Patents

Due to the number of patents that we hold and the complexity of the technology, it is not possible for us to know with certainty which of our patents are the most significant. However, currently it is our opinion that our most significant patents fall into the four areas described below, which are generally relevant to digital consumer imaging products. Also, it is our policy to license a portfolio of our patents in order to provide our licensees with the maximum amount of design freedom. Whether our licensees use one or several of our patents, the royalty rate is unaffected. We do not receive information from our licensees as to which specific patents they actually use at any point in time.

Rapid image retrieval has been responsible for the majority of the license income that we earned in 2005 and 2004 from digital still cameras. In this area we have only one patent that remains in force. This patent is used in the creation, storage and retrieval of thumbnail images, which allow users to select a particular picture, quickly, from a large number held in electronic storage. We believe that this patent is widely used in digital still cameras and possibly also in camera-equipped cellular telephones. The related foreign patents expired in 2004 and the US patent will expire on April 11, 2006. If we are unable to validate that our licensees utilize at least one of our other digital imaging patents discussed below, our licensing revenues from digital still cameras will cease after April 11, 2006.

Image data shuffling patents are used to reduce the amount of data required to transmit or record an image. These patents expire at various dates through 2013 and have been issued in the USA, France, Great Britain, Germany, Japan, Korea and Taiwan. We believe that these patents are necessary for the production of digital video camcorders because they are included in applicable technical standards. We believe it is possible that they also may be used in DVD recorders and set top cable boxes that are equipped to record video (cable boxes). The technology is useful in compressing either still or motion video images and we believe it is possible these patents may be used or useful in digital still cameras and possibly in camera-equipped cellular telephones.

Feed forward quantization patents are also useful in reducing the amount of data required to transmit or record images, principally video images. These patents expire at various dates through 2012 and have been issued in the USA, France, Great Britain, Germany, Korea and Taiwan. We believe that these patents are

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necessary for the production of digital video camcorders in order to comply with applicable technical standards. We believe that these patents may be used in DVD recorders and cable boxes. We also believe that they may be used or useful now or in the future in digital still cameras and camera-equipped cellular telephones that have the capability to record still and motion video.

High-speed data decoding patents may be useful in any digital device that displays video. The patents expire at various dates through 2014 and are issued in the USA, Austria, France, Great Britain and Germany, and an application is pending in Japan. We are investigating the extent to which these patents may be used in many consumer digital devices but we have not yet reached a conclusion as to which products, if any, may currently infringe these patents.

Markets and Customers

The major product categories from which we receive royalty income at present are:

Digital video camcorders. In 2005, we received recurring royalties from three manufacturers of these products totaling approximately $5.1 million. Additionally, under an agreement concluded in July 2005, Samsung Electronics, Co., Ltd. has prepaid $2.75 million to us for the right to use our patents in digital video camcorders, through 2008. Also, as a result of a prepaid licensing agreement concluded in 2004 that expires in April 2006, we do not receive current licensing income for these products from Sony. Commencing in the second quarter of 2006, Sony will be required to pay recurring royalties based on the value of its sales in countries where our patents are in force and infringed by their products. Based on market research and published financial data, we believe that Sony s sales of digital video camcorders are significantly greater than those of the licensees who pay us currently. Accordingly, we expect that, commencing in the second quarter of 2006 when Sony becomes obliged to pay royalties to us currently, our recurring royalties from digital video camcorders should increase significantly from current levels, assuming sales levels remain the same.

Digital still cameras. In 2005, we received approximately $20.4 million of royalties for use of our patents in digital still cameras. Of this amount, approximately $4.5 million represents recurring royalties and approximately $15.9 million represents negotiated settlements covering past use of Ampex s patents and, in some cases, a prepayment of royalty obligations through April 11, 2006. April 11, 2006 coincides with the U.S. expiration of our rapid image retrieval patent (121), which is used in digital still cameras and in certain camera-equipped cellular phones. While our digital still camera license agreements permit our licensees to use our portfolio of digital imaging patents, by agreement, we are currently receiving royalties only on the 121 patent. To date, this is the only patent we have chosen to litigate. We have analyzed several digital still cameras and believe that many utilize our feed forward quantization patent. We have provided claim charts to three licensees that allege infringement of this patent and we expect to issue additional claim charts to other licensees or manufacturers during 2006 if further testing indicates that their products infringe our patents. We have scheduled additional technical and business meetings to discuss our claim charts and believe that several additional meetings will be required over the next six to nine months until we can conclusively determine whether or not our feed forward quantization patent is being used. In addition to our feed forward quantization patent, our image data shuffling and high-speed data decoding patents may be used or useful in these products but we have not done sufficient testing to support the issuance of patent claim charts on these other digital imaging patents at this time. In exchange for a favorable royalty on future product sales, certain digital still camera licensees have agreed to provide us with access to technical information in order for the parties to confirm whether any of our other digital imaging patents, including our feed forward quantization patent, are being utilized in digital still cameras and camera equipped cellular phones manufactured by or for such licensees. To date, we have entered into licenses for the use of our patents in digital still cameras with Canon Inc., Casio Computer Co. Ltd., Fuji Photo Film Co. Ltd., Funai Electric Co. Ltd., Konica Minolta Holdings, Inc., Matsushita Electric Industrial Co. Ltd., Nikon Corporation, Olympus Corporation, Pentax Corporation, Samsung Techwin Co. Ltd., Sanyo Electric Co. Ltd., Sony Corporation and Victor Company of Japan.

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Although our rapid image retrieval patent expires on April 11, 2006, our other digital imaging patents are registered in many of the major worldwide markets and have expiration dates through 2014. In the event that additional patents are infringed by manufacturers of digital still cameras, we would expect to receive royalties over the remaining lives of these patents on product shipments after April 11, 2006. Also, because these patents are in force in most worldwide markets we would expect that the level of annual recurring royalties would be greater than amounts received in 2005 since our 121 patent is presently only in force in the U.S. However, it may be necessary to incur additional expenses for litigation to enforce our patents, which we are prepared to do. Also, while we believe that other Ampex patents may be used in digital still cameras now or in the future, we cannot assure you that this belief is correct. Therefore, after April 11, 2006, our digital still camera royalties may be materially reduced or eliminated.

Camera equipped cellular telephones. At present we have two licensees for these products, one of which has prepaid its obligation through April 2006. Based on current trends, which are for cellular telephones to record higher resolution still images or significant amounts of video, we believe that these products will be required to employ high levels of image compression which may involve the use of our patents. We have notified many major manufacturers of camera-equipped cellular telephones that we believe they may be infringing certain of our patents. We cannot assure you that these products infringe our patents now or will do so in the future, or that we will be able to negotiate any licenses for these products. Our discussions are in an early stage and are likely to require substantial exchanges of technical and business information before we can be certain that our patents have been infringed. As a result, we believe it is not likely that we will generate significant income from these products in 2006, and if our negotiations are unsuccessful we may have to initiate litigation to enforce our patents at some time in the future.

DVD recorders and cable boxes. In 2004, we were approached by a consumer electronic manufacturer that planned to introduce a line of DVD recorders. We concluded a license with this company that also covers use of our patents in video recorders utilizing hard disks (PVR s) or DVD storage. In 2005, less than 5% of our licensing revenue was generated by this licensee and future royalties will be dependent on the value of sales achieved by this licensee. We believe that other manufacturers of DVD recorders and PVRs may be using one or more of our patents. We are currently in discussion with another major manufacturer of DVD recorders concerning a license of our technology. At present we cannot assure you that we will be able to conclude any additional licenses for our DVD recorder and PVR related patents.

We are continuing to review other categories of products such as digital television receivers for potential licensing opportunities but have not yet concluded that any of our patents are being used.

Many of our patents that are relevant to consumer products are the result of design work on professional and broadcast television products. These are markets that we do not at present pursue actively. Therefore, as our patents that are useful in consumer products expire, we may not be able to replace them, with the result that we might cease to receive patent royalties in the future. We will give consideration to funding new research and development projects in the digital imaging field or to the acquisition of patents from others. No decisions in this regard have been taken and there can be no assurance that any new licensable patents will be developed or acquired.

Recorders Segment

Products

All of our products are manufactured by Data Systems and are comprised of very high performance instrumentation and mass data storage products. High performance recorders reproduce data at higher speeds and store larger volumes of data than in general purpose recording devices. Instrumentation recorders capture digital data that is usually generated by a sensor or other devices. Examples include satellite telemetry information and flight test data. Our mass data storage products consist of our 19-millimeter scanning recorders and robotic

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library systems and related tape and after-market parts. Helical scanning 19-millimeter tape recorders were initially commercialized for the professional broadcast market and utilize a unique recording tape format that is partitioned to permit faster data access and greater storage than possible with linear tape drives that are generally used in typical computing environments. Library systems allow for scalable storage by assembling tape cartridges in multiple racks that can be quickly accessed by the tape drive. Data Systems also continues to offer spare parts to repair professional video recorders and other products that it previously manufactured and marketed to the television production and post-production industries. However, sales of spare parts of legacy television products accounted for less than 10% of total Recorders segment revenue in all periods reported herein. For information concerning revenue for each product group comprising in excess of 15% of consolidated revenue and other information relating to our operating segments, see Management s Discussion and Analysis of Financial Condition and Results of Operations.

Data Acquisition/Instrumentation Products. We have been well established for more than 50 years as a supplier of instrumentation recorders. We have supplied these recorders primarily to government agencies for use in data collection, satellite surveillance and defense-related applications, as well as to defense contractors and aerospace and other industrial users primarily for test and measurement purposes. Our instrumentation recorders have been used on almost every advanced commercial and U.S. military aircraft, as well as on foreign aircraft. We believe they are well suited to these demanding aeronautical applications and other applications involving comparable data-gathering challenges in extreme environments, because of their performance and reliability.

Our principal data acquisition/instrumentation products currently are the DDRs 400, DSRs 440 and DSRs 400B. These are disk and solid-state memory based recorders, which are plug-compatible replacements for the Company s tape-based DCRsi instrumentation recorders for ease of data transfer, analysis and archival storage. The removable, hermetically sealed disk cartridge based DDRs 400 instrumentation disk recorder offers a sustained data rate of 400 megabits per second (Mb/s) and storage capacity of up to 640 gigabytes (GB). The DDRs 400 is used in airborne image recording, telemetry data and acoustic sonar data acquisition and in flight test and radar development applications. The DSRs 440 and DSRs 400B solid state recording systems include removable, flash memory cartridges and are specifically designed for airborne applications requiring rapid data rates and large storage capacities in a small, rugged and lightweight package. The DSRs 440 offers a sustained data rate of 400 Mb/s and an expandable storage capacity of up to one terabyte (TB). The DSRs 400B offers a sustained data rate of 600 Mb/s and storage capacity of up to 500 GB. The Company also offers a Multiplexer product line that can be internally or externally configured with the DDRs and DSRs product line to enable simultaneous capture of multiple channels of data input in mission critical applications.

The Company continues to offer its tape-based DCRsi 240, DCRsi 120 and DCRsi 75 digital instrumentation recorders. Tapes from these recorders are fully interchangeable. The DCRsi recorders are rugged, highly reliable and compact recorders that permit uninterrupted data capture from fractions of a megabit per second up to 240 megabits per second over very long periods of time, such as during test flights of new aircraft. The DCRsi 240 instrumentation recorder has the capability of storing 48GB of data at a record/reproduce rate of up to 240 Mb/s. The DCRsi 120 instrumentation recorder has a similar storage capacity and a record/reproduce rate of 120 MB per second. The DCRsi 75 recorder is our lowest cost DCRsi model with a record-reproduce rate of 75 MB per second. These products are designed for data interchange between locations and agencies. In ground-based applications, which generally are less harsh environments that do not require the ruggedness of a DCRsi recorder, our 19-millimeter DST and DIS mass data storage products can also perform the storage and analysis functions of DCRsi products.

To date, we have shipped our new disk and solid-state memory based products to various U.S. and foreign governmental agencies. Orders for these products have generated an increase in backlog at December 31, 2005 to $9.1 million from $3.7 million at December 31, 2004. In addition, we were also approved by the U.S. Navy to provide up to $5.0 million of these newly introduced products. This arrangement is excluded from backlog at this time. Future deliveries under this approval will be subject to receipt of purchase orders over the next three years

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for specific quantities to be determined by the U.S. Navy from time to time. Government programs, which utilize these products, have lead times of several years before significant revenues are generated.

Significant portions of data acquisition and instrumentation recorder sales reflect purchases by prime contractors to the federal government, which can be subject to significant fluctuations. See Markets. In addition, other factors relating to the markets for our instrumentation products and to competition in these markets may affect future sales of these products. See Distribution and Customers, Competition, and New Product Development and Industry Conditions.

19-millimeter Products. Our 19-millimeter tape based products include our DST and DIS tape drives and library systems and use core technology developed by us for our digital video recorders. Our DST tape drives are used to store digital data in formats such as SCSI and fibre channel that are typically utilized in the computer industry. Our DIS tape drives use specialized instrumentation formats that are primarily used in intelligence gathering. The drives use high-density metal particle tape cartridges, which are available in a range of sizes providing storage capacities from 100 to 660GB per cartridge in quad-density format. DST automated library systems incorporate multiple tape cartridges and tape drives and provide from 1.2 to 12.8 terabytes (TB) of storage capacity while occupying only a fraction of the floor space required by competing storage systems. Expansion modules can expand the DST library storage capacities up to approximately 100 TB. DST and DIS tape drives offer rapid access times to vast amounts of data that is maintained near online to allow it to be retrieved/archived quickly from/to very large data bases. We manufacture our 19-millimeter products to customer order. Since our Recorders segment is primarily focused on our data acquisition and instrumentation products, we do not currently intend to invest additional development resources to extend the life of our 19-millimeter products beyond the quad density format. However, we will conduct sustaining engineering to support our current customers requirements. See Markets, Distribution and Customers, Competition, and New Product Development and Industry Conditions.

Other Products. Data Systems other products are primarily television after-market products (including spare parts) relating to television products that we manufactured in prior periods and continue to support.

Markets

Data Acquisition/Instrumentation Recorders. Data Systems DDRs, DSRs and DCRsi recording drives are designed to acquire large volumes of data in stressful physical environments, and are used extensively in airborne and naval intelligence acquisition and for the collection of test data during the design and qualification of aircraft. These products are used by U.S. and foreign military and intelligence agencies (including those of Germany, Japan and the United Kingdom), as well as by manufacturers of commercial airplanes, such as Boeing Corporation, and other foreign airframe manufacturers. A significant portion of DCRsi products are also sold in versions that are intended for use in ground facilities for the long-term storage or analysis of data previously collected in mobile environments. Our DSRs and DDRs products have been developed to replace over several years a large installed base of DCRsi tape-based recorders.

U.S and foreign government agencies continue to be the primary market for our data acquisition and instrumentation recorders. Sales to government agencies are subject to fluctuation as a result of changes in government spending programs (including defense programs) and could be adversely affected by pressure on government agencies to reduce spending. Any material decline in the current level of government purchases of our products could have a material adverse effect on us.

19-Millimeter Products. Our 19-millimeter mass storage tape drives and library systems are optimized for applications that must handle large amounts of data, such as those that process and store images, digital video and streaming data. Government intelligence data gathering and archival storage are our principal markets.

Our products are used in a small number of specialized applications. Accordingly, we believe that our share of the overall data storage market is very small.

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Distribution and Customers

Our data acquisition and instrumentation recorders (including our DIS 19-millimeter tape drives) are sold primarily to prime contractors who in turn sell to government agencies involved in data collection, satellite surveillance and defense-related activities, as well as to defense contractors and other industrial users for testing and measurement purposes. Sales of instrumentation recorders are made through our internal domestic and international sales forces, as well as through independent sales organizations in foreign markets. The government programs that involve our products are typically long-term in duration. Government procurement practices typically limit our customers purchase commitments with our recorders segment to one-year or less. Also, we typically operate with low levels of backlog and ship products ordered within a particular quarter in that quarter or the succeeding quarter.

We currently distribute our 19-millimeter products (including DST and DIS recorders) directly through our internal sales force, as well as through independent value-added resellers. With respect to our 19-millimeter recorders, we are not actively pursuing new government programs but continue to offer products to customers who desire to support or expand an existing program.

We currently operate a total of six sales and service offices, including four in the U.S., one in Japan and one in the United Kingdom.

Our sales to U.S. government agencies (either directly or indirectly through government contractors) represented approximately 59% of Recorders segment revenue in fiscal 2005 compared to 70% in fiscal 2004 and 72% in fiscal 2003. Products sold for U.S. government use include primarily data acquisition instrumentation recording systems. Sales to government customers are subject to customary contractual provisions permitting termination at the government s election. See Markets.

In 2005 and 2004, no single Recorders segment customer accounted for more than 10% of total revenue. In 2003, one customer, BAE Systems, accounted for 14.4% of total revenue.

Research, Development and Engineering

Recording systems such as those developed by us initially in the professional television industry and subsequently in the mass data storage industry involve extremely complex technology. As a result, we have developed extensive expertise in a wide area of technical disciplines and have developed fundamental innovations in digital image processing, magnetic recording technology and communication channel electronics. In 2005, we spent approximately $4.2 million (17.2% of total Recorders segment revenue) for research and development programs and engineering costs, compared to $3.9 million (13.8% of total Recorders segment revenue) in 2004 and $3.2 million (9.5% of Recorders segment revenue) in 2003. Future research, development and engineering spending may need to be reduced if Data Systems were to experience further declines in product revenues. See Management s Discussion and Analysis of Financial Condition and Results of Operations and Note 2 of the Notes to Consolidated Financial Statements.

In prior years, we designed and manufactured a wide range of professional television products, and we patented many of our innovations. While we exited those markets several years ago, many patents covering innovations in the field remain in force. These technologies form the foundation of our digital patent portfolio that we are seeking to exploit with new licensing agreements covering digital video camcorders, digital still cameras, DVD recorders, and hard disk recorders.

In recent years, our Recorders segment has elected to focus on its data acquisition and instrumentation products. As a result, it has transitioned much of its research and development budget away from the 19-millimeter digital recording technology, to the recently developed DSRs and DDRs solid-state and disk-based recorders, which incorporate data interfaces previously utilized in our DCRsi recorders. These products have

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largely been designed in response to unique and varied requirements of various government agencies and are being evaluated for inclusion in future intelligence gathering programs under consideration. As a result, our new products have been manufactured in limited quantities. New government programs typically undergo several years of evaluation before product specifications are established, prime and subcontractors selected, funding appropriated and contracts let. See Recorder Segment Products Data Acquisition/Instrumentation Products above. We do not plan to develop our 19-millimeter product lines beyond the quad density format. However, we will conduct sustaining engineering to support our current customers requirements.

All of our research, development and engineering efforts are conducted in-house. While we do not outsource our product engineering, in line with industry trends, we endeavor to utilize off the shelf components rather than to design our own components. Research and development is subject to certain risks and uncertainties described below under New Product Development and Industry Conditions, and there can be no assurance that any of these efforts will be technologically or commercially successful.

Patents, Licenses and Trademarks

As a result of our ongoing research and development expenditures, we have developed substantial proprietary technology, certain of which we have elected to patent or to seek to patent. As of December 31, 2005, we held approximately 550 patents and patent applications, including approximately 200 patents in the U.S. and approximately 350 corresponding patents in other countries. Also, there are approximately 30 U.S. and foreign patent applications pending. The majority of these patents and pending patents relate to our recording technology. We continually review our patent portfolio and allow non-strategic patents to lapse, thereby minimizing substantial renewal fees.

U.S. patents are, at present, in force for a period of 20 years from the date of application and patents granted by foreign jurisdictions are generally in force for between 14 years to 20 years from the date of application. We have obtained our present patents over the course of the past 20 years and, accordingly, have patents in force that will expire from time to time over the next 20 years. Patents are important to our current overall business, both as a source of protection of the proprietary technology used in our current products, and as a source of royalty revenue. While results of operations would be adversely affected by the loss or expiration of patents that generate significant royalty revenue, Management believes that none of our Recorder Segment product lines is materially dependent upon a single patent or license or group of related patents or licenses, and that timely introduction of products incorporating new technologies or particularly suited to meet the needs of a specific market or customer group is a more important determinant of the success of our current business.

In 2005, one licensee, Matsushita Electric Industrial Co. Ltd., accounted for 12% of total revenue. In 2004, two licensees, Sony and Canon, accounted for 39.4% and 19.2% of total revenue, respectively. In 2003, one licensee, Matsushita Electric Industrial Co. Ltd. accounted for 14.9% of total revenue.

It is not possible to predict the amount of royalty revenue that will be received in the future. Royalty revenue has historically fluctuated widely due to a number of factors that we cannot predict, such as the extent of use of our patented technology by third parties, the extent to which we must pursue litigation in order to enforce our patents, and the ultimate success of our licensing and litigation activities. We also expect to spend additional costs in future years in our investigation and analysis of how our digital video imaging and data compression technologies are being utilized by manufacturers of consumer digital video products. There can be no assurance that we will continue to develop patentable technology that will generate significant patent royalties in future years. We will continue to evaluate additional products and potential licensing opportunities to the extent that our technical and financial resources permit. We have not granted any licenses under our scanning recorder patents specifically for data storage applications, but we may do so in the future if we determine that this would support our marketing strategy.

We regard our trademark Ampex and our logo as valuable to our businesses. We have registered our trademark and logo in the U.S. and a number of foreign countries. U.S. trademark registrations are generally

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valid for an initial term of 10 years and renewable for subsequent 10-year periods. We have not granted any material rights to use our name or logo to any other third party.

Our trademarks used in this report include Ampex , DCT , DST , DIS , DCRsi , DSRs and DDRs , all of which are trademarks of Ampex Corporation. All other trademarks and service marks used in this report are the property of Ampex or their respective owners.

Manufacturing

Our Recorders segment s products are manufactured at facilities in Redwood City, California and Colorado Springs, Colorado. Products are designed and engineered primarily in Redwood City. Because our mass data storage products incorporate many of the technologies and components of our 19-millimeter-based videotape recorders, the manufacturing process of the mass data storage products has benefited from the existing video recorder production facilities and techniques.

We maintain insurance, including business interruption insurance, which Management considers adequate and customary under the circumstances. However, there is no assurance that we will not incur losses beyond the limits of, or outside the coverage of, our current insurance policies.

Sources of Supply

We use a broad variety of raw materials and components in our manufacturing operations. While most materials are readily available from numerous sources, we purchase certain components, such as customized integrated circuits, memory chips and flexible magnetic media, from a single domestic or foreign manufacturer. Significant delays in deliveries of, or defects in the supply of, such components could adversely affect our manufacturing operations pending qualification of an alternative supplier. In addition, we produce highly engineered products in relatively small quantities. As a result, our ability to cause suppliers to continue production of certain products on which we may depend may be limited. Manufacturers have required us in the past and may require us in the future to purchase lifetime quantities of certain products or components in advance of their discontinuing the product, requiring us to maintain inventory levels in excess of current period revenue forecasts. We do not generally enter into long-term raw material supply contracts. In addition, many of the components of our products are designed, developed and manufactured by us, and thus are not readily available from alternative sources.

Fluctuations in Operating Results; Seasonality and Backlog of Recorders Segment

Our revenue and results of operations are generally subject to quarterly and annual fluctuations. Factors affecting operating results include: customer ordering patterns; availability and market acceptance of new products; timing of significant orders and new product announcements; order cancellations; receipt of lump sum royalty settlements for prior period shipments and/or prepayments of running royalties otherwise due in future periods and numerous other factors. Our revenues are typically dependent upon receipt of a limited number of customer orders involving relatively large dollar volumes in any given fiscal period, increasing the potential volatility of our revenues from quarter to quarter. In addition, sales to government customers (primarily sales of instrumentation products) are subject to fluctuations as a result of changes in government spending programs, which can materially affect our gross margin as well as our revenues.

A substantial portion of our backlog at a given time is normally shipped within one or two quarters thereafter. Therefore, revenues in any quarter are heavily dependent on orders received in that quarter and the immediately preceding quarter. Our backlog of firm orders at December 31, 2005 was $9.1 million, compared to $3.7 million at December 31, 2004 and $10.7 million at December 31, 2003. We were awarded a multi-year contract of approximately $6.3 million in the second quarter of 2005 from The Boeing Company for our new disk and solid state-based data instrumentation recorders to be used in the development of the 787 airplane. The

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undelivered value of $5.8 million of this contract has been included in reported backlog as of December 31, 2005. In the fourth quarter of 2005, we were also approved by the U.S. Navy to provide up to $5.0 million of these newly introduced products, which is not included in backlog at this time. Future deliveries under this approval will be subject to receipt of purchase orders over the next three years for specific quantities to be determined by the U.S. Navy from time to time. To date we have received purchase orders and made shipments for a total of $0.4 million as of December 31, 2005. In 2003, we received government orders primarily in DCRsi instrumentation products and tape that remained in backlog pending shipment, which the customer scheduled throughout 2004. We do not generally include foreign orders in backlog until we have obtained requisite export licenses and other documentation. Orders may be subject to cancellation in the event shipments are delayed. For all of the foregoing reasons, results of a given quarter are not necessarily indicative of results to be expected for a fiscal year.

Competition

We encounter significant competition in our Recorders segment product markets. Although our competitors vary from product to product, many are significantly larger companies with greater financial resources, broader product lines and other competitive advantages. Our primary market focus is currently being directed to the data acquisition and instrumentation markets, principally involving intelligence gathering for classified programs where our products have been widely deployed. Our involvement in the mass data storage market is very limited and directed at applications that process video or large image based data sets. We do not attempt to compete in the larger commercial mass data storage applications.

In the instrumentation market, we compete primarily with companies that depend on government contracts for a major portion of their sales in this market, including Heim Data Systems, L-3 Communications Corporation, Calculex and Sypris Solutions, Inc. The number of competitors in this market has decreased in recent years as the level of government spending in many areas has declined. The principal competitive factors in this market are cost, product reliability, product performance and the ability to satisfy applicable government procurement requirements.

New Product Development and Industry Conditions

The instrumentation and data storage industries are characterized by continual technological change and the need to introduce new products and product upgrades. This requires a high level of expenditure for research and development. Obsolescence of existing product lines, or the inability to develop and introduce new products, could have a material adverse effect on revenues and results of operations. We have no current plans to develop our 19-millimeter product lines beyond the quad density format, but we will invest in sustaining engineering activities to support the needs of our existing customer base. We have recently introduced our DSRs and DDRs solid-state memory-based and disk-based instrumentation recorders. To date, shipments of these specialized units have been made to a limited number of customers in small quantities primarily for performance evaluation. If successful, these products could be selected for new intelligence gathering programs that would ultimately seek to replace over time our older tape based DCRsi recorders. There can be no assurance that such orders will actually be received. No assurance can be given that existing products will not become obsolete, that any new products will win commercial acceptance or that our new products or technology will be competitive. See Competition. Furthermore, the introduction of new products or technologies can be hampered by technical problems in design, manufacturing and test procedures or the occurrence of other unforeseen events.

Sales of our instrumentation products can be significantly affected by changes in government spending levels. See Markets and Management s Discussion and Analysis of Financial Condition and Results of Operations.

International Operations

Substantially all of our licensing revenue is derived from foreign customers. Sales of products to foreign customers accounted for approximately 27.3% of product and service revenue in fiscal 2005, compared to 19.5%

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in fiscal 2004 and 13.5% in fiscal 2003. Foreign marketing operations are conducted primarily through local distributors and agents, with support from our internal marketing and sales organization. See Distribution and Customers.

Foreign operations are subject to the usual risk attendant on investments in foreign countries, including limitations on repatriation of earnings, restrictive actions by local governments, fluctuation in foreign currency exchange rates and nationalization. Additionally, export sales are subject to export regulations and restrictions imposed by the U.S. Department of State and the U.S. Department of Commerce.

In certain prior periods, declines in the value of the U.S. dollar in relation to certain foreign currencies have favorably affected our international operations, and in other periods the strength of the dollar relative to such currencies has adversely affected our international operations. Fluctuations in the value of international currencies can be expected to continue to affect our operations in the future, although the impact will be less significant than it was in periods with a higher proportion of sales in foreign currencies. We currently do not hedge our assets that are denominated in foreign currencies. U.S. export revenues and our licensing agreements are principally denominated in U.S. dollars.

See Note 20 of the Notes to Consolidated Financial Statements for additional information concerning our foreign operations.

Environmental Regulation and Proceedings

Our facilities are subject to numerous federal, state and local laws and regulations designed to protect the environment from waste emissions and hazardous substances. We are also subject to the federal Occupational Safety and Health Act and other laws and regulations affecting the safety and health of employees in its facilities. Management believes that we are generally in compliance in all material respects with all applicable environmental and occupational safety laws and regulations or have plans to bring operations into compliance. Management does not anticipate that capital expenditures for pollution control equipment for fiscal 2006 will be material.

Owners and occupiers of sites containing hazardous substances, as well as generators and transporters of hazardous substances, are subject to broad liability under various federal and state environmental laws and regulations, including liability for investigative and cleanup costs and damages arising out of past disposal activities. We have three environmental investigations, remediation and/or monitoring activities outstanding at December 31, 2005. Two sites are associated with the operations of our former manufacturing subsidiary that was sold in 1995 (Media) while the third relates directly to a disposal activity of the Company. Some of these activities involve the participation of state and local government agencies. Although we sold Media in November 1995, we may have continuing liability with respect to environmental contamination at these sites if Media fails to discharge its responsibilities with respect to such sites. On January 10, 2005, Media filed under Chapter 11 of the Bankruptcy Code. In prior years, we had been named as a potentially responsible party by the United States Environmental Protection Agency with respect to four other contaminated sites that have been designated as Superfund sites on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act of 1980. In the second quarter of 2005, we were informed that these former Media sites have been remediated to the satisfaction of the EPA. Accordingly, we believe that there is no further liability with respect to these Superfund sites. During 2004 and 2005, we spent a total of approximately $127,000 and $141,000, respectively, in connection with environmental investigation, remediation and monitoring activities. We expect to spend $1.1 million in the next twelve months for such activities, largely pertaining to Media s prior activities.

Because of the inherent uncertainty as to various aspects of environmental matters, including the extent of environmental damage, the most desirable remediation techniques and the time period during which cleanup costs may be incurred, it is not possible for us to estimate with any degree of certainty the ultimate costs that we

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may incur with respect to the currently pending environmental matters referred to above. Nevertheless, at December 31, 2005, we had an accrued liability of $0.1 million for pending environmental liabilities associated with activities by us and $2.4 million of net liabilities for discontinued operations for the estimated liabilities we may incur with respect to former Media sites discussed above. Although we do not currently possess sufficient information to reasonably estimate the amounts of liabilities to be recorded upon future completion of studies, litigation or settlements, and neither the timing nor the amount of the ultimate costs associated with environmental matters can be determined, they could be material to our consolidated results of operations or operating cash flows in the periods recognized or paid. However, considering our past experience and existing reserves, we do not expect that these environmental matters will have a material adverse effect on our consolidated financial position. These liabilities have not been discounted.

While we believe that we are generally in compliance with all applicable environmental laws and regulations or have plans to bring operations into compliance, it is possible that we will be named as a potentially responsible party in the future with respect to additional Superfund or other sites. Furthermore, because we conduct our business in foreign countries as well as in the U.S., it is not possible to predict the effect that future domestic or foreign regulation could have on our business, operating results or cash flow. There can be no assurance that we will not ultimately incur liability in excess of amounts currently reserved for pending environmental matters, or that additional liabilities with respect to environmental matters will not be asserted. In addition, changes in environmental regulations could impose the need for additional capital equipment or other requirements. Such liabilities or regulations could have a material adverse effect on us in the future.

Employees

As of December 31, 2005, in our continuing operations we employed 127 people worldwide, compared to 127 at December 31, 2004 and 145 at December 31, 2003. Approximately 11% of our current worldwide workforce is employed in our international operations, compared to 12% at December 31, 2004 and 9% at December 31, 2003. No employees are covered by any collective bargaining agreement. We are dependent on the performance of certain key members of Management and key technical personnel. We have not entered into employment agreements with any such individuals. Edward J. Bramson, who has served as our Chief Executive Officer since 1991, is also engaged in the management of certain companies as more fully described below in Item 4A. Executive Officers of the Registrant. Mr. Bramson currently devotes most of his time to the management of Ampex. The loss of the services of Mr. Bramson or other key individuals could have a material adverse effect on us.

Pension Plan Matters

We are the Plan Sponsor of the Ampex pension plan and of the Media pension plan. We amended these plans in early 1994 to terminate benefit service and compensation accruals as of February 1, 1994 in order to reduce payments that would otherwise be required. These pension plans remain underfunded and actuaries have forecasted that substantial pension contributions will be required through 2010 in order to fully fund benefits payable to plan participants.

We account for our obligations under these pension plans in accordance with Statement of Financial Accounting Standards (SFAS) No. 87, Employers Accounting for Pensions. Under this accounting principle, we recognize a liability on our Consolidated Balance Sheet for unfunded accumulated benefit obligations earned by Ampex s and Media s U.S. employees and retirees through the 1994 plan termination date, which at December 31, 2005 totaled $61.3 million and $25.4 million, respectively.

The 1995 sale agreement for Media required the buyer, Quantegy Corporation, to pay directly or to reimburse Ampex for required contributions to the Media pension plan. This agreement was intended to make us whole from any expense or cash outlay as it pertained to the Media pension plan. However, we remained the Plan Sponsor of the Media pension plan and remained obligated to make pension contributions to that plan.

During

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2003, the Company and Media entered into the Retirement Plan Funding and Settlement Agreement, which provided for monthly payments of $74,000 by Media to us in settlement of future pension contributions that may be required under the Media pension plan that would be funded by us. During 2004 and 2003 Media paid directly or reimbursed Ampex for pension contributions made on Media s behalf of $0.8 million and $0.8 million, respectively. During 2005, Media did not pay directly or reimburse us for pension contributions made by us on Media s behalf. Reimbursement payments reduce actuarially determined Media pension costs and are reflected in the Statement of Operations and Comprehensive Income (Loss) when such payments are assured of collection.

On January 10, 2005, Media filed under Chapter 11 of the Bankruptcy Code. Accordingly, we do not expect to receive any additional payments or to be reimbursed for future pension contributions that we will be required to make under the Media pension plan as its Plan Sponsor.

The following schedule lists the annual estimated contributions as computed by the plans actuary for the Ampex pension plan and Media pension plan through 2010. The following amounts are substantially less than the unfunded accumulated benefit obligation recognized by us as liabilities on our Consolidated Balance Sheets due to differing actuarial assumptions prescribed by ERISA in each instance.

	Estimated Contributions	
	Ampex Pension Plan	Media Pension Plan
	(in thousands)	
2006	$ 1,641	$ 7,827
2007	19,338	4,976
2008	9,201	3,769
2009	3,629	1,298
2010	400	
Total	$ 34,209	$ 17,870

In 1994, the Company, the Pension Benefit Guaranty Corporation (the PBGC) and certain affiliates, including Hillside Capital Incorporated (Hillside), who were members of a group under common control for purposes of the Employee Retirement Income Security Act (ERISA), entered into a Joint Settlement Agreement (Agreement) in connection with the 1994 reorganization of our former parent, NH Holding Incorporated (NHI), relating to our pension plan (the Ampex pension plan) and of our former Media subsidiaries (the Media pension plan), which are substantially under funded. Under the terms of the Agreement, the Company and Hillside are held jointly and severally liable to the PBGC to fund the required contributions under the Ampex and Media pension plans. Pursuant to this Agreement, Hillside is obligated to advance pension contributions for the Ampex and Media pension plans in the event we are unable to make the required contributions necessary in order to satisfy the minimum funding standard. Failure by Hillside to advance funds as may be required would enable the PBGC to terminate the plans and seek recovery of termination benefits from Hillside.

During the period 2001 through 2005, Hillside made pension contributions totaling $20.7 million pertaining to the Ampex pension plan and the Media pension plan, of which $5.9 million was paid in 2005 and $10.7 million was paid in 2004. We have issued notes to Hillside (Hillside Notes) in the amount of the pension contributions and amounts advanced in prior years. We have requested Hillside to fund contributions due in 2006, which are estimated to total $9.5 million, pursuant to terms of the Agreement, and we may do likewise in future years based on our liquidity.

When Hillside is required to make all or portions of the Ampex and/or Media pension contributions, pursuant to the Agreement, we issue additional Hillside Notes. Under the terms of the Hillside Notes, $150,000 is due on the first anniversary of the notes with the remainder due on the fourth anniversary of the notes. Pursuant

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to amendments to our senior debt agreements, all principal payments on the Hillside Notes will be deferred until after December 31, 2006 with earlier repayment in the event that the Senior Notes have been repaid in full. The Hillside Notes provide for interest paid quarterly at 1 percent plus 175% of the applicable mid-term federal rate (effective rate of 8.75% at December 31, 2005). We granted to Hillside a security interest in Data Systems inventory as collateral for advances. The agreement contains certain restrictive covenants which, among other things, restrict our ability to declare dividends, sell all or substantially all of our assets or commence liquidation, or engage in specified transactions with certain related parties, breach of which could result in acceleration of our potential termination liabilities.

Hillside is legally obligated to comply with the terms of the Agreement, and has represented that it has sufficient assets to fund pension contributions that are scheduled in future years. We have no direct or indirect financial ownership interest in Hillside and, accordingly, have no ability to control Hillside or to mandate its compliance with the terms of the Agreement. Accordingly, except for the provisions of the Agreement, our ability to borrow pension contributions from Hillside is beyond our control.

ITEM 1A. RISK FACTORS

Risk Related to our Business

Our operating results and income have fluctuated significantly in the past and will continue to fluctuate, and we may not be profitable in the future.

Our revenues and results of operations are generally subject to quarterly and annual fluctuations. Various factors affect our operating results, some of which are not within our control, including:

- receipt of lump sum, prepaid and ongoing licensing royalties;
- product sales by licensees;
- new licenses with licensees;
- litigation expenses;
- debt repayments and interest expense;
- the amount and timing of pension contributions and related funding obligations;
- customer ordering and government spending patterns;

availability and market acceptance of new products and services;

timing of significant orders and new product announcements; and

order cancellations.

For example, our licensing reven