

VITAL IMAGES INC  
Form 10-K  
March 16, 2005

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

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

For the fiscal year ended December 31, 2004

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

For the transition period from to

Commission File Number 0-22229

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**VITAL IMAGES, INC.**

(Exact name of Registrant as specified in its charter)

**Minnesota**

(State or other jurisdiction of  
incorporation or organization)

**5850 Opus Parkway, Suite 300  
Minnetonka, MN 55343-4414**

(Address of principal  
executive offices)

**42-1321776**

(I.R.S. Employer Identification No.)

**55343-4414**

(Zip Code)

**(952) 487-9500**

(Registrant's telephone number, including area code)

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

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

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**Common Stock, \$.01 par value**  
**Preferred Stock Purchase Rights**  
(Title of Class)

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 registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to the Form 10-K.

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

The aggregate market value of the common stock held by non-affiliates of the registrant computed by reference to the price at which the common stock was last sold as of June 30, 2004, the last business day of the registrant's most recently completed second fiscal quarter, was \$144,724,926. The common stock is the registrant's only class of voting stock.

The number of shares outstanding of the issuer's classes of common stock as of February 28, 2005: Common stock, \$.01 Par Value 12,051,530.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of registrant's definitive Proxy Statement in connection with the Annual Meeting of Stockholders to be held May 11, 2005 ( 2005 Proxy Statement ) are incorporated by reference into Part III of this Form 10-K, as indicated in Items 10 through 14 of Part III.

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Vital Images, Inc.

Form 10-K

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**Part I**

**Cautionary Statement Regarding Forward-Looking Information**

*Vital Images desires to take advantage of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and is filing this cautionary statement in connection with the Reform Act. This Annual Report on Form 10-K and any other written or oral statements made by or on our behalf may include forward-looking statements that reflect our current views with respect to future events and future financial performance. Certain statements in this Annual Report on Form 10-K are forward-looking statements within the meaning of Section 27(a) of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. You can identify these forward-looking statements by our use of the words believes, anticipates, forecasts, projects, could, plans, expects, may, will, would, intends, estimates and similar expressions, whether in the negative or affirmative. We wish to caution you that any forward-looking statements made by us or on our behalf are subject to uncertainties and other factors that could cause such statements to be wrong. We cannot guarantee that we actually will achieve these plans, intentions or expectations. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements that we make. These statements are only predictions and speak only of our views as of the date the statements were made. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, and/or performance of achievements. We do not assume any obligation to update or revise any forward-looking statements that we make, whether as a result of new information, future events or otherwise.*

*Factors that may impact forward-looking statements include, among others, our abilities to maintain the technological competitiveness of our current products, develop new products, successfully market our products, respond to competitive developments, develop and maintain partnerships with providers of complementary technologies, manage our costs and the challenges that may come with growth of our business, and attract and retain qualified sales, technical and management employees. We are also affected by the growth and regulation of the enterprise-wide advanced visualization industry, including the acceptance of enterprise-wide advanced visualization by hospitals, clinics, and universities, and reimbursement and regulatory practices by Medicare, Medicaid, and private third-party payer organizations. We are also affected by other factors identified in our filings with the Securities and Exchange Commission, some of which are set forth in the section entitled Risk Factors in this Annual Report on Form 10-K (and many of which we have discussed in prior filings). Although we have attempted to list comprehensively these important factors, we also wish to caution investors that other factors may prove to be important in the future in affecting our operating results. New factors emerge from time to time, and it is not possible for us to predict all of these factors, nor can we assess the impact each factor or combination of factors may have on our business.*

**Item 1. Business**

**Our Business**

Vital Images, Inc. ( Vital Images, we, us, or our ) is a provider of enterprise-wide advanced visualization and analysis solutions for use in clinical diagnosis, disease screening applications, and therapy planning. Our technology utilizes high-speed volume visualization and analysis, as well

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as network communications based on DICOM and Internet protocols. *Vitrea*® 2, our flagship software, rapidly creates accurate, interactive 2D, 3D, and 4D images from 2D information generated by standard computed tomography ( CT ), magnetic resonance ( MR ), and positron emission tomography ( PET ) scanners. *ViTALConnect* , our Web enabled medical diagnostic tool, allows physicians anywhere, anytime access to interactive 2D, 3D, and 4D advanced visualization.

Our strategy is to address the growing interest among radiologists, cardiologists, oncologists and other specialists to improve their workflow and productivity. Our products provide clinical benefits and allow physicians to collaborate with their peers via Web- and picture archiving and communications systems ( PACS )-based solutions. PACS enable hospitals and clinics to acquire, distribute and archive medical images and diagnostic reports, eliminating the need for film and enhancing productivity.

We offer two primary software products, *Vitrea* and *ViTALConnect*. *Vitrea* is our flagship advanced visualization product for radiological and surgical applications. *Vitrea* provides image clarity, processing speed, and simplicity, and allows clinicians to screen for disease, diagnose less invasively, and plan treatments more accurately. We offer several optional modules so clinicians can customize their *Vitrea* workstations for their specialties. These modules include the following: 3D Angio, Automated Vessel Measurements, CT Brain Perfusion, CT Cardiac, CT Colon, Fusion7D , ImageChecker CT, Lung,

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SoftRead, Vessel Probe, and VScore. *Vitreia 2* is offered both as a stand-alone software package and as part of an integrated software and hardware system, consisting of *Vitreia 2* software installed on a computer workstation. We have licensed approximately 1,900 copies of *Vitreia* and *Vitreia 2* to hospitals, clinics, imaging centers and other sites.

As specialists outside the radiology department increasingly rely on *Vitreia* as a diagnostic and communications tool, demand for access to advanced visualization is growing across the healthcare enterprise. To address this market opportunity, we are forming strategic distribution partnerships with PACS providers and promoting the capabilities of ViTALConnect, our thin-client Web-based solution.

*ViTALConnect* allows physicians and other users to access 2D, 3D and 4D enterprise-wide advanced visualization capabilities, including the ability to measure, rotate, analyze and segment images, all with a personal computer using a Web-enabled browser, thus allowing access to advanced visualization from anywhere and at anytime, including critical patient situations. With ViTALConnect, users can employ a PC or notebook computer to process, analyze, review and distribute multi-dimensional medical images securely over the Web. In addition, a collaboration mode lets several physicians in different locations confer while interacting with the same images in real time.

Our enterprise-wide advanced visualization and analysis software solutions are used with medical diagnostic equipment, primarily in clinical diagnosis, disease screening and therapy planning. Our software applies proprietary computer graphics and image processing technologies to a wide variety of data supplied by CT, MR and PET scanners to allow medical clinicians to create 2D, 3D and 4D views of human anatomy and to non-invasively navigate within these images to better visualize and understand internal structures and pathologies. We market *Vitreia 2* and *ViTALConnect* both as standalone software packages and as part of integrated software and hardware systems to radiologists, surgeons, primary care physicians and medical researchers. We markets our products directly to end-user customers, such as hospitals and clinics, and to diagnostic imaging companies, digital imaging equipment manufacturers and picture archive and communication systems ( PACS ) companies, who sell our products in conjunction with products they either manufacture or acquire from third parties.

Our products work with equipment from all major manufacturers of diagnostic imaging systems, including Toshiba Medical Systems Corporation, GE Medical Systems, Siemens Medical Systems, Inc. and Philips Medical Systems, and can be integrated into PACS, such as those marketed by McKesson Information Systems, Sectra and Stentor.

We were founded and incorporated in Iowa in September 1988, and we re-incorporated in Minnesota in March 1997. Our principal executive offices are located at 5850 Opus Parkway, Suite 300, Minnetonka, MN 55343 (telephone (952) 487-9500, facsimile (952) 487-9510, e-mail info@vitalimages.com ). From May 24, 1994 through May 11, 1997, we were a wholly-owned subsidiary of Bio-Vascular, Inc., which is now known as Synovis Life Technologies, Inc.

Our corporate website address is [www.vitalimages.com](http://www.vitalimages.com). In the SEC Filings category of the Investors section of our website, we make our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to these reports available free of charge as soon as reasonably practicable after such reports are filed with or furnished to the United States Securities and Exchange Commission (the SEC ). The Corporate Governance category of the Investors section of our website also contains free copies of the Charters for the Audit Committee, Compensation Committee, and Governance and Nominating Committee of our Board of Directors, as well as our Code of Business Conduct and Ethics. Each of the above referenced documents can also be obtained free of charge (other than a reasonable charge for copying exhibits to our reports on Forms 10-K, 10-Q or 8-K) in print by any shareowner who requests them from our investor relations department. The investor relations department's email address is [investment@vitalimages.com](mailto:investment@vitalimages.com) and its mail address is: Investor Relations, Vital Images, Inc., 5850 Opus Parkway, Suite 300, Minnetonka, MN 55343. Information available on our website is not

incorporated by reference into this Annual Report on Form 10-K.

You may also obtain copies of our SEC filings on the SEC's website at [www.sec.gov](http://www.sec.gov) or at the SEC's Public Reference Room at 450 Fifth Street N.W., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

### **Market Opportunity**

Medical practices in the areas of diagnostic imaging, surgery and cancer treatment have changed dramatically over the past 20 years, due in part to the introduction of a variety of new imaging, visualization, analysis, computer, networking, catheter and navigation technologies. The result has been the rapid adoption and increased use of CT, MR and PET scanners and the incorporation of new physician-care practices based on the imaging information provided by these devices.

CT, MR and PET imaging technologies capture data that provide a physician with a graphical representation of the inside of the human body. These images have traditionally been viewed as a series of two-dimensional, cross-sectional slices on x-ray-type film. As computer processing speed increased, software performance improved and networking technologies developed, manufacturers of scanning equipment began offering integrated systems that allowed clinicians to view, analyze and manipulate these medical images in a digital environment.

Medical imaging systems first visualized individual slices, or pictures, on a computer monitor and later provided views of multiple slices. More recently, medical imaging systems began to permit viewing and manipulation of large, multiple slice data sets as a single, three-dimensional image on a computer workstation. Today, the enterprise-wide advanced visualization industry involves the creation, visualization, manipulation, analysis and communication of medical images in two, three and four dimensions (collectively, enterprise-wide advanced visualization software ).

Initially, the enterprise-wide advanced visualization industry and the markets for enterprise-wide advanced visualization products lagged the market for imaging devices due to the lack of industry standards for the generation, transmission and storage of medical imaging data and due to computer costs and performance considerations. After a time, many of the technical and cost barriers to growth in the enterprise-wide advanced visualization industry and the PACS industry began to erode. In particular, the medical industry embraced an image transmission and archiving standard called Digital Imaging and Communications in Medicine ( DICOM ), which is promulgated by the American College of Radiology and the National Electronic Manufacturer s Association. This standard permits imaging, visualization, networking and archiving systems from different vendors to work cooperatively within a single network. In addition, the cost-to-performance ratio of computer products used in visualization and PACS has improved dramatically, bringing the prices for enterprise-wide advanced visualization capabilities and PACS within the grasp of most healthcare providers. We believe that the acceptance of industry standards such as DICOM and the improvements in the cost-to-performance ratio for clinical workstations will support continued market growth in the enterprise-wide advanced visualization and PACS industries.

We believe that growing acceptance of 3D medical imaging offers us numerous market expansion opportunities. Research and development efforts are currently focused on using our base of visualization technology to expand to other imaging modalities, such as x-ray angiography, as well as expanding the features and functions in the current modalities. We are also enhancing our enterprise-wide advanced visualization software tools for less-invasive screening applications, such as CT colonography for colon cancer screening, CT Lung to diagnose lung cancer and CT cardiac for diagnosis of heart disease.

The diagnostic medical imaging market continues to expand both its geographic boundaries and its definitive boundaries. Long defined as the market for CT, MR, PET, ultrasound and other imaging modalities, the diagnostic imaging market has grown to include both PACS and enterprise-wide advanced visualization systems, which have become integral technologies for many radiology practices around the world.

The use of enterprise-wide advanced visualization software and systems to assist in surgical planning and navigation has only begun to emerge in clinical practice in the last few years. While enterprise-wide advanced visualization solutions have been used in these applications and to support cancer treatment planning in the past, we believe that perspective, three-dimensional volume rendering represents an underutilized resource to practitioners for diagnostic screening and radiology, surgical planning and navigation and cancer treatment planning.

Today, a minority of hospitals, clinics and imaging centers use enterprise-wide advanced visualization products in diagnostic imaging. Technological advances over the last several years in both computer hardware and software development have dramatically improved the cost-to-performance ratio, bringing the prices for enterprise-wide advanced visualization products within the reach of most healthcare providers. In addition, increasing clinical awareness, improving utility of applications and an exponential increase in CT slice volumes are driving demand for enterprise-wide advanced visualization products.



Hospitals recognize that PACS solutions, or picture archiving and communications systems, enhance workflow and boost productivity by eliminating the need to store and transfer bulky film. In fact, hospitals are investing in this area, and the PACS market is growing 30 percent annually. Adopting a PACS solution is a significant investment for a hospital. Sales tend to encompass more decision makers and follow a longer sales cycle. Ultimately, PACS opportunities involve more Vitrea licenses and make our software accessible to more physicians in an organization.

We also expect market growth due to a number of other advantages of enterprise-wide advanced visualization, including the following:

Recent technology improvements in CT and MR scanners enable them to generate an increasing number of slices per exam, sometimes resulting in over 5,000 images, which is more than 30 times as many images as were possible to obtain in exams five years ago. To obtain this many printed images on traditional x-ray film is quite expensive and may be logistically impractical.

Medicare, Medicaid, private insurance companies and managed care organizations are increasingly approving reimbursement for procedures utilizing PET scanners, which has greatly increased the number of procedures performed. In addition, recent advances in integrating CT and PET technologies into a single scanner have also contributed to an increase in the number of procedures performed utilizing such technology. Through our partnership with Mirada Solutions Limited ( Mirada ), we offer an optional module to *Vitrea 2* that uses Mirada's fusion technology to provide clinicians with an integrated view of images generated by PET and PET/CT scanners.

The use of imaging procedures as medical planning tool procedures is growing, and physicians are increasingly recognizing the clinical value of enterprise-wide advanced visualization imaging. In addition, the Baby Boom generation has a strong interest in screening procedures for the early detection of cancer and heart disease. Accordingly, these factors are driving a demand for an increased number of scanning procedures.

Driven by a shortage of radiologists, hospital radiology departments are under pressure to perform as efficiently as possible. Thus, an increased workload must be completed with the same or fewer people. Speed in interpreting images is essential for increasing workflow productivity. Thus, there is a clear need for fast and efficient integrated 2D, 3D and 4D visualization and analysis tools, which can be used to generate and interpret images at a much greater speed than traditional X-ray technology.

Diagnoses based on 2D images, or slices, require the clinician to assemble a 3D view mentally to understand the true anatomy and pathology. Given the industry pressure to produce cost-effective outcomes, 3D visualization is a valuable tool for accelerating diagnoses, potentially eliminating unnecessary tests and treatment, optimizing the use of minimally invasive surgery and therapies, and gaining additional insight for clinical decisions.

Spatial relationships are of paramount importance in surgery, and 3D views displaying anatomy and pathology can greatly aid in surgical planning. Enterprise-wide advanced visualization has the potential to promote improved surgical outcomes by giving surgeons a better road map with which to plan their operative procedures. Interactive navigation of volume data from scanners may also have the capability to spare patients from invasive procedures like endoscopy or conventional angiography.

Increased use of enterprise-wide advanced visualization technology has the potential to enhance radiologists' ability to communicate their findings to fellow clinicians, referring physicians and patients. In addition, the integration of these clinical disciplines through electronic visualization, networking and the Internet could allow for greater cross-discipline coordination due to increased speed, access to information and the resulting ability to perform consultative, interactive planning and examination on computer workstations.

**Strategy**

Our goal is to be a leading provider of enterprise-wide advanced visualization and analysis solutions that improve clinical outcomes and reduce costs. To achieve this goal, we intend to implement the following key strategies:

Develop and maintain leading-edge technology. We intend to continue our overall strategy of developing and marketing leading-edge enterprise-wide advanced visualization solutions for a variety of medical applications. As part of this strategy, we will continue to improve the speed and performance of *Vitreia 2* and *ViTALConnect* software. In particular, we will be focused on developing additional protocols that enhance the ease-of-use of *Vitreia 2* and *ViTALConnect*, as well as increasing the number of platforms on which the software operates.

Further develop applications for our enterprise-wide advanced visualization solutions. We intend to leverage our core competencies in volume rendering, computer graphics and clinical applications. We plan to develop and offer a full range of enterprise-wide advanced visualization solutions for diagnostic imaging, disease screening and therapy planning. We believe that significant new opportunities exist for the application of our innovative technologies for the diagnosis and treatment of cardiovascular disease, cancer and orthopedics.

Further penetrate the enterprise-wide advanced visualization market. We intend to expand our sales and marketing staff and increase our marketing efforts in order to continue building momentum for the acceptance and purchase of *Vitreia 2* and *VITALConnect*. We have a multiple-point strategy to increase our market penetration. This strategy includes contacting and educating physicians and clinicians as to the benefits of our high-performance advanced visualization software; expanding our partnership with Toshiba; developing and growing our technology and marketing relationships with PACS vendors, so that we can expand physician access within the healthcare enterprise through PACS- and Web-based solutions; offering high-performance advanced visualization software options, as well as maintenance and service, to our growing installed base; and working with other manufacturers of diagnostic imaging equipment and other hardware that works with enterprise-wide advanced visualization solutions. By convincing users of the benefits of our system, we believe that we can successfully influence purchasing decisions for medical institutions that are making initial purchases of or upgrades to their imaging technology. In addition, we will continue to work to expand our appeal by implementing additional 2D capability as well as ensuring that our technology will easily integrate into PACS networks.

Continue to seek collaborative partnerships with leading medical institutions. We have historically sought out and developed collaborative relationships with many prestigious medical institutions to develop and test our enterprise-wide advanced visualization solutions. We will continue to pursue collaborations to focus on developing products that will improve clinical outcomes and reduce costs for the practices of medical imaging and surgery.

Continue to seek collaborative partnerships with leading medical technology companies. In addition to collaborations with medical institutions, we intend to selectively pursue relationships with leading medical technology companies to expand our clinical, distribution, financial and/or technical capabilities for our enterprise-wide advanced visualization solutions. Such relationships include our development, marketing and/or distribution agreements with Toshiba America Medical Systems; the Surgical Navigation Technologies division of Medtronic, Inc.; E-Z-EM, Inc.; R2 Technology, Inc. ( R2 ); McKesson Information Solutions ( McKesson ); Sectra; Mirada; and Stentor, Inc. Referring physicians, surgeons and other clinicians, who understand 3D and 4D images better than 2D images, are placing greater demands on radiologists. In fact, 3D images are becoming a common language between radiology and the surgical and interventional worlds. Delivering *Vitreia* through a hospital's PACS solution, coupled with our floating license capabilities, which give multiple end users the opportunity to share access to enterprise-wide advanced visualization, is an efficient way to put advanced visualization in the hands of more physicians throughout a healthcare enterprise. See Business-Marketing and Distribution, Intellectual Property and Manufacturing and Service

#### Our Solution and Technology

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Two core technologies underlying our products are customized protocols and a visualization technique known as volume rendering. We believe that our customized protocols make our products simple to use. This feature is critical to *Vitreia 2*'s speed and ease-of-use, as it provides automated 2D, 3D and 4D renderings of scanner data, automated presentation of appropriate software tools, and automated image analysis algorithms optimized for individual clinical applications. Our engineers and clinical collaborators have selected specific views for each type of exam *Vitreia 2* supports in order to provide immediate, useful 2D, 3D and 4D views for the user. 4D is defined as 3D images showing changes over time, such as images of a beating heart. After the selected patient data has been retrieved, *Vitreia 2* provides the clinician with up to six views, with all visualization parameters pre-set for the specific type of clinical exam. The visualization settings for these views are stored in *Vitreia 2*'s software and are automatically and adaptively applied to each patient study, optimizing the views displayed. By applying this proprietary protocol technique, the system anticipates the clinician's needs and immediately provides useful views of the patient data. The use of customized protocols automates the complex and time-consuming approaches inherent in many competing enterprise-wide advanced visualization products and eliminates the need for the user to be proficient in operating complex graphics programs. We have been issued Patent No. 5,986,662 from the U.S. Patent and Trademark

Office for its mechanism for automated protocol selection, Patent No. 6,130,671 for the mechanism to calculate simulated lighting in 3D images, and Patent No. 6,219,059 for the user interface and mechanism used to control the relative transparency of 3D data in volume renderings of medical images.

Volume rendering is an advanced technique for displaying three-dimensional views on a computer monitor that we believe has significant advantages over the alternative technique, known as surface rendering. Volume rendering permits the direct display of all of the imaging data without mathematical modeling and allows interactive control of the level of transparency of the data. By comparison, surface rendering requires the creation of artificial surfaces based on selected imaging data, and the usefulness of the resulting visual image is largely dependent on where these surfaces are set by the clinical technician. Volume rendering is not dependent on the creation of artificial surfaces and allows visualization of varying components that might otherwise be eliminated from a surface rendered image due to surface approximation. Because volume rendering uses all of the data and information collected by the imaging equipment, we believe visualization processes that use volume rendering provide clinicians with better images to define and display pathology and anatomy in a more useful manner.

Enterprise-wide advanced visualization companies largely overlooked volume rendering because the computer power necessary to perform volume rendering was significantly more expensive and intensive than the requirements for surface rendering. Our experience with volume rendering has its basis in the efforts of Vincent J. Argiro, Ph.D., who founded Vital Images and developed enterprise-wide advanced visualization software using volume rendering as an aid in his research in developmental neuroscience. Dr. Argiro focused on accelerating the performance of volume rendering on standard computer platforms. As a result of his work, he developed expertise in accelerated volume rendering, which forms the core of our volume rendering technology. Because the performance of standard computer platforms has increased while the relative cost of such performance has decreased, we believe that volume rendering has become a more accessible imaging solution for routine clinical applications.

We believe the combination of customized protocols and accelerated volume rendering offered by our products, together with improved computer performance, allow us to deliver simple, fast and affordable enterprise-wide advanced visualization products.

### **Products and Product Development**

License fees accounted for 67% of total revenue in each of the fiscal years ended December 31, 2004, 2003, and 2002, respectively. Maintenance and services comprised 26%, 25%, and 19% of total revenue for the years ended December 31, 2004, 2003, and 2002, respectively, while hardware sales accounted for 7%, 8%, and 14% of total revenue for the years ended December 31, 2004, 2003, and 2002, respectively.

Vitre*a*. *Vitre**a* 2 is our advanced medical imaging software for diagnostic evaluation of computed tomography (CT), magnetic resonance (MR) and position emission tomography (PET) image data. *Vitre**a* 2 features real-time navigation of 3D volume data, permitting the user to create two- and three-dimensional views of human anatomy and to interactively navigate within these images to better visualize and understand internal structures and disease conditions. In addition, *Vitre**a* 2 utilizes an intuitive clinical workflow and automatic settings to improve speed and simplicity over other visualization techniques.

We conceived of *Vitre**a* in December 1995, when we assessed our business strategy and determined that to optimize our dedicated participation in the medical field, we needed to create a new product for direct clinical application. The objective for this new product effort was to produce an easy-to-use clinical software tool to allow radiologists and other clinicians to use two- and three-dimensional visualization in their routine clinical processes. Specifications for this new product, called *Vitre**a*, were developed in early 1996, with software development beginning in late spring of that year. We submitted 510(k) documentation in September 1996 for *Vitre**a*, which was granted marketing clearance by the U.S. Food

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and Drug Administration (the FDA) in November 1996 for use as a clinical diagnostic and surgical planning device when used with CT and MR medical imaging data. *Vitre*a was first released for sale to customers in October 1997. Due to its speed and ease-of-use, we believe *Vitre*a was the first advanced visualization product with the ability to appeal primarily to the clinical market. Historically, 3D medical imaging software was slow, difficult to use, and operated only on expensive workstations. Consequently, the functionality of such software was appealing only for research applications. *Vitre*a combined speed with ease-of-use to enable a physician to access, manipulate and analyze 2D, 3D and 4D images, typically in less than five to ten minutes.

In December 1999, we released *Vitre*a 2, a Microsoft® Windows and Intel®-architecture-based version of its *Vitre*a software for 2D/3D visualization and analysis of medical image data. *Vitre*a 2 was Vital Images' first advanced visualization software product available for the Microsoft Windows operating system and provides the speed and ease-of-use the medical community demands for diagnosis and treatment planning in a clinical environment. In June 2004, we released *Vitre*a 2 Version 3.5, which has improved usability and networking features to meet the diagnostic, screening and therapy planning needs of busy radiology departments and operates on the Microsoft Windows XP operating system.

*Vitre*a 2 capitalizes on our experience in enterprise-wide advanced visualization and provides clinicians with an easy-to-use tool for disease screening, radiological diagnosis and therapy planning. It represents our most important step to date as a

provider of a range of clinical tools for broad distribution to the enterprise-wide advanced visualization market. *Vitrea 2*'s primary features are its high-speed rendering capability and its ability to provide 2D, 3D and 4D viewing for routine diagnosis and therapy planning without requiring the user to be trained in computer graphics techniques. We believe that both of these features - speed and ease-of-use - now make it possible to use enterprise-wide advanced visualization solutions in daily clinical routines. A *Vitrea 2* user, following a built-in clinical workflow, can view the image data in two, three or four dimensions using visualization settings based on specific clinical applications stored within the system as dedicated visualization protocols. The user may then interactively navigate around, or fly through, the image to view clinically relevant anatomies and pathologies. *Vitrea 2* software also allows the user to capture views by taking snapshots, which can be integrated into customized reports for electronic transmission and archiving through a DICOM network or sent to another location via the Internet.

*Vitrea 2* software conforms to the latest medical imaging and computer industry standards, such as *OpenGL* computer graphics application programming interface and DICOM.

We offer *Vitrea 2* both as an integrated software and hardware system, consisting of *Vitrea 2* software integrated on a personal computer ( PC ) and as a stand-alone software package. Pursuant to purchasing arrangements we have with computer resellers, we purchase personal computers at a nominal discount, install *Vitrea 2*, and market the package as an integrated enterprise-wide advanced visualization solution. Some customers prefer to purchase their own hardware. For such customers, as well as when selling to our diagnostic imaging OEM and PACS partners, we sell software licenses only for use on hardware qualified for use with *Vitrea 2*. The list price for a base model integrated workstation and software package is approximately \$87,000, and the list price for the *Vitrea 2* software without a workstation is approximately \$72,000.

In addition to its immediate clinical applications, *Vitrea 2* software incorporates a number of additional technological advances, thereby making it adaptable to routine clinical use in surgical navigation and cancer treatment planning and for integration into diagnostic imaging equipment and PACS networks manufactured and sold by other companies. In particular, *Vitrea 2* software was written using advanced programming techniques, a modular, object-oriented design, C++ programming language, and a shared messaging structure. We believe these characteristics make it practical to modify *Vitrea 2* software to suit the clinical needs of surgical navigation and oncology, as well as allowing diagnostic equipment and PACS network manufacturers to integrate *Vitrea 2* software into their product offerings, thereby providing us the opportunity to leverage the *Vitrea 2* software development investment into new commercial areas.

**Software options.** We have developed a number of value-added software options that work with the base *Vitrea 2* software platform. These options provide a variety of clinical information for specialized uses. Our options include the following:

**VScore** . Our *VScore* software option allows clinicians to non-invasively quantify calcium in the four major coronary arteries using CT image data. We introduced *VScore* in August 1999, and it was the first add-on option to our *Vitrea 2* enterprise-wide advanced visualization software product.

**CT Brain Perfusion.** Our CT Brain Perfusion software option helps radiologists analyze blood flow of stroke victims where the speed of diagnosis and treatment is often the primary factor in determining the extent of recovery. We introduced CT Brain Perfusion in October 2001.



Innerview GI . Our Innerview GI software option generates 2D and 3D images of the entire colon, increasing the speed and ease of locating and analyzing polyps. This option provides a less invasive, more comfortable diagnostic procedure than previously possible, improving patient compliance for screening.

Automated Vessel Measurements. Our Automated Vessel Measurements software option helps physicians characterize the course and dimensions of diseased blood vessels. Automated Vessel Measurements is designed to support activities such as pre-surgical diagnosis, evaluation and stent planning in the abdominal aorta, carotid arteries, coronary arteries and renal arteries. We introduced Automated Vessel Measurements in October 2001.

CT Cardiac. Our CT Cardiac software option defines the coronary anatomy and the degree of luminal obstruction of the coronary arteries. It is commonly used to determine the extent of obstructive coronary artery disease and to assess the feasibility and appropriateness of various forms of therapy or surgical interventions. We introduced CT Cardiac in February 2003. In the first quarter of 2005, the CT Cardiac option was enhanced with the addition of the cardiac functional analysis (CFA) capability that enables measurement of blood volume changes in the left ventricle of the heart.

Vessel Probe. Our Vessel Probe software option is a complementary product to the CT Cardiac software option. It

is used to define vascular anatomy and the degree of luminary obstruction in vessels other than the coronary arteries. With this option, physicians can determine the extent of obstructive vascular disease and assess the feasibility of various forms of therapy or surgical interventions. We introduced Vessel Probe in December 2003.

Concurrent License. In December 2003, we introduced our Concurrent License option, which gives multiple end users the ability to share a single *Vitreia 2* license within a facility. While limiting the number of simultaneous users to the number of *Vitreia 2* licenses purchased, the Concurrent License option allows *Vitreia 2* software to be accessed from multiple reading stations within an enterprise.

SoftRead. Our SoftRead option, when used in conjunction with concurrent licensing, allows physicians to view studies in 2D when the Vitrea workstation is already in use. It supports data from multiple sources of diagnostic equipment, and can provide comparisons between multiple studies.

CT Lung. Our CT Lung software option provides fast and simple-to-use visualization of nodules in the lung. CT Lung can play a key role in diagnosis, treatment, follow up comparisons and inter-departmental communication. Our CT Lung software option is currently being reviewed for approval by the FDA.

3D-Angio. Our 3D-Angio software option converts and displays Toshiba digital angiograms, allowing views of patient angiographic data in 2D and 3D from an unlimited number of viewing angles. Most of Vitrea's standard visualization capabilities for CT and MR images are available for use with 3D-Angio datasets.

ImageChecker® CT. Through our partnership with R2 Technology, Inc., we offer the ImageChecker CT software option, which is a clinically-focused option that seamlessly integrates the ImageChecker® CT (ICCT) software into the Vitrea software. R2 Technology Inc.'s ICCT software is an advanced image analysis and visualization system designed to assist radiologists in the detection of pulmonary nodules during review of multidetector CT (MDCT) exams of the chest. This separately-licensed Vitrea option allows users to detect lung nodules and visualize studies of the chest from data acquired by a multi-slice CT scanner. There are two ImageChecker CT models: LN-500 – a full-featured chest CT review system, and LN-1000 – a full-featured, lung nodule detection system that uses computer-aided detection (CAD) technology.

Fusion7D. Through our partnership with Mirada Solutions, we offer the Fusion7D software option. Fusion7D is the only commercially available package with the deformable fusion component, making it the most comprehensive solution on the market. Fusion7D enables physicians to visualize images, fuse studies, calculate and display Standard Uptake Values and effectively communicate their findings to referring physicians. In addition, Fusion7D allows physicians to eliminate unnecessarily repeating an exam due to patient motion; accurately fuse images to combine anatomical and metabolic information about lesions; distinguish between scar tissue and tumor; and perform temporal comparisons, enabling physicians to monitor disease progression and therapy effectiveness.

*ViTALConnect*. *ViTALConnect* is a thin-client Web-enabled medical diagnostic tool that allows physicians to use PCs or notebook computers to access interactive 2D, 3D and 4D advanced visualization. Building on our knowledge and understanding of advanced diagnostic workflow, *ViTALConnect* offers users the access that is critical in today's hospital enterprise. *ViTALConnect* enables users to make quick diagnostic decisions, review studies and perform advanced analysis from anywhere at anytime. Also a communication tool, *ViTALConnect* includes collaboration capabilities that enable multiple physicians in different locations to confer while interacting with the same data in real-time.

We acquired the predecessor product to *ViTALConnect* when we acquired HInnovation, Inc. in February 2004. HInnovation's core product, iConnection, was refined and re-introduced to the market in the fall of 2004 as *ViTALConnect*.

As specialists outside the radiology department increasingly rely on *Vitre*a as a diagnostic and communications tool, demand for access to advanced visualization is growing across the healthcare enterprise. *ViTALConnect* allows these specialists to use enterprise-wide advanced visualization. With *ViTALConnect*, users can employ a PC or notebook computer to process, analyze, review and distribute multi-dimensional medical images securely over the Web.

### **Maintenance and Support**

In addition to system and software products, we also market maintenance and support services, as well as certain other services, such as installation and training. In connection with licensing *Vitreia 2* and ViTALConnect software, we offer annual maintenance and support services for both *Vitreia 2* and ViTALConnect software, as well as for the integrated *Vitreia 2* system, pursuant to which we provide software updates, minor feature enhancements, error correction, telephone support and other general support services. Our maintenance and support services do not include installation, training and other services, whether on- or off-site, which can be purchased separately. Additionally, because our products are classified by the FDA as medical devices, we are required by FDA regulations to provide certain levels of support to end users, whether or not those end users have purchased any maintenance or support services.

### **Marketing and Distribution**

We market *Vitreia 2* and *ViTALConnect* both as standalone software packages and as part of integrated software and hardware systems to radiologists, surgeons, primary care physicians and medical researchers. We market our products directly to end-user customers, such as hospitals and clinics, and to diagnostic imaging companies, digital imaging equipment manufacturers and PACS companies, who sell our products in conjunction with products they either manufacture or acquire from third parties.

We have signed several agreements with manufacturers of complementary products in which we collaborate in marketing our products. In September 2000, we signed a marketing and distribution agreement with Toshiba America Medical Systems ( TAMS ), a primary manufacturer of diagnostic equipment, which named *Vitreia 2* as TAMS primary 3D software for use with its CT scanners in the United States. In February 2002, we announced that we had entered into a marketing and distribution agreement with Toshiba Medical Systems Corporation to offer *Vitreia 2* to its subsidiaries and distributors, including TAMS, in more than 50 countries in North and South America, Europe, the Middle East, Africa, Australia and Asia, except Japan. The agreement has twice been amended. We are currently in the process of renegotiating our agreement with Toshiba. See Business Dependence on Major Customers.

We work collaboratively on products and services in image-guided surgery and surgical planning with the Surgical Navigation Technologies ( SNT ) division of Medtronic, Inc. Under our agreement with SNT, our advanced visualization technology will be integrated into Medtronic SNT s image-guided surgery products, and the two companies will collaborate on new surgical planning software and service offerings. We also have an agreement with E-Z-EM, Inc. to market and develop our CT colonography product. We have a joint distribution agreement with McKesson Information Systems, a primary provider of PACS, under which each company has been granted the right to distribute the other party s products. We also have a distribution agreement with Stentor, Inc. to integrate Vitrea with Stentor s iSite PACS solution a unique technology for distributing and managing images over the Web. Current and future Stentor customers will have the ability to access Vitrea at their Stentor workstations. We have also recently entered into an agreement with London-based Medicsight to integrate Medicsight s Colon CAR, or computer-assisted reader an image analysis software tool to detect colon polyps into InnerviewGI, our CT colon option.

We market our products directly to select OEMs on either a standard basis or, in the case of Medtronic SNT, on a customized basis. In connection with OEM opportunities, we will either provide complete systems for resale by such OEMs or will provide discrete elements of our technology for incorporation into the products and systems of such OEMs.

We market our products both domestically and internationally. In the United States, we market our products through a direct sales force as well as through OEMs and resellers. Internationally, we market our products through OEMs and resellers. See Note 9 to the Financial Statements - Major Customers and Geographic Data for information regarding our export sales. As of December 31, 2004, we had 29 salespeople in the U.S.,

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one salesperson supporting our international resellers, one OEM reseller in the United States and 11 international resellers. Many of our international resellers are also Toshiba resellers.

**Relationship with Toshiba Medical Systems Corporation**

Our marketing and distribution agreement with Toshiba Medical Systems Corporation ( Toshiba ) names *Vitrea 2* as Toshiba s primary enterprise-wide advanced visualization software for use with their CT scanners in the United States and in more than 50 countries in North and South America, Europe, the Middle East, Africa, Australia and Asia, except Japan. Sales to Toshiba accounted for approximately 50%, 42%, and 34% of our total revenue for the years ended December 31, 2004, 2003, and 2002, respectively. We are currently in the process of renegotiating our agreement with Toshiba. See Business Marketing and Distribution and Dependence on Major Customers.

**Collaborative Relationships**

We have formed collaborative relationships with some of the leading universities and physicians in medicine and medical imaging to develop what we believe to be the most innovative and clinically relevant medical imaging solutions. We have entered into clinical collaboration agreements with universities and physicians to:

Identify new clinical applications where enterprise-wide advanced visualization can improve clinical outcomes and reduce costs;

Assist in the development of clinical routines that incorporate our enterprise-wide advanced visualization solutions in normal diagnostic, screening and therapy planning practices;

Consult in the development of new features that facilitate and improve diagnosis and therapy planning for our future products;

Assess the clinical value of our enterprise-wide advanced visualization solutions for given applications;  
and

Develop automated rendering protocols for CT or MR data.

Our collaborative partners do not receive any ownership of technology we develop in connection with the collaboration, nor do they receive any fees or royalties under the collaboration agreements.

**Competition**

The enterprise-wide advanced visualization market is developing and growing rapidly. It is intensely competitive, subject to rapid change and significantly affected by new product introductions and other market activities of industry participants. Our primary competitors are diagnostic imaging system suppliers, which are typically large, multinational companies with far greater financial and technical resources. They also have well-established sales and distribution networks for their products. These companies, including GE Medical Systems, Siemens Medical Systems, Inc. and Philips Medical Systems, develop and market medical imaging systems, such as CT and MR equipment, which may be purchased with integrated medical imaging capabilities. Our software works on the products offered by each of these companies. In order to win business against equipment manufacturers, we must convince customers to buy our enterprise-wide advanced visualization software separately from their purchase of imaging equipment, instead of buying integrated systems from our competitors.

We also face competition from PACS vendors and other suppliers of medical imaging systems and software. PACS companies sometimes provide medical imaging capability in addition to their image archiving and networking products. Vendors of hospital, clinical and radiology information systems have also diversified into the PACS and medical imaging product lines, either through internal development or business development. These companies, which may be large or small, attempt to offer an integrated system covering a full range of administrative, clinical and radiology information management capabilities to healthcare providers. Other suppliers of medical imaging systems and software compete on the basis of volume rendering or other visualization technologies, specific applications or market niches. Most of these suppliers, including Voxar Ltd., Viatronix, Inc. and TeraRecon, Inc., are smaller than or similar in size to us.

Our competitive strength is based on several factors, including our ability to do the following:

Provide differentiated enterprise-wide advanced visualization and analysis solutions that operate in multi-vendor network and image source environments;

Provide clinical quality, integrated 2D, 3D and 4D images, volume rendered at high speed with interactive navigation on a relatively low-cost standard computer;

Integrate clinical knowledge from our collaborative clinical partners into our products;

Leverage our visualization technology across multiple clinical disciplines, including clinical diagnosis, disease

screening and therapy planning;

Offer a DICOM client product, which can operate on any DICOM network, independent of the imaging system and network provider; and

Serve original equipment manufacturers ( OEMs ), PACS vendors and end-user customers through the development of a modular end-user product that can easily be segmented for OEM customers or integrated into a PACS environment.

We believe that product quality, performance, functionality and features, quality of support and service, reputation, and price are also important competitive factors. We believe that customers will prefer our solutions because they are the best-in-class productivity tools for doctors. While price has been less significant than other factors, increasing competition in the enterprise-wide advanced visualization market may result in price reductions and reduced gross margins. In particular, should one or more of the diagnostic imaging system suppliers choose to provide or distribute more competitive medical imaging products than ours, our business, financial condition and results of operations could be materially adversely affected.

#### **Customers and Customer Support**

Through December 31, 2004, we have sold approximately 1,900 separate software licenses for *Vitrea*, *Vitrea 2*, *InnerviewGI* and *ViTALConnect*, for use in over 1,500 different sites, including hospitals and teaching hospitals, clinics, imaging centers, and other sites, both in major cities as well as in smaller population areas.

We are committed to rapid response to customer service requests. Customer support representatives are available during business hours to answer questions about the operation, maintenance and repair of our products.

#### **Intellectual Property**

Although we have filed patent applications and have received patents with respect to certain aspects of our technology, we generally do not rely only on patent protection with respect to our products and technologies. We also rely on a combination of trade secret and copyright law, employee and third-party nondisclosure agreements and other protective measures to protect intellectual property rights pertaining to our products and technologies. Because of the rapid pace of technological change in the enterprise-wide advanced visualization industry, we believe that the knowledge, ability and experience of our personnel; new product developments and enhancements; and ongoing, reliable product maintenance and support are also significant factors in our competitive position.

We do not own all of the software and other technologies used in our products, but we believe we have the necessary licenses from third parties for using that technology in our current products. It may be necessary to renegotiate with such third parties for any new versions of current products or any new products. Such third party licenses may not be available on reasonable terms, or at all.



**Manufacturing and Service**

Our manufacturing efforts are limited to the production, quality assurance and distribution of our software, which is distributed on CD-ROM. After we send software to our customers, it will be loaded into a workstation, either by our personnel, personnel from one of our authorized resellers, or our customers' personnel. If our personnel load the software, it is as part of our installation services, which we price and bill incrementally to the price for our software. In addition to loading software into the workstation, our installation services generally include integrating *Vitreia 2* workstations and *VITALConnect* software into customers' computer networks, configuring the network requirements and verifying software operability on site.

We rely primarily on our own software development as our core competence. We obtain certain application and utility software from third parties (see Intellectual Property above) and use a third party operating system for integrated computer workstations. In addition, we obtain systems components, computers and computer peripherals from third party suppliers.

We have also signed reseller distribution agreements that allow us to distribute products from certain third parties. We currently have agreements with R2 for R2's ImageChecker® CT software applications for the detection of lung nodules and with Mirada for Mirada's Fusion 7D software application for the anatomical alignment of two different image data sets from two different types of diagnostic equipment, such as combining images from CT and PET scanners.

### **Governmental Regulation**

As medical devices, our enterprise-wide advanced visualization software solutions are subject to extensive and rigorous regulation by numerous governmental authorities, principally the FDA and corresponding foreign agencies. In the United States, the FDA administers the Federal Food, Drug and Cosmetic Act and its amendments. These regulations classify medical devices as either Class I, II or III devices, which are subject to general controls, special controls or pre-market approval requirements, respectively. Most Class I and II devices, as well as some Class III devices, can be cleared for marketing pursuant to a 510(k) pre-market notification. The process of obtaining a 510(k) clearance typically can take several months to a year or longer.

Class III devices generally require more stringent clinical investigation and pre-market clearance requirements. In such cases, the FDA will require that the manufacturer submit a pre-market approval ( PMA ) application that must be reviewed and approved by the FDA prior to the sale and marketing of the device in the United States. The process of obtaining a PMA can be expensive, uncertain and lengthy, frequently requiring anywhere from one to several years from the date of FDA submission, if approval is obtained at all. Moreover, a PMA, if granted, may include significant limitations on the indicated uses for which a product may be marketed.

*Vitreia 2* and *ViTALConnect* are classified as Class II medical devices and have received marketing clearances from the FDA as the result of 510(k) pre-market notifications. Specifically, *Vitreia* , *ViTALConnect* and the Company s add-on options have been cleared to be marketed for use with CT, MR, and PET scanners. Future products, add-on options to existing software, and expanded claims of efficacy will likely require additional 510(k) pre-market notifications.

There can be no assurance that future FDA review processes will not involve delays or that certain clearances will be granted on a timely basis. If our current or future products become classified as Class III devices, they could be subject to a more expensive, uncertain and lengthy approval process, and approval, if granted, could include significant limitations on the indicated uses for which a product may be marketed.

We are also increasingly becoming subject to regulation in foreign countries in which we sell our products. Many of the regulations applicable to our products in such countries are similar to those of the FDA. Our ability to successfully market and sell our products in foreign markets depends in large part on our ability to comply with such foreign regulatory requirements. *Vitreia 2* software has been Conformitee Europeene ( CE ) marked, indicating conformance with applicable sections of the Medical Device Directive 93/42/EEC, which allows the products to be marketed in the member countries of the European Communities.

We are also subject to periodic inspections by the FDA and similar foreign regulatory agencies, whose primary purpose is to audit our compliance with quality system regulations established by the FDA and other applicable government standards. Regulatory action may be initiated in response to audit deficiencies or to product performance problems. We believe that our manufacturing and quality control procedures are in compliance with all applicable requirements of the FDA and foreign regulatory agencies in countries in which we sell our products. We have received ISO 13485 Certification.

Medicare and Medicaid laws and regulations may impact the financial arrangements through which we market, sell and distribute our products and services to patients who are Medicare or Medicaid beneficiaries. Violations of these laws and regulations may result in civil and criminal penalties, including substantial fines and imprisonment. In a number of states, the scope of these laws and regulations has been extended to include the provision of services or products to all patients, regardless of the source of payment, although there is variation from state to state as to the exact provisions of such laws or regulations. In other states and, on a national level, several health care reform initiatives have been

proposed which would have a similar impact. We believe that our operations and our marketing, sales and distribution practices currently comply with all current fraud and abuse and physician anti-referral laws and regulations, to the extent they are applicable.

**Third Party Reimbursement and Cost Containment**

Our products are purchased primarily by hospitals, clinics, imaging centers and other users that bill various third party payers for the services provided to the patients. These payers, which include Medicare, Medicaid, private insurance companies and managed care organizations, reimburse part or all of the costs and fees associated with the diagnostic procedures utilizing our products. The medical imaging services performed using our software, except for disease screening procedures, are covered by current CPT codes (Current Procedural Terminology, as defined by the Centers for Medicare & Medicaid Services). As such, hospitals providing services using our enterprise-wide advanced visualization solutions can seek reimbursement for such services by using existing approved CPT codes. Medicare and Medicaid reimbursement for hospitals is based on a fixed amount for admitting a patient with a specific diagnosis. Because of this fixed reimbursement method, hospitals have incentives to use less costly methods in treating Medicare and Medicaid patients, and they will frequently make capital

expenditures to take advantage of less costly treatment technologies. Often, reimbursement is reduced to reflect the availability of a new procedure or technique and, as a result, hospitals are generally willing to implement new cost-saving technologies before these downward adjustments take effect. Likewise, because the rate of reimbursement for certain physicians who perform certain procedures has been, and may in the future, be reduced in the event of changes in the resource-based relative value scale method of payment calculation, physicians may seek greater cost efficiency in treatment to minimize any negative impact of reduced reimbursement. Any amendments to existing reimbursement rules and regulations that restrict or terminate the reimbursement eligibility (or the extent or amount of coverage) of medical procedures using our products or the eligibility (or the extent or amount of coverage) of our products could have a material adverse impact on business.

In response to the focus of national attention on rising health care costs, a number of changes to reduce costs have been proposed or have begun to emerge. There have been, and may continue to be, proposals by legislators and regulators and third party payers to reduce these costs. There has also been a significant increase in the number of Americans enrolling in some form of managed care plan and, in addition, many hospitals participate in or have agreements with HMOs. It has become a typical practice for hospitals to affiliate themselves with as many managed care plans as possible. Higher managed care penetration typically drives down the prices of healthcare procedures, which in turn places pressure on medical supply prices. This causes hospitals to implement tighter vendor selection and certification processes by reducing the number of vendors used, purchasing more products from fewer vendors and trading discounts on price for guaranteed higher volumes to vendors. Hospitals have also sought to control and reduce costs over the last decade by joining group purchasing organizations or purchasing alliances. We cannot predict what continuing or future impact these practices, the existing or proposed legislation, or such third party payer measures may have on our future business.

#### **Health Insurance Portability and Accountability Act of 1996 ( HIPAA )**

The HIPAA regulations are causing our customers to request that we sign business associate agreements with them. A business associate is a person or entity that performs certain functions or activities that involve the use or disclosure of protected health information on behalf of, or provides services to, a covered entity. By law, the HIPAA Privacy Rule applies only to covered entities health plans, health care clearinghouses, and certain health care providers. However, most health care providers do not carry out all of their health care activities and functions by themselves. Instead, they often use the services of a variety of other persons or businesses. The Privacy Rule allows covered providers and health plans to disclose protected health information to these business associates if the providers or plans obtain satisfactory assurances that the business associate will use the information only for the purposes for which it was engaged by the covered entity, will safeguard the information from misuse, and will help the covered entity comply with some of the covered entity s duties under the Privacy Rule. Covered entities may disclose protected health information to an entity in its role as a business associate *only* to help the covered entity carry out its health care functions not for the business associate s independent use or purposes, except as needed for the proper management and administration of the business associate.

#### **Employees**

As of February 28, 2005, we had 151 full-time employees, with 50 involved in research and development, 53 in sales and marketing, 25 in technical support functions and 23 in administrative functions. We are not a party to any collective bargaining agreement involving our employees. We believe our relationship with our employees is good.

#### **Acquisition of HInnovation, Inc.**

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On February 18, 2004, we completed our acquisition of HInnovation, Inc. ( HInnovation ), in accordance with the terms and conditions of an Acquisition Agreement and Plan of Reorganization (the Acquisition Agreement ) dated as of January 8, 2004 by and among Vital Images, HInnovation Acquisition, Inc., a wholly-owned subsidiary of Vital Images ( HInnovation Acquisition ), HInnovation and Mr. Hui Hu and JMS Co., Ltd., the principal stockholders of HInnovation. Pursuant to the Acquisition Agreement, HInnovation was merged with and into HInnovation Acquisition, and HInnovation became a wholly-owned subsidiary of Vital Images. We acquired the predecessor product to *ViTALConnect* when we acquired HInnovation. HInnovation's core product, iConnection , was refined and re-introduced to the market in the fall of 2004 as *ViTALConnect*.

The merger consideration included 376,262 newly-issued shares of common stock of Vital Images valued at \$6 million and \$5.8 million in cash at the time of the merger. The merger consideration for HInnovation includes contingent milestone payments of up to a maximum of \$6.0 million of contingent milestone payments comprised of \$3.0 million in common stock and \$3.0 million in cash. The contingent milestone payments are based on 1) the achievement of certain revenue targets resulting from the sale of products containing HInnovation technology during the 12 month period following the closing date; 2) the porting of our product to HInnovation's product platform and the commercial launch thereof; and 3) licensing the

HIInnovation patented technology within 24 months after the closing date. The number of shares issued under the contingent milestone payments will be determined based on the average closing price of our common stock during the 10 trading days before completion of the milestone objective. However, the Acquisition Agreement provides that the number of shares of our common stock comprising the contingent consideration cannot exceed 300,000 shares. If, at the time of its issuance, the value of such stock is less than \$3.0 million due to this limitation on the number of shares, we will pay the shortfall in cash. Any contingent payments made by us will result in an increase in goodwill. As of December 31, 2004, no contingent payments had been earned. The first milestone was not met before the February 2005 deadline. As a result, the potential maximum contingent consideration was reduced to \$4.5 million, which consists of \$3.0 million in common stock and \$1.5 million in cash.

HIInnovation was a privately-held company founded in June 2000 and is a provider of innovative and cost-effective solutions to deliver medical imaging software applications and services online. HIInnovation's enabling technologies have been developed to help hospitals, clinics and industry reach a new dimension in optimizing workflow, improving productivity, enhancing service and increasing revenue. It obtained 510(k) marketing clearance for iConnection from the FDA in November 2001. HIInnovation was awarded U.S. Patent No. 6,621,918, which covers a server-based MPR/3D/4D software system and design.

## **Risk Factors**

### *Historical Operating Losses*

For the years ended December 31, 2004, 2003 and 2002, we had operating income of \$514,000, \$1.9 million and \$677,000, respectively. However, we had an operating loss of \$1.1 million for the year ended December 31, 2001 and incurred operating losses for each year prior to that since 1990, with the exception of the fiscal year ended October 31, 1995. As of December 31, 2004, our accumulated deficit was \$11.3 million. Our ability to maintain profitability will depend on, among other things, our abilities to maintain the technological competitiveness of our current products, develop new products, successfully market our products, respond to competitive developments, and attract and retain qualified sales, technical and management employees. We may not be able to continue to achieve profitable operations on an annual basis.

### *Market Acceptance*

Our success depends on our ability to successfully market *Vitrea 2* and *ViTALConnect* software for clinical use, and on the ability and willingness of physicians to use enterprise-wide advanced visualization software medical imaging software in disease screening, clinical diagnosis and therapy planning. The enterprise-wide advanced visualization software offered by *Vitrea 2* and *ViTALConnect* represent new alternatives to the conventional methods traditionally used for viewing medical images in the clinical setting. The acceptance of *Vitrea 2* and *ViTALConnect* by physicians and other clinicians will depend on our ability to educate those users as to the speed, ease-of-use and other benefits offered by the *Vitrea 2* and *ViTALConnect* systems, as well as our timely introduction of new features and functions. There can be no assurance that users will prefer enterprise-wide advanced visualization software over less expensive two-dimensional medical imaging software or that we will succeed in our efforts to further develop, commercialize, and achieve market acceptance for *Vitrea 2* and *ViTALConnect* or for any other product in the clinical setting.

### *Substantial Reliance on a Single Product*

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Revenue from sales and servicing of the *Vitreia 2* system constituted 95%, 96%, and 98% of our total revenues for the years ended December 31, 2004, 2003, and 2002. We anticipate that revenue from the sale of *Vitreia 2* will continue to account for a substantial portion of our revenue for the foreseeable future. As such, the failure of physicians to accept *Vitreia 2* would have a material adverse impact on our business, financial condition, and results of operations.

### *Dependence on Market Growth*

The enterprise-wide advanced visualization industry in which we market our products is still developing due to the fairly recent availability of high performance computers at reduced prices, the recent adoption of industry standards for the generation, transmission and storage of medical imaging data, and changing medical practices. Historically, there has been a perception that enterprise-wide advanced visualization was too slow or difficult for clinical use. This perception was due largely to the relatively slower processing speed of workstations available in the past. We believe that the recent advances in the affordability of high performance computers and in the development of industry standards for the generation, transmission, and storage of imaging data will provide opportunities for growth in the enterprise-wide advanced visualization industry. However, given the uncertainties associated with the developing stage of this industry, there can be no assurance

that it will continue to develop in the manner we anticipate. Accordingly, there can be no assurance that the enterprise-wide advanced visualization industry will provide growth opportunities for us and our software products or that our business strategies will be successful as the enterprise-wide advanced visualization industry continues to evolve. Ultimately, if the enterprise-wide advanced visualization industry fails to develop as we expect, our business, results of operations and financial condition will be materially and adversely affected.

Highly Competitive Industry

We face intense competition in the enterprise-wide advanced visualization industry. We expect technology to continue to develop rapidly, and our success will depend to a large extent on our ability to maintain a competitive position with our products. Our competitors in the enterprise-wide advanced visualization industry include large, established manufacturers of CT and MR imaging equipment. Companies such as GE Healthcare, Siemens Medical Systems, Inc. and Philips Medical Systems typically offer their own enterprise-wide advanced visualization software and workstations as part of their integrated imaging and scanner systems. Our software works on the products offered by each of these companies. In order to win business against equipment manufacturers, we must convince customers to buy our enterprise-wide advanced visualization software separately from their purchase of imaging equipment, instead of buying integrated systems from our competitors.

In addition to having a competitive advantage in marketing enterprise-wide advanced visualization tools as an integrated part of their imaging products, our competitors have significantly greater capital and staffing resources for research and development that are critical to success in the rapidly changing enterprise-wide advanced visualization industry, more recognizable brand names, and more well-established marketing and distribution networks. While price has been less significant than other factors, increasing competition may result in price reductions and reduced gross margins. Additionally, we face competition from other entities, such as software suppliers and PACS vendors. We may not be able to compete effectively with such manufacturers or competing entities.

Risk of Technological Obsolescence

The enterprise-wide advanced visualization market is characterized by rapid innovation and technological change. We may be unable to compete effectively in the marketplace, and products developed by our competitors may render our products obsolete or non-competitive. Similarly, our competitors may succeed in developing or marketing products that are viewed as providing superior clinical performance or are less expensive than our current or future products.

Dependence on Major Customers

One of our principal distribution channels is to sell our *Vitrea 2* medical imaging software in connection with medical imaging equipment sold by Toshiba. Sales to Toshiba accounted for 50%, 42% and 34% of our total revenue for the years ended December 31, 2004, 2003, and 2002, respectively. Toshiba's account receivable represented 23% of the Company's accounts receivable at December 31, 2004 and 7% at December 31, 2003. Management believes a limited number of large customers may continue to account for a significant portion of our revenue during any given period for the foreseeable future. Except for our marketing and distribution agreements with Toshiba, Medtronic SNT, E-Z-EM, Inc. and McKesson, we currently have no long-term purchase or other agreements with any of our customers, and we generally make sales pursuant to purchase orders. A reduction, delay, or cancellation of orders from one or more of our significant customers, or our inability to collect accounts receivable from these customers, likely would have a material adverse effect on our operating results.



Impact of Purchase Commitments

We have an agreement with R2 to distribute R2's lung nodule CAD software product in conjunction with our product. We began purchasing the lung CAD product in the first half of 2004 and will continue for a three-year period. Our total purchase commitment is a maximum of \$5.6 million of product over the three-year commitment period. Our purchase commitment price will be reduced if the selling price of the lung CAD product when sold directly to end-users by R2 falls below a specified price. The purchase commitment units we are required to purchase will be reduced if R2 and its other distributors of the lung CAD product are unable to sell as many units as we are required to purchase. However, we must purchase the minimum amount under the agreement with R2 regardless of how much of the lung CAD product we sell. If our cost to purchase the lung CAD product is greater than the price at which we can sell the lung CAD product, or if we are unable to sell some or all of the lung CAD product we buy, our business could be adversely affected.

Fluctuations in Operating Results

We may experience significant fluctuations in future annual and quarterly operating results. If these fluctuations occur, they may result in volatility in the price of our common stock. Quarterly revenue and operating results may fluctuate as a result of a variety of factors that are outside of our control including, but not limited to, the timing of significant orders, the timing of product enhancements and new product introductions by us or our competitors, the pricing of our products, changes in customers' budgets, and competitive conditions.

Government Regulation

Our products are subject to regulation by the FDA and by comparable agencies in foreign countries. In the United States, the FDA regulates the development, introduction, manufacturing, labeling and record keeping procedures for medical devices, including 3D medical imaging software and systems. The process of obtaining marketing clearance from the FDA for new products and new applications for existing products can be time-consuming and expensive. All of our current products have received marketing clearance from the FDA pursuant to 510(k) pre-market notifications. *Vitreia 2* and *ViTALConnect* and our add-on options have been cleared to be marketed for use with CT, MR and PET scanners. The FDA may not grant clearance with respect to our future products or enhancements, or future FDA review may involve delays that could adversely affect our ability to market such future products or enhancements. In addition, our future products or enhancements may be subject to a more lengthy and expensive pre-market approval process with the FDA.

Even if we obtain regulatory clearances and approvals to market a product from the FDA, these approvals may entail limitations on the indicated uses of the product. Product clearances and approvals by the FDA can also be withdrawn due to failure to comply with regulatory standards or the occurrence of unforeseen problems following initial approval. The FDA could also limit or prevent the distribution of our products and has the power to require the recall of such products. FDA regulations depend heavily on administrative interpretation, and future interpretations made by the FDA or other regulatory bodies may adversely affect us. The FDA may inspect our facilities and operations to determine whether we are in compliance with various regulations relating to specification, development, documentation, validation, testing, quality control and product labeling. If the FDA determines that we are in violation of such regulations, it could impose civil penalties, including fines, recall or seize products and, in extreme cases, impose criminal sanctions.

We market our products both domestically and internationally. International regulatory bodies have established varying regulations governing product standards, packaging requirements, labeling requirements, import restrictions, tariff regulations, duties and tax requirements. Our inability or failure to comply with the varying regulations, or the imposition of new regulations, could restrict our ability to sell our products internationally and could adversely affect our business.

Health Insurance Portability and Accountability Act of 1996 ( HIPAA )

The HIPAA regulations are causing our customers to request that we sign business associate agreements with them. A business associate is a person or entity that performs certain functions or activities that involve the use or disclosure of protected health information on behalf of, or that provides services to, a covered entity. By law, the HIPAA Privacy Rule applies only to covered entities' health plans, health care clearinghouses, and certain health care providers. However, most health care providers do not carry out all of their health care activities and functions by themselves. Instead, they often use the services of a variety of other persons or businesses. The Privacy Rule allows covered providers and health plans to disclose protected health information to these business associates if the providers or plans obtain satisfactory assurances that the business associate will use the information only for the purposes for which it was engaged by the covered entity, will safeguard the information from misuse, and will help the covered entity comply with some of the covered entity's duties under the Privacy Rule.

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Covered entities may disclose protected health information to an entity in its role as a business associate only to help the covered entity carry out its health care functions not for the business associate's independent use or purposes, except as needed for the proper management and administration of the business associate. These agreements are necessary for us in the normal course of servicing and supporting our products. If we are not willing to or are unable to enter into a business associate agreement with current and potential customers, such customers may not purchase our products or services, which would have a material adverse effect on our business, financial condition, or results of operations.

### *Uncertain Protection for Intellectual Property: Possible Claims of Others*

Although we have received patents and have filed patent applications with respect to certain aspects of our technology, we generally do not rely only on patent protection with respect to our products and technologies. We also rely on a combination of trade secret and copyright law, employee and third-party nondisclosure agreements and other protective measures to protect intellectual property rights pertaining to our products and technologies. Such measures may not provide meaningful protection of our trade secrets, know-how or other intellectual property in the event of any unauthorized use, misappropriation or disclosure. Others may independently develop similar technologies or duplicate our technologies. In

addition, to the extent that we apply for any patents, such applications may not result in issued patents or, if issued, such patents may not be valid or of value. We do not believe that our products and technologies infringe any existing patents or intellectual property rights of third parties. However, our products and technologies may infringe existing patents or intellectual property rights of third parties. The costs of prosecuting or defending an intellectual property claim could be substantial and could adversely affect our business, even if we are ultimately successful in prosecuting or defending any such claims. If our products or technologies are found to infringe the rights of a third party, we could be required to pay significant damages or license fees or cease production, any of which could have a material adverse effect on our business.

Product Liability Risk: Limited Insurance Coverage

The manufacture and sale of products used in the practice of medicine entail significant risk of product liability claims. We currently maintain product liability insurance and coverage limits that we consider to be reasonable. However, our coverage limits may not be adequate to protect us from any liabilities we might incur in connection with claims in connection with our products. Further, we may not be able to maintain the same level of coverage in the future. We may also need increased product liability coverage as we release additional products and updates. Such insurance is expensive and may not be available on acceptable terms, if at all. A successful product liability claim or series of such claims against us in excess of our insurance coverage could have a material adverse effect on our business, financial condition, or results of operations.

Need to Hire Additional Personnel

Our ability to enhance and develop markets for our current products and to introduce new products to the marketplace also depends on our ability to attract and retain qualified scientific and management personnel. We compete for such personnel with other companies, academic institutions, and government entities and organizations, many of which have substantially greater capital resources, name recognition, and research and development capabilities. There can be no assurance that we will be successful in recruiting or retaining such personnel. We may not be able to recruit and retain such personnel, which would have a material adverse effect on our business.

Management of Growth

Our ability to grow successfully requires an effective planning and management process. The expansion and growth of our business could place a significant strain on our management systems, infrastructure and other resources. To manage growth successfully, we must continue to improve and expand our systems and infrastructure in a timely and efficient manner. In addition, the success of any acquisition, such as our acquisition of HInnovation, will depend on our ability to successfully integrate the acquired business with our business. Our controls, systems, procedures and resources may not be adequate to support a changing and growing company. If management fails to respond effectively to changes and growth in business, including acquisitions, such failure could have a material adverse effect on our business, financial condition, or results of operations.

Dependence on Third-Party Reimbursement

Our products are purchased by hospitals, clinics, imaging centers and other users, which bill various third party payers, such as government health programs, private health insurance plans, managed care organizations and other similar programs, for the health care goods and services provided to their patients. There are currently Current Procedural Terminology (CPT) reimbursement codes for most of the diagnostic

procedures that use our products. However, the amount of such reimbursement varies by location and is subject to change. Payers may deny reimbursement if they determine that a product used in a procedure was not used in accordance with established payer protocol regarding cost-effective treatment methods or was used for an unapproved indication. Third party payers are increasingly challenging the prices charged for medical services and, in some instances, have put pressure on service providers to lower their prices or reduce their services. We are unable to predict what changes will be made in the reimbursement methods used by third party healthcare payers. Third party payers may not consider as cost effective the procedures in which our products are used. Reimbursement for such procedures may not be available or, if available, payers low reimbursement levels may adversely affect our ability to sell our products on a profitable basis. In addition, there have been and may continue to be proposals by legislators, regulators and third party payers to curb further these costs in the future. A failure by hospitals and other users of our products to obtain reimbursement from third party payers, changes in third party payers policies toward reimbursement for procedures using our products or legislative action could have a material adverse effect on our business, **financial condition, or results of operations.**

Uncertainty of Health Care Reform

The levels of revenue and profitability of medical technology companies may be affected by the efforts of government and third party payers to contain or reduce the costs of health care through various means. In the United States, there have been, and we expect that there will continue to be, a number of federal, state, and private proposals to control health care costs. These proposals may contain measures intended to control public and private spending on health care as well as to provide universal public access to the health care system. If enacted, these proposals may result in a substantial restructuring of the health care delivery system. Significant changes in the nation's health care system could have a substantial impact on the manner in which we conduct business and could have a material adverse effect on our business, financial condition and results of operations.

Possible Issuances of Preferred Stock

Our Articles of Incorporation authorize our Board of Directors, without any action by our common stock stockholders, to establish the rights and preferences of up to 5,000,000 shares of currently undesignated preferred stock. These shares of preferred stock could possess voting and conversion rights that could adversely affect the voting power of the holders of the common stock and may have the effect of delaying, deferring or preventing a change in control of Vital Images. No shares of preferred stock or other senior equity securities are currently designated, and currently we have no plan to designate or issue any such securities.

Anti-Takeover Considerations

We are subject to anti-takeover provisions of the Minnesota Business Corporation Act. In addition, we have adopted a Shareholder Rights Plan (the Rights Agreement) designed to protect against unsolicited attempts to acquire Vital Images. These measures may deter or discourage takeover attempts and other changes in control that are not approved by our Board of Directors, and they may have a depressive effect on any market for our common stock. As a result, our stockholders may lose opportunities to dispose of their shares at the higher prices typically available in takeover attempts or that may be available under a merger proposal. In addition, these measures may have the effect of permitting our current directors to retain their positions and place them in a better position to resist changes that stockholders may wish to make if they are dissatisfied with the conduct of our business.

No Dividends

We have not paid cash dividends on our common stock in the past, and we do not intend to do so in the foreseeable future.

Limitations on Director Liability

As permitted by Minnesota law, our Articles of Incorporation provide that members of our board of directors shall not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, with certain exceptions. These provisions may discourage stockholders from bringing suit against a director for breach of fiduciary duty and may reduce the likelihood of derivative litigation brought by

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stockholders on our behalf against a director. In addition, our Bylaws provide for mandatory indemnification of directors and officers to the fullest extent permitted by Minnesota law.

**Item 2. Properties**

The Company's principal office is located in Minnetonka, Minnesota, where the Company currently occupies approximately 41,000 square feet under a lease that expires January 31, 2012. Under certain conditions contained in the lease, the Company will expand its facilities to approximately 61,000 square feet by July 31, 2007.

The Company considers its current facilities adequate for its current needs and believes that suitable additional space will be available as and if needed.

**Item 3. Legal Proceedings**

The Company is not engaged in any legal proceedings at this time.

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

There was no matter submitted to the vote of security holders during the fourth quarter of the fiscal year ended December 31, 2004.



**Part II****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

The Company's common stock is listed on The NASDAQ National Market under the symbol VTAL. The table below reflects the high and low per share closing sale prices of the Company's common stock as reported by The NASDAQ Stock Market for each of the periods indicated. Such prices reflect inter-dealer prices, do not include adjustments for retail mark-ups, markdowns or commissions, and may not necessarily represent actual transactions.

	High		Low
<u>2004</u>			
Fourth Quarter	\$ 16.95	\$	12.18
Third Quarter	\$ 12.60	\$	9.84
Second Quarter	\$ 12.39	\$	9.26
First Quarter	\$ 20.01	\$	9.34
<u>2003</u>			
Fourth Quarter	\$ 21.05	\$	15.75
Third Quarter	\$ 24.55	\$	17.42
Second Quarter	\$ 19.09	\$	11.12
First Quarter	\$ 12.90	\$	9.05

The Company has never paid or declared any cash dividends on its common stock and does not intend to pay dividends on its common stock in the near future. To date, the Company has incurred cumulative operating losses and presently expects to retain its future anticipated earnings to finance development and expansion of its business. As of February 28, 2005, there were approximately 8,200 beneficial owners and approximately 800 registered holders of record of the Company's common stock.

**Item 6. Selected Financial Data**

	2004	2003	2002	2001	2000
	(in thousands, except for per share data)				
<b>Years ended December 31:</b>					
Revenue	\$ 36,122	\$ 27,300	\$ 21,116	\$ 15,196	\$ 10,628
Gross profit	25,675	20,229	14,808	10,723	7,168
Operating expenses	25,161(2)	18,294	14,131	11,778	9,955
Operating income (loss)	514	1,935	677	(1,055)	(2,787)
Net income (loss)	\$ 296	\$ 8,462(1)	\$ 790	\$ (1,012)	\$ (2,637)
Net income (loss) per share-basic	\$ 0.03	\$ 0.83	\$ 0.09	\$ (0.14)	\$ (0.39)
Weighted average common shares outstanding basic	11,632	10,189	8,861	7,075	6,760
Net income (loss) per share-diluted	\$ 0.02	\$ 0.71	\$ 0.08	\$ (0.14)	\$ (0.39)
Weighted average common shares outstanding diluted	12,536	11,848	9,822	7,075	6,760
<b>At December 31:</b>					
Working capital	30,996	31,915	9,219	6,094	2,344
Total assets	69,284	53,063	18,827	13,269	7,287
Long-term debt					
Total stockholders' equity	54,554	44,594	11,721	8,051	3,765

(1) Includes a net tax benefit of \$6,313 resulting from the reversal of the Company's valuation allowance for its net deferred tax assets, net of other current year state and federal income taxes.

(2) Includes \$1,000 of acquired in-process research and development charge relating to the acquisition of HInnovation, Inc. in February 2004.

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

**Executive summary**

Vital Images, Inc. (the Company) achieved significant growth in 2004. Total revenue increased 32% to \$36.1 million in 2004 compared to \$27.3 million in 2003. Operating income was \$514,000 in 2004, which included amortization of identified intangibles of \$1.1 million and an acquired in-process research and development charge of \$1.0 million related to the acquisition of HInnovation, compared to \$1.9 million in 2003.

The Company recorded net income of \$296,000, or \$0.02 per diluted share, in 2004 compared to \$8.5 million of net income, or \$0.71 per diluted share, in 2003. Full-year earnings for 2003 include a net tax benefit of \$6.3 million, or \$0.53 per diluted share.

The Company's balance sheet remains strong: total cash, cash equivalents and marketable securities were \$35.7 million as of December 31, 2004 compared to \$34.2 million as of December 31, 2003; working capital was \$31.0 million as of December 31, 2004 compared to \$31.9 million as of December 31, 2003; and working capital included deferred revenue of \$8.1 million and \$4.5 million as of December 31, 2004 and 2003, respectively.

Throughout the Company's history, a significant portion of the Company's revenue has been generated from the U.S. CT market. Going forward, the Company anticipates a growing contribution from other sources, including an expanding picture archive and communication systems (PACS) market, sales of Web-based products and the Company's installed customer base. In February 2004, the Company acquired HInnovation, Inc., a privately-held provider of software solutions that allow physicians to use PCs or notebook computers to access 2D, 3D and 4D medical imaging applications securely over the Internet, which represents another step towards expanding the Company's presence in the PACS and Web-based markets.

**Overview**

The Company develops, markets and supports enterprise-wide advanced visualization software for use primarily in clinical diagnosis, disease screening and therapy planning. The Company's software applies proprietary computer graphics and image processing technologies to a wide variety of data supplied by computed tomography (CT), magnetic resonance (MR) and positron emission tomography (PET) scanners. The Company's products allow clinicians to create 2D, 3D and 4D views of human anatomy and to non-invasively navigate within these images to better visualize and understand internal structures and pathologies. The Company believes that its high-speed visualization technology and customized protocols cost-effectively bring 3D visualization and analysis into the routine, day-to-day practice of medicine. The Company, which operates in a single business segment, markets its products to healthcare providers and to manufacturers of diagnostic imaging systems and PACS through a direct sales force in the United States and independent distributors in international markets.

On October 28, 1996, the Board of Directors of Bio-Vascular, Inc. (Bio-Vascular), now known as Synovis Life Technologies, Inc., the former parent company of Vital Images, approved a plan to spin off and establish Vital Images as an independent, publicly-owned company. On

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May 12, 1997, Bio-Vascular distributed all of the shares of Vital Images to the stockholders of Bio-Vascular, and on that date Vital Images began operating as an independent public company. All Bio-Vascular stockholders of record as of May 5, 1997 received one share of Vital Images common stock for each two shares of Bio-Vascular stock held on that date, and cash in lieu of fractional shares. Vital Images common stock is currently listed on The NASDAQ National Market under the symbol VTAL.

### **Critical accounting policies and estimates**

Management's discussion and analysis of financial condition and results of operations are based upon the Company's audited consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. The notes to the consolidated financial statements contained in this Annual Report describe the Company's significant accounting policies used in the preparation of the consolidated financial statements.

The Company continually evaluates its critical accounting policies and estimates. The Company believes the critical accounting policies listed below reflect significant judgments, estimates and assumptions used in the preparation of its

consolidated financial statements.

*Allowance for doubtful accounts*

The Company maintains an allowance for doubtful accounts at an amount estimated to be sufficient to provide adequate protection against losses resulting from extending credit to the Company's customers. In judging the adequacy of the allowance for doubtful accounts, the Company considers multiple factors, including historical bad debt experience, the general economic environment, the need for specific client reserves and the aging of the Company's receivables. This provision is included in operating expenses as a general and administrative expense in the consolidated statements of operations. A considerable amount of judgment is required in assessing these factors. If the factors utilized in determining the allowance do not reflect future performance, then a change in the allowance for doubtful accounts would be necessary in the period such determination has been made which would impact future results of operations. As of December 31, 2004, the allowance for doubtful accounts was \$767,000 for gross accounts receivable of \$8.9 million.

*Deferred taxes*

Significant judgment is required in determining the realizability of the Company's deferred tax assets. The Company must assess the likelihood that its net deferred tax assets will be recovered from future taxable income, and to the extent the Company believes that recovery is not likely, it must establish a valuation allowance. To the extent the Company establishes a valuation allowance; it must include an expense within the tax provision in the statement of operations. As of December 31, 2004, the consolidated balance sheet included net deferred tax assets of \$9.1 million.

The Company's methodology for determining the realizability of its deferred tax assets involves estimates of future taxable income from its core business, the estimated impact of future tax deductions from the exercise of stock options outstanding as of December 31, 2004, and the expiration dates and amounts of net operating loss carryforwards and other tax credits. These estimates are projected through the life of the related deferred tax assets based on assumptions which management believes to be reasonable and consistent with current operating results.

Although the Company had cumulative pre-tax income for financial reporting purposes for the three years ended December 31, 2004, the Company did not pay any significant income taxes over that period due to tax deductions from the exercise of stock options as well as its utilization of net operating losses. In assessing the realizability of its deferred tax assets as of December 31, 2004, the Company considered evidence regarding its ability to generate sufficient future taxable income to realize its deferred tax assets. The primary evidence considered included the cumulative pre-tax income for financial reporting purposes for the past three years; the cumulative tax operating loss for the past three years; the estimated impact of future tax deductions from the exercise of stock options outstanding as of December 31, 2004; and the estimated future taxable income based on historical operating results.

After giving consideration to these factors, the Company concluded that it was more likely than not that tax loss carryforwards that expire in 2005 and other tax credits that expire within the next four years will not be utilized due to the estimated future tax deductions from the exercise of stock options outstanding as of December 31, 2004. As a result, the Company recorded a valuation allowance of \$183,000 for the year ended December 31, 2004. The Company also recorded a full valuation allowance of \$43,000 relating to 2004 foreign net operating losses that are subject to uncertainty regarding utilization.

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The Company also concluded that it was more likely than not that the net deferred tax assets of \$9.1 million as of December 31, 2004 and the estimated future tax deductions from the exercise of stock options outstanding as of December 31, 2004 would be utilized prior to expiring. Based on this conclusion, the Company would require approximately \$42 million in cumulative future taxable income to be generated at various times over the next twenty years to realize the related net deferred tax assets of \$9.1 million as of December 31, 2004 as well as the estimated future tax deductions from the exercise of stock options outstanding and in-the-money as of December 31, 2004.

In the event that the Company adjusts its estimates of future taxable income or tax deductions from the exercise of stock options; or the Company's stock price increases significantly without a corresponding increase in taxable income, the Company may need to establish additional valuation allowances, which could materially impact its financial position and results of operations.

### *Long-lived assets*

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate the carrying

amount may not be recoverable, in accordance with Statement of Financial Accounting Standards ( SFAS ) No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets. Events or changes in circumstances that indicate the carrying amount may not be recoverable include, but are not limited to, a significant decrease in the market value of the business or asset acquired, a significant adverse change in the extent or manner in which the business or asset acquired is used, or a significant adverse change in the business climate. If such events or changes in circumstances are present, the undiscounted cash flows method is used to determine whether the asset is impaired. Cash flows would include the estimated terminal value of the asset and exclude any interest charges. To the extent the carrying value of the asset exceeds the undiscounted cash flows over the estimated remaining life of the asset; the impairment is measured using the discounted cash flows. The discount rate utilized would be based on management's best estimate of the related risks and return at the time the impairment assessment is made.

The Company's long-lived assets consist of property and equipment of \$3.2 million, licensed technology of \$330,000 and other intangible assets subject to amortization of \$5.8 million as of December 31, 2004.

*Goodwill and other intangible assets with indefinite lives*

The Company accounts for goodwill and other intangible assets in accordance with the provisions of SFAS No. 142, Goodwill and Other Intangible Assets. Under SFAS No. 142, goodwill and intangible assets with indefinite lives are not amortized to expense and must be reviewed for impairment annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. The first step of the goodwill impairment test, used to identify potential impairment, compares the fair value of a reporting unit with its carrying amount, including goodwill. The Company operates as one reporting unit and therefore compares the book value to the market value (market capitalization plus a control premium). If the market value exceeds the book value, goodwill is considered not impaired, thus the second step of the impairment test is not necessary. If the Company's book value exceeds the market value, the second step of the goodwill impairment test is performed to measure the amount of impairment loss, if any. The second step of the goodwill impairment test, used to measure the amount of impairment loss, compares the implied fair value of the goodwill with the book value of the goodwill. If the carrying value of the goodwill exceeds the implied fair value of the goodwill, an impairment loss would be recognized in an amount equal to the excess. Any loss recognized cannot exceed the carrying amount of goodwill. After a goodwill impairment loss is recognized, the adjusted carrying amount of goodwill is its new accounting basis. Subsequent reversal of a previously recognized goodwill impairment loss is prohibited once the measurement of that loss is completed. The Company completed the annual goodwill impairment assessment as of December 31, 2004, upon which no impairment was recorded.

The Company's goodwill was \$6.1 million as of December 31, 2004.

*Commitments and contingencies*

As of December 31, 2004, the Company had a commitment with R2 Technology, Inc. ( R2 ) to purchase an estimated \$5.4 million of product for resale over the next 11 quarters. Based on current sales estimates, the Company will be able to sell all product anticipated to be purchased under the obligation. Any changes to these estimates could have an adverse impact on the Company's financial position and results of operations.

The Company is subject to the possibility of various loss contingencies in the normal course of business. The Company accrues for loss contingencies when a loss is estimable and probable. The Company did not have any material loss contingencies recorded as of December 31, 2004.

*Revenue recognition*

Revenue recognition rules for software companies are complex. The Company follows specific and detailed guidelines in determining the proper amount of revenue to be recorded; however, certain judgments affect the application of the Company's revenue recognition policy. Revenue results are difficult to predict, and any shortfall in revenue or delay in recognizing revenue could cause the Company's operating results to vary significantly from period to period.

The significant judgments for revenue recognition typically involve whether collectibility can be considered probable and whether fees are fixed or determinable. In addition, the Company's transactions often consist of multiple element arrangements, which must be analyzed to determine the relative fair value of each element, the amount of revenue to be recognized upon shipment, if any, and the period and conditions under which deferred revenue should be recognized.

The Company licenses its software and sells products and services to end-users and also indirectly through original equipment manufacturers ( OEMs ) and independent distributors (collectively Resellers ). Terms offered by the Company do not generally differ based on whether the customer is an end-user, or a Reseller. The Company offers terms that require payment within 30 to 90 days after product delivery. The Company does not offer rights of return, acceptance clauses or price protection to its customers.



License fees revenue is derived from the licensing of computer software. Hardware revenue is derived from the sale of system hardware, including peripheral equipment. Maintenance and service revenue is derived from software maintenance and from telephone support, installation, training and engineering services. The Company's software licenses are always sold as part of an arrangement that includes maintenance and support and often installation and training services.

Engineering services consist of software modification or development services that are sold separately to OEMs. The Company generally sells hardware as part of a system sale, but it occasionally sells hardware as part of a system upgrade or additional product sale.

The Company recognizes revenue in accordance with American Institute of Certified Public Accountants (AICPA) Statement of Position (SOP) 97-2, Software Revenue Recognition, as amended by SOP 98-4 and SOP 98-9, as well as Technical Practice Aids issued from time to time by the AICPA and SEC Staff Accounting Bulletin No. 104. The Company recognizes revenue when it is realized or realizable and earned. The Company considers revenue realized or realizable and earned when it has persuasive evidence of an arrangement, the product has been shipped or the services have been provided to the customer, the sales price is fixed or determinable, and collectability is probable. Provided all other revenue recognition criteria are met, license revenue from Resellers is recognized on a sell-in or sell-through basis depending on the arrangement with the Reseller. The Company recognizes revenue from Resellers on a sell-in basis provided the Reseller i) assumes all risk of the purchase, ii) has the ability and obligation to pay regardless of receiving payment from the end user, and iii) has a history of timely payments.

The Company evaluates the credit worthiness of all customers. In circumstances where the Company does not have experience selling to a customer and lacks adequate credit information to conclude that collection is probable, revenue is deferred until the arrangement fees are collected and all other revenue recognition criteria in the arrangement have been met.

In addition to the aforementioned general policy, the following are the specific revenue recognition policies for services and multiple-element arrangements.

**Software and Hardware** Revenue from license fees and hardware is recognized when shipment of the product has occurred, no significant Company obligations with regard to implementation remain and the Company's services are not considered essential to the functionality of other elements of the arrangement. See also **Multiple Element Arrangements** below for further information.

**Services** Revenue from maintenance and support arrangements is deferred and recognized ratably over the term of the maintenance and support arrangements. Revenue from training and installation services is recognized as the services are provided to customers. Revenue from engineering services, where the Company is performing significant customization or modification of software, is recognized using contract accounting on a percentage-of-completion basis. The Company records revenue by reference to actual hours incurred to date and the estimated hours remaining to complete the services.

**Multiple-Element Arrangements** The Company enters into arrangements with customers that include a combination of software products, system hardware, specified upgrades, maintenance and support, or installation and training services. For such arrangements, the Company recognizes revenue using the residual value method. The Company allocates the total arrangement fee among the various elements of the arrangement based on the relative fair value of each of the undelivered elements determined by vendor-specific objective evidence. The fair value of maintenance and support services is based upon the renewal rate for continued service arrangements. The fair value of installation and training services is established based upon separate pricing for the services. In software arrangements for which the Company does not have vendor-specific objective evidence of fair value for all elements, revenue is deferred until the earlier of when vendor-specific objective evidence

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is determined for the undelivered elements (residual method) or when all elements for which the Company does not have vendor-specific objective evidence of fair value, have been delivered.

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The following table sets forth information from the Company's Statements of Operations, expressed as a percentage of total revenue.

	For the Years Ended December 31,		
	2004	2003	2002
<b>Revenue:</b>			
License fees	66.6%	67.4%	67.3%
Maintenance and services	26.4	25.1	19.0
Hardware	7.0	7.5	13.7
Total revenue	100.0	100.0	100.0
<b>Cost of revenue:</b>			
License fees	11.1	6.7	5.9
Maintenance and services	12.8	13.8	13.6
Hardware	5.0	5.4	10.4
Total cost of revenue	28.9	25.9	29.9
Gross profit	71.1	74.1	70.1
<b>Operating expenses:</b>			
Sales and marketing	33.8	34.1	32.2
Research and development	17.5	18.9	19.6
General and administrative	15.6	14.0	15.1
Acquired in-process research and development	2.8		
Total operating expenses	69.7	67.0	66.9
Operating income	1.4	7.1	3.2
Interest income	1.0	0.8	0.6
Income before income taxes	2.4	7.9	3.8
Provision (benefit) for income taxes, net	1.6	(23.1)	0.1
Net income	0.8%	31.0%	3.7%

### Revenue

Total revenue increased 32% to \$36.1 million in 2004 from \$27.3 million in 2003. Total revenue increased 29% to \$27.3 million in 2003 from \$21.1 million in 2002. The revenue growth was driven by the increase in the Company's core revenue components of software license fees and maintenance and service revenue. License fee revenue increased 31% to \$24.1 million from \$18.4 million in 2003 and increased 29% to \$18.4 million in 2003 from \$14.2 million in 2002. The increase in software license fee revenue was driven by an increase in the number of *Vitreax 2* licenses sold, principally to Toshiba Medical Systems Corporation (Toshiba), and an increase in the number of Vitrea add-on options sold. In addition, the sale of third-party software products increased to \$1.8 million in 2004 from \$194,000 in 2003. The installed base of Vitrea customers increased from approximately 850 at December 31, 2002, to approximately 1,300 at December 31, 2003, and to approximately 1,900 at December 31, 2004. The number of Vitrea add-on modules sold by the Company increased from approximately 660 in 2002, to 1,200 in 2003, and to 2,400 in 2004.

Maintenance and services revenue increased 39% to \$9.5 million for 2004 compared to \$6.8 million for 2003 and increased 70% to \$6.8 million in 2003 from \$4.0 million in 2002. Of the \$2.7 million increase for 2004 compared to 2003, \$2.0 million consisted of an increase in maintenance revenue and \$1.1 million was an increase in training revenue. The increases for 2004 were partially offset by a \$380,000 decrease in engineering services rendered under product development agreements with Medtronic Surgical Navigation Technologies (SNT), E-Z-EM, Inc.

and Toshiba and a \$44,000 decrease in installation

revenue due to Toshiba performing its own installations of *Vitre 2*. The increase in training revenue in 2004 was due in part to the introduction of the offsite regional training program. Maintenance revenue increased \$2.8 million from 2002 to 2003. Maintenance revenue increased in all periods primarily due to an increased customer base and improved pricing.

For 2004, the Company generated 57% revenue growth from the sale of *Vitre 2* options, including *VScore*, CT Colonography, Automated Vessel Measurements and CT Cardiac. The sale of *Vitre 2* options totaled \$14.1 million for 2004 compared with \$9.0 million for 2003 and \$6.0 million for 2002. For 2004, software license fee revenue from sales to Toshiba totaled \$12.9 million compared with \$8.3 million for 2003 and \$6.0 million for 2002. Toshiba represented 50%, 42% and 34% of total revenue in 2004, 2003 and 2002, respectively.

Hardware revenue increased 23% to \$2.5 million in 2004 from \$2.1 million in 2003. The increase from 2003 to 2004 was due to price increases in hardware and overall increases in sales of *Vitre* licenses. Hardware revenue decreased 28% to \$2.1 million in 2003 from \$2.9 million in 2002. The decrease from 2002 to 2003 was due to a decrease in the number of complete system sales and lower unit pricing for hardware platforms shipped in 2003.

#### **Gross margin**

The Company's gross margin was 71% in 2004, down from 74% in 2003, in part due to the increase in the cost of third-party software, which is up \$1.1 million over 2003. In addition, \$976,000 of expense was incurred due to amortization of intangibles throughout the year related to the HInnovation acquisition that was charged to cost of revenue. These factors led to reduced software margins of 83% in 2004, compared to 90% in 2003. Maintenance and services margins were 51% in 2004, up from 45% in 2003, in part due to changes in pricing structure for maintenance and training services. Hardware margins were 30% in 2004 compared to 28% in 2003. Gross margin in 2003 increased to 74% from 70% in 2002, as total revenue included higher margin license revenue and less hardware revenue, which carries a lower margin.

#### **Sales and marketing**

Sales and marketing expenses were \$12.2 million, \$9.3 million and \$6.8 million for 2004, 2003 and 2002, respectively. The increases were mostly due to increases in compensation costs as a result of additional personnel required to drive and support recent growth and increased sales commissions as a result of increased revenue. Compensation costs, including commissions, increased \$1.8 million from 2003 to 2004 and \$1.5 million from 2002 to 2003, due to more sales and marketing personnel and higher commissions related to the increase in revenue. There were 53, 42, and 33 sales and marketing personnel as of December 31, 2004, 2003 and 2002, respectively. Due to the increase in the number of personnel from 2003 to 2004, travel and entertainment expenses increased \$440,000. Tradeshow, advertising and marketing brochure costs increased \$425,000 and \$65,000 from 2003 to 2004 and 2002 to 2003, respectively, due to the Company attending more tradeshows and increasing its presence at tradeshows by purchasing more booth space.

From 2002 to 2003, there was a \$356,000 increase in expenses related to utilizing outside consultants to help sell and promote *Vitre 2* and related options for 2003 as compared to 2002. The Company expects sales and marketing costs to increase in future periods as a result of the cost of additional sales and marketing personnel and increased sales of its product.

**Research and development**

Research and development expenses were \$6.3 million, \$5.2 million and \$4.1 million in 2004, 2003 and 2002, respectively. Of the \$1.2 million expense increase from 2003 to 2004, \$677,000 was due to increased compensation costs resulting from additional personnel supporting software and product development and additional employees related to the Company's acquisition of HInnovation, Inc. Total research and development personnel increased from 38 at December 31, 2003 to 50 at December 31, 2004.

Due to more training and increased personnel, training and hiring costs increased \$64,000 from 2002 to 2003, respectively. There was a \$189,000 expense increase due to a decrease in expenses classified in cost of revenue in connection with engineering services provided to certain third parties under various product development agreements in 2003 as compared to 2002. The Company anticipates that research and development costs will increase in future periods as the Company develops software tools for applications with large potential markets, such as cardiovascular disease, disease screening applications such as colon cancer, and surgical and therapy planning.

#### **General and administrative**

General and administrative expenses were \$5.6 million, \$3.8 million, and \$3.2 million in 2004, 2003 and 2002, respectively. Of the \$1.8 million increase from 2003 to 2004, \$404,000 was due to an increase in compensation costs related to additional personnel. Fees related to accounting, legal, consulting, regulatory filings and temporary worker services increased \$518,000 in 2004. These fees were primarily due to costs related to implementation of Section 404 of the Sarbanes-Oxley Act of 2002, as well as additional costs incurred as a result of a restatement at the end of the third quarter of 2004. In addition, bad debt expense increased \$580,000 during 2004 as a result of reserves established for specific accounts in the first quarter of 2004. Total general and administrative personnel increased from 21 at December 31, 2003 to 23 at December 31, 2004.

Legal fees increased \$227,000 during 2003 as compared to 2002 due to business development, patent work and SEC filings related to the registration statement covering the resale of shares from a private placement in June 2003. Registration and filing fees increased \$104,000 in 2003 as compared to 2002, which includes a \$100,000 NASDAQ National Market registration fee. This registration fee was paid for the first time in June 2003 when the Company qualified for listing on the NASDAQ National Market. These increases were partially offset by a \$230,000 decrease due to severance costs paid in 2002 to the Company's former chief executive officer. The Company believes that general and administrative expenses will increase in future periods due to increased infrastructure costs as the business grows and as the legal and regulatory environment continues to place increased emphasis on administrative functions.

#### **Operating income**

The increased revenue from *Vitrea 2* and add-on software options and related service revenues, net of the increased expenses attributable to the development of the Company's infrastructure and the development and promotion of the *Vitrea 2* product, resulted in operating income of \$514,000 for 2004 compared with \$1.9 million for 2003 and \$677,000 for 2002.

Operating income was \$514,000 in 2004, which included amortization of identified intangibles of \$1.1 million and an acquired in-process research and development charge of \$1.0 million related to the acquisition of HInnovation, compared to \$1.9 million in 2003.

#### **Interest income**

There was \$368,000 of interest income for 2004, compared with \$214,000 in 2003 and \$135,000 in 2002. These increases were primarily due to increases in cash, cash equivalents and marketable securities. The increases in cash, cash equivalents and marketable securities were due to the increased cash flows from operations from 2002 to 2003 and from 2003 to 2004 and the \$19.0 million of cash generated from the private placement in June 2003.

**Income taxes**

The Company's methodology for determining the realizability of its deferred tax assets involves estimates of future taxable income from its core business, the estimated impact of future tax deductions from the exercise of stock options outstanding as of December 31, 2004, and the expiration dates and amounts of net operating loss carryforwards and other tax credits. These estimates are projected through the life of the related deferred tax assets based on assumptions which management believes to be reasonable and consistent with current operating results.

Although the Company had cumulative pre-tax income for financial reporting purposes for the three years ended December 31, 2004, the Company did not pay any significant income taxes over that period due to tax deductions from the exercise of stock options as well as utilization of net operating losses. In assessing the realizability of its deferred tax assets as of December 31, 2004, the Company considered evidence regarding its ability to generate sufficient future taxable income to realize its deferred tax assets. The primary evidence considered included the cumulative pre-tax income for financial reporting purposes for the past three years; the cumulative tax operating loss for the past three years; the estimated impact of future tax deductions from the exercise of stock options outstanding as of December 31, 2004; and the estimated future



taxable income based on historical operating results.

After giving consideration to these factors, the Company concluded that it was more likely than not that tax loss carryforwards that expire in 2005 and other tax credits that expire within the next four years will not be utilized due to the estimated future tax deductions from the exercise of stock options outstanding as of December 31, 2004. As a result, the Company recorded a valuation allowance of \$183,000 for the year ended December 31, 2004. The Company also recorded a valuation allowance of \$43,000 relating to 2004 foreign net operating losses that are subject to uncertainty regarding utilization and, therefore, a full valuation allowance was recorded.

The Company also concluded that it was more likely than not that the net deferred tax assets of \$9.1 million as of December 31, 2004 and the estimated future tax deductions from the exercise of stock options outstanding as of December 31, 2004 would be utilized prior to expiring. Based on this conclusion, the Company would require approximately \$42 million in cumulative future taxable income to be generated at various times over the next twenty years to realize the related net deferred tax assets of \$9.1 million as of December 31, 2004 as well as the estimated future tax deductions from the exercise of stock options outstanding and in-the-money as of December 31, 2004.

In the event that the Company adjusts its estimates of future taxable income or tax deductions from the exercise of stock options; or the Company's stock price increases significantly without a corresponding increase in taxable income, the Company may need to establish additional valuation allowances, which could materially impact its financial position and results of operations.

During 2003, the Company concluded that it is more likely than not that substantially all of its net deferred tax assets would be realized, and the Company reversed substantially all of its valuation allowance for net deferred tax assets, which resulted in the recording of a net tax benefit in 2003. The reversal of the deferred tax assets valuation allowance is based upon the Company's historical operating performance and management's expectation that the Company will generate taxable income of at least \$25 million in future periods to allow it to realize its deferred tax assets resulting from the tax benefits associated with its net operating loss carryforwards and a significant portion of its research and development tax credit carryforwards, as well as certain other tax benefits related to book and tax income timing differences. The reversal of the valuation allowance resulted in a tax benefit of \$7.2 million. This reversal net of other current year state and federal income taxes resulted in a net tax benefit of \$6.5 million in 2003.

The Company's effective income tax rate is volatile based on the level of operating income achieved, the level of research and development credits available to the Company, the mix between our U.S. operating results, for which we record income taxes, and our foreign operating results, for which we do not record an income tax benefit due to the uncertainty of realizing these tax benefits in future years in our foreign jurisdictions. Based on current estimates, the Company anticipates an effective tax rate of 36% to 39% for fiscal 2005. Any future valuation allowance recorded on the Company's net deferred tax assets of \$9.1 million as of December 31, 2004, would have an adverse effect on the Company's tax provision and operating results.

The income tax provision for 2002 consists solely of certain state minimum fees. As a result of the Company's history of generating net operating losses, the Company had established a valuation allowance to completely reserve for the deferred tax asset of the Company at December 31, 2002.

#### **Liquidity and capital resources**

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As of December 31, 2004, the Company had \$24.1 million in cash and cash equivalents, \$11.5 million in marketable securities, working capital of \$30.1 million and no borrowings, as compared to \$30.1 in cash and cash equivalents, \$4.1 million in marketable securities, working capital of \$31.9 million and no borrowings as of December 31, 2003.

### *Operating activities*

During 2004, cash provided by operations was \$7.6 million, which consisted of an increase of \$1.8 million in working capital accounts and \$5.8 million in cash flow from other operating activities. The increase in accounts receivable was due to the Company's significant overall revenue increase in the fourth quarter of 2004 versus the same period in 2003. The increase in deferred revenue was due to the increase in maintenance and services on a year-over-year basis and an overall increase in customer base to which these services are sold. The increase in accrued expenses and other current liabilities was primarily due to an overall increase in operations and the general timing of cash disbursements in the fourth quarter of 2004. Cash flows from other operating activities in 2004 consisted primarily of non-cash expenses related to the amortization from identified intangibles and IPR&D related to the HInnovation acquisition, an increased provision for doubtful accounts related to the establishment of reserves for specific customer accounts, depreciation and amortization of property and equipment, and a tax benefit related to the exercise of stock options. Days sales outstanding as of December 31, 2004 increased to 82 days, compared to 65 days as of December 31, 2003. Days sales outstanding is calculated based on net accounts receivable and total revenue.

Cash provided by operations was \$4.4 million and \$2.4 million in 2003 and 2002, respectively, which consisted of an increase in working capital accounts of \$760,000 in 2003 and \$550,000 in 2002, and cash flow from other operating activities

of \$3.6 million in 2003 and \$1.9 million in 2002. Days sales outstanding as of December 31, 2003 decreased to 65 days from 90 days as of December 31, 2002.

*Investing activities*

The Company used \$15.7 million, \$3.4 million and \$4.0 million of cash in investing activities in 2004, 2003 and 2002, respectively.

The Company used \$1.6 million, \$1.9 million and \$1.5 million for purchases of property and equipment in 2004, 2003 and 2002, respectively. The purchases for all periods were principally to upgrade computer equipment and to purchase computer equipment for new personnel. In addition, the Company purchased furniture and fixtures and leasehold improvements related to expansions of the Company's offices in 2003 and 2002. Management anticipates that the Company will continue to purchase property and equipment necessary in the normal course of the Company's business. The amount and timing of these purchases and the related cash outflows in future periods is difficult to predict and depends on a number of factors, including the hiring of employees and the rate of change of computer hardware. The Company anticipates increased property and equipment purchases in 2005 as the Company moves to its new corporate office in the first quarter of 2005.

The Company used \$30.4 million, \$6.8 million and \$8.0 million to purchase investments in marketable securities during 2004, 2003 and 2002, respectively. The Company realized \$22.5 million, \$5.2 million and \$5.5 million of proceeds from sales of marketable securities during 2004, 2003 and 2002, respectively. The marketable securities are invested in U.S. government obligations, U.S. government agency obligations, corporate commercial obligations and certificates of deposits.

During the first quarter of 2004, the Company completed the acquisition of HInnovation, Inc. in accordance with the terms and conditions of an Acquisition Agreement and Plan of Reorganization dated as of January 8, 2004, using \$6.1 million of cash. See Note 3 to the Consolidated Financial Statements for additional information on the acquisition.

*Financing activities*

Cash provided by financing activities totaled \$2.2 million, \$21.1 million, and \$2.9 million for 2004, 2003 and 2002, respectively. The cash provided by financing activities in 2004 and 2002 resulted primarily from the exercise of stock options granted under the Company's stock plans and upon the exercise of warrants. Of the cash provided by financing activities during 2003, \$19.0 million consisted of net proceeds, after deducting offering costs of \$1.3 million, from the Company's private placement in June 2003 of 1.5 million shares of common stock at \$13.50 per share. A registration statement covering the resale of these shares was declared effective on September 29, 2003 by the Securities and Exchange Commission.

The Company has never paid or declared any cash dividends and does not intend to pay dividends in the near future.

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The following summarizes our contractual obligations, including purchase commitments, at December 31, 2004, and the effect such obligations are expected to have on our liquidity and cash flow in future periods.

	2005	2006	2007	2008	2009 through 2012
Operating leases(1)	\$ 673,000	\$ 471,000	\$ 618,000	\$ 711,000	\$ 2,289,000
Purchase commitment(2)	1,915,000	1,890,000	1,575,000		
HInovation acquisition(3)	4,500,000				
Total	\$ 7,088,000	\$ 2,361,000	\$ 2,193,000	\$ 711,000	\$ 2,289,000

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(1) The Company currently leases its office facilities in Minnetonka, Minnesota under a lease that expires in January 2012. In March 2004, the Company signed a non-cancelable operating lease for new office space. The new lease term started in February 2005 and expires in January 2012. Under the terms of the new lease, the lessor for the Minnetonka office began making the minimum lease payments for the Company's former facilities located in Plymouth, Minnesota in February 2005. As part of the new lease, the Company is also required to pay a portion of the lessor's operating costs for the new facilities. The minimum lease payments listed include both the Plymouth and Minnetonka office locations. See Note 5 to the Consolidated Financial Statements for additional information on the new lease.

(2) In November 2002, the Company entered into an agreement with R2 Technology, Inc. ( "R2" ) to distribute R2's lung nodule CAD software product in conjunction with the Company's products. The Company completed its development work to meet the clinical requirements for selling the lung nodule CAD software with Vitrea 2 on August 26, 2004. Under the agreement, the first purchase was required in the fourth quarter of 2004. The total purchase commitment will be a maximum of \$5.6 million worth of product over a three-year commitment period. The purchase commitment price the Company must pay will be reduced if the selling price of the lung CAD product when sold directly to end-users by R2 falls below a specified price. The purchase commitment units the Company is required to purchase will be reduced if R2 and its other distributors of the lung CAD product are unable to sell as many units as the Company is required to purchase.

As of December 31, 2004, the Company had a commitment to purchase an estimated \$200,000 worth of additional R2 lung nodule CAD software under the agreement that was not fulfilled. The Company and R2 are currently renegotiating the terms of the contract.

(3) The merger consideration for HInnovation includes contingent milestone payments of up to a maximum of \$6.0 million of contingent milestone payments comprised of \$3.0 million in common stock and \$3.0 million in cash. The contingent milestone payments are based on 1) the achievement of certain revenue targets resulting from the sale of products containing HInnovation technology during the 12 month period following the closing date; 2) the porting of Vital Images' product to HInnovation's product platform and the commercial launch thereof; and 3) licensing the HInnovation patented technology within 24 months after the closing date. The number of shares issued under the contingent milestone payments will be determined based on the average closing price of the Company's common stock during the 10 trading days before completion of the milestone objective. However, the Acquisition Agreement provides that the number of shares of Vital Images common stock comprising the contingent consideration cannot exceed 300,000 shares. If, at the time of its issuance, the value of such stock is less than \$3.0 million due to this limitation on the number of shares, Vital Images will pay the shortfall in cash. Any contingent payments made by the Company will result in an increase in goodwill. As of December 31, 2004, no contingent payments had been earned. The first milestone was not met before the February 2005 deadline. As a result, the potential maximum contingent consideration was reduced to \$4.5 million, which consists of \$3.0 million in common stock and \$1.5 million in cash.

The Company had no significant outstanding purchase orders as of December, 31 2004. The Company has entered into a number of technology licensing agreements that provide for the payment of royalties when the Company sells *Vitrea 2*. Except for the R2-purchase commitment discussed above, the Company is not obligated for any minimum payments under such agreements.

Management believes that its cash and cash equivalents should be sufficient to satisfy the Company's cash requirements for at least the next 12 months. The future availability of financing is influenced by many factors, including profitability, operating cash flows and market conditions. The Company believes that its strategies and actions toward maintaining financial flexibility mitigate much of this risk.

#### **Foreign currency transactions**

Substantially all of the Company's foreign transactions are negotiated, invoiced and paid in U.S. dollars.

#### **Inflation**

Management believes inflation has not had a material effect on the Company's operations or on its financial condition.

**Recent accounting pronouncement**

In December 2004, the Financial Accounting Standards Board ( FASB ) issued SFAS No. 123 (revised 2004), Share-Based Payment . SFAS No. 123R supersedes APB Opinion No. 25, which requires recognition of an expense when goods or services are provided. SFAS No. 123R requires the determination of the fair value of the share-based compensation at the grant date and the recognition of the related expense over the period in which the share-based compensation vests. SFAS No. 123R permits a prospective or two modified versions of retrospective application under which financial statements for prior periods are adjusted on a basis consistent with the pro forma disclosures required for those periods by the original SFAS No. 123. The Company is required to adopt the provisions of SFAS No. 123R effective July 1, 2005, at which time the Company will begin recognizing an expense for unvested share-based compensation that has been issued or will be issued after that date. Under the retroactive options, prior periods may be restated either as of the beginning of the year of adoption, January 1, 2005 for the Company, or for all periods presented. The Company has not yet finalized its decision concerning the transition option it will utilize to adopt SFAS No. 123R. The Company is currently assessing its stock-based compensation strategy and related tax implications. Future stock-based compensation may differ from pro forma amounts disclosed in Note 2 to the consolidated financial statements. The Company expects the impact of the adoption of SFAS No. 123R to be material to its

consolidated financial statements.

### **Forward-looking statements**

This Annual Report on Form 10-K contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and information that is based on management's beliefs as well as on assumptions made by, and upon information currently available to, management. When used in this Annual Report on Form 10-K, the words "expect," "anticipate," "intend," "plan," "believe," "seek," and "estimate" and similar expressions are intended to identify such forward-looking statements. However, this Annual Report on Form 10-K also contains other forward-looking statements. Forward-looking statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions including, but not limited to, the following factors, which could cause the Company's future results and shareholder values to differ materially from those expressed in any forward-looking statements made by or on behalf of the Company: the dependence on market growth of the industry in which the Company operates; the extent to which the Company's products gain market acceptance; the potential for litigation regarding patent and other intellectual property rights; the introduction of competitive products by others; dependence on major customers; fluctuations in quarterly results; the progress of product development; the availability of third party reimbursement; and the receipt and timing of regulatory approvals and other factors detailed from time to time in the Company's filings with the Securities and Exchange Commission, including those set forth under the heading "Risk Factors" included in Item 1 of this Annual Report on Form 10-K.

### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

Market risk refers to the risk that a change in the level of one or more market prices, interest rates, indices, volatilities, correlations or other market factors such as liquidity will result in losses for a certain financial instrument or group of financial instruments. The Company does not hold or issue financial instruments for trading purposes, and it does not enter into forward financial instruments to manage and reduce the impact of changes in foreign currency rates because, as disclosed above, substantially all of the Company's foreign transactions are negotiated, invoiced and paid in U.S. dollars. Based on the controls in place and the relative size of the financial instruments entered into, the Company believes the risks associated with not using these instruments would not have a material adverse effect on the Company's consolidated financial position or results of operations.

In addition, the Company does not engage in speculative transactions and does not use derivative instruments or engage in hedging activities. See the Notes to the Consolidated Financial Statements for a description of the Company's accounting policies and other information related to these financial instruments.

In the normal course of business, the Company is exposed to market risks, including changes in interest rates and price changes that could affect the Company's operating results. As of December 31, 2004, fluctuations in interest rates, exchange rates and price changes would not have had a material effect on the Company's financial position or operating results.

#### **Interest rate risk**

The Company places its cash and cash equivalents, which generally have a term of less than 90 days, with a high-quality financial institution and has investment guidelines relative to diversification and maturities designed to maintain safety and liquidity. As of December 31, 2004, the

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Company had cash and cash equivalents totaling \$24.1 million. Due to the short-term nature of these instruments, the carrying value approximates market value. If, during 2005, average short-term interest rates decreased by 1.0% from 2004 average rates, the Company's projected interest income from short-term investments would decrease by approximately \$241,000, assuming a similar level of investments in 2005.

### **Price risk**

As of December 31, 2004, the Company held marketable securities with an aggregate fair market value of \$11.5 million. All of the Company's marketable securities are classified as available-for-sale and all mature in one year or less. Available-for-sale investments are recorded at market value, which is based on quoted market prices, with unrealized holding gains and losses included as a separate component of stockholders equity. The Company uses a specific identification cost method to determine the gross realized gains and losses on the sale of its securities. Had market prices of such securities declined 10% as of December 31, 2004, the values of these instruments would have decreased by approximately \$1.2 million.



**Foreign currency risk**

Substantially all of the Company's foreign transactions are negotiated, invoiced and paid in U.S. dollars. Therefore, fluctuations in the value of the dollar as compared to other foreign currencies have not had an effect on the Company.

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

The Company's financial statements, supplemental schedule and Report of Independent Registered Public Accounting Firm thereon, all of which are included in this Annual Report on Form 10-K, are listed in Item 15(a)(1) of this Form 10-K.

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

Not applicable.

**Item 9A. Controls and Procedures**

**Disclosure controls and procedures**

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the Company's periodic Securities Exchange Act reports is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required financial disclosure.

As of the end of the period covered by this report, the Company carried out an evaluation, under the supervision and with the participation of Company management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to the Securities Exchange Act of 1934 ( Exchange Act ) Rules 13a-15(e) and 15d-15(e). Based upon, and as of the date of this evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that our disclosure controls and procedures were not effective, because of the material weaknesses discussed below. To address the material weaknesses described below, the Company performed additional analysis and other post-closing procedures to ensure that the consolidated financial statements were prepared in accordance with generally accepted accounting principles. Accordingly, management believes that the financial statements included in this report fairly present in all material respects our financial condition, results of operations and cash flows for the periods presented.

**Internal control over financial reporting**

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with established policies or procedures may deteriorate.

The Company is in the process of conducting an evaluation of its internal control over financial reporting as of December 31, 2004. In making its assessment of internal control over financial reporting, management is using the criteria described in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

A material weakness is a control deficiency, or combination of control deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. As of December 31, 2004, the Company did not maintain effective controls over (a) the accuracy and completeness of deferred revenue for maintenance and services, (b) the accuracy and completeness of property and equipment and, (c) the execution of certain financial reporting controls. Specifically, (a) effective controls were not in place to recognize deferred maintenance revenue in the appropriate period and there were errors in the detailed deferred revenue schedules, (b) effective controls were not in place to verify the existence of certain property and equipment and, (c) effective controls were not in place to ensure sufficient documentation over the quarterly closing process to demonstrate that management reviewed the quarterly financial results and related disclosures.

The material weakness related to the accuracy and completeness of deferred revenue for maintenance and services resulted in the restatement of the Company's consolidated financial statements for the year ended December 31, 2003 and for the first and second quarters of 2004. Additionally, these control deficiencies could result in a material misstatement to annual or interim financial statements that would not be prevented or detected. Accordingly, management has determined that each of these control deficiencies constitutes a material weakness. Because of these material weaknesses, management will be unable to

conclude that the Company maintained effective internal control over financial reporting as of December 31, 2004 based on the criteria in the *Internal Control - Integrated Framework*.

The Company's evaluation of its internal control over financial reporting as of December 31, 2004 is not complete. Further, there can be no assurance that as a result of the ongoing evaluation of internal control over financial reporting, additional deficiencies will not be identified or that any deficiencies identified, either alone or in combination with others, will not be considered a material weakness.

Securities and Exchange Commission Release No. 34-50754, subject to certain conditions, provides up to 45 additional days beyond the due date of this Annual Report on Form 10-K for the filing of management's annual report on internal control over financial reporting required by Item 308(a) of Regulation S-K and the related attestation report of the independent registered public accounting firm required by Item 308(b) of Regulation S-K. Pursuant to the Release, management's report on internal control over financial reporting and the associated report on the audit of management's assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2004 are not filed herein and are expected to be filed no later than May 2, 2005 with an amendment to this Annual Report on Form 10-K.

The Company expects that the material weaknesses identified will result in an adverse opinion by the Company's independent registered public accounting firm on the effectiveness of the Company's internal control over financial reporting.

**Changes in internal control over financial reporting**

Except as otherwise discussed herein, there have been no changes in our internal control over financial reporting during our fourth fiscal quarter ended December 31, 2004 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

None.

**Part III**

Certain information required by Part III is omitted from this Annual Report on Form 10-K because the Registrant will file a definitive Proxy Statement relating to our 2005 Annual Meeting of Stockholders pursuant to Schedule 14A (the Proxy Statement) not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, and certain information included therein is incorporated herein by reference as indicated below.

**Item 10. Directors and Executive Officers of Registrant**

The information required by this Item 10 will be included under the captions Election of Directors and Information Concerning Directors, Nominees and Executive Officers in the Company's 2005 Proxy Statement. Information concerning the compliance of the Company's officers, directors and 10% stockholders with Section 16(a) of the Securities Exchange Act of 1934 is incorporated by reference to the information to be contained in the 2005 Proxy Statement under the caption Compliance with Section 16(a). The information regarding Audit Committee members and audit committee financial experts is incorporated by reference to the information to be contained in the 2005 Proxy Statement under the caption Board Committees. The information regarding the Company's Code of Business Ethics is incorporated by reference to the information to be contained in the Company's 2005 Proxy Statement under the heading Code of Business Conduct and Ethics.

**Item 11. Executive Compensation**

The information under the captions Executive Compensation and Director Compensation to be contained in the Company's 2005 Proxy Statement is incorporated herein by reference.

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

The information under the captions Beneficial Ownership of Common Stock and Equity Compensation Plan Information to be contained in the Company's 2005 Proxy Statement is incorporated herein by reference.

**Item 13. Certain Relationships and Related Transactions**

Not applicable.

**Item 14. Principal Accountant Fees and Services**

The information under the caption Independent Registered Public Accounting Firm to be contained in the Company's 2005 Proxy Statement is incorporated herein by reference.

**Part IV**

**Item 15. Exhibits and Financial Statement Schedules**

(a) The following consolidated financial statements of Vital Images, Inc. and Report of Independent Registered Public Accounting Firm thereon are included herein:

(1) Financial Statements

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2004 and 2003

Consolidated Income Statement for the years ended December 31, 2004, 2003 and 2002

Consolidated Statements of Stockholders' Equity and Other Comprehensive Income for the years ended December 31, 2004, 2003 and 2002

Consolidated Statements of Cash Flows for the years ended December 31, 2004, 2003 and 2002

Notes to Consolidated Financial Statements

(2) All other schedules to the consolidated financial statements required by Article 12 of Regulation S-X are not required under the related instructions or are inapplicable and therefore have been omitted.

(3) Listing of Exhibits

The Exhibits required to be a part of this Report are listed in the Index to Exhibits.

(b) Exhibits

Included in Item 15(a)(3) above.

**Signatures**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, in Minneapolis, Minnesota, on the 16th day of March, 2005.

Vital Images, Inc.

By: /s/Michael H. Carrel  
 Michael H. Carrel  
 Chief Financial Officer and  
 Vice President-Finance  
 (Principal Financial Officer and Principal Accounting Officer)

Pursuant to the requirement of the Securities Exchange Act of 1934, this Report has been signed by the following persons in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/s/Jay D. Miller Jay D. Miller	President, Chief Executive Officer and Director (Principal Executive Officer)	March 16, 2005
/s/Michael H. Carrel Michael H. Carrel	Chief Financial Officer, Vice President-Finance, Treasurer and Secretary (Principal Financial Officer and Principal Accounting Officer)	March 16, 2005
/s/Douglas M. Pihl Douglas M. Pihl	Chairman of the Board and Director	March 16, 2005
/s/Vincent J. Argiro Vincent J. Argiro	Chief Technology Officer, Founder and Director	March 16, 2005
/s/James B. Hickey, Jr. James B. Hickey, Jr.	Director	March 16, 2005
/s/Richard W. Perkins Richard W. Perkins	Director	March 16, 2005
/s/Michael W. Vannier Michael W. Vannier	Director	March 16, 2005
/s/Sven A. Wehrwein Sven A. Wehrwein	Director	March 16, 2005

**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders of Vital Images, Inc.:

In our opinion, the consolidated financial statements listed in the index appearing under Item 15(a)(1) present fairly, in all material respects, the financial position of Vital Images, Inc. and its subsidiary (the Company) at December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2004 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, 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.

PricewaterhouseCoopers LLP

Minneapolis, Minnesota

March 2, 2005



## Vital Images, Inc.

## Consolidated Balance Sheets

	December 31,	
	2004	2003
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 24,119,157	\$ 30,111,613
Marketable securities	11,546,140	4,078,587
Accounts receivable, net	8,090,359	4,877,876
Deferred income taxes	600,000	275,000
Prepaid expenses and other current assets	1,092,495	776,558
Total current assets	45,448,151	40,119,634
Property and equipment, net	3,222,367	3,043,239
Deferred income taxes	8,454,000	9,306,000
Licensed technology, net	330,000	450,000
Other intangible assets, net	5,777,000	
Goodwill	6,052,744	
Other assets		144,346
Total assets	\$ 69,284,262	\$ 53,063,219
<b>Liabilities and Stockholders Equity</b>		
Current liabilities:		
Accounts payable	\$ 1,892,657	\$ 1,485,451
Accrued compensation	3,175,354	1,347,464
Accrued royalties	573,985	556,494
Other current liabilities	673,131	285,121
Deferred revenue	8,136,844	4,530,333
Total current liabilities	14,451,971	8,204,863
Deferred revenue	277,568	264,691
Total liabilities	14,729,539	8,469,554
Commitments and contingencies (Note 3 and 5)		
Stockholders equity:		
Preferred stock: \$0.01 par value; 5,000,000 shares authorized; none issued or outstanding		
Common stock: \$0.01 par value; 20,000,000 shares authorized; 12,007,160 and 11,140,380 shares issued and outstanding, respectively	120,072	111,404
Additional paid-in capital	65,813,282	56,108,590
Accumulated other comprehensive loss	(47,865)	
Accumulated deficit	(11,330,766)	(11,626,329)
Total stockholders equity	54,554,723	44,593,665
Total liabilities and stockholders equity	\$ 69,284,262	\$ 53,063,219

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

**Vital Images, Inc.**  
**Consolidated Statements of Operations**

	For the Year Ended December 31,		
	2004	2003	2002
<b>Revenue:</b>			
License fees	\$ 24,054,251	\$ 18,388,794	\$ 14,211,640
Maintenance and services	9,524,791	6,844,470	4,019,639
Hardware	2,543,005	2,066,454	2,884,795
<b>Total revenue</b>	<b>36,122,047</b>	<b>27,299,718</b>	<b>21,116,074</b>
<b>Cost of revenue:</b>			
License fees	3,993,982	1,818,353	1,250,426
Maintenance and services	4,660,433	3,773,794	2,862,459
Hardware	1,792,666	1,478,914	2,195,182
<b>Total cost of revenue</b>	<b>10,447,081</b>	<b>7,071,061</b>	<b>6,308,067</b>
<b>Gross profit</b>	<b>25,674,966</b>	<b>20,228,657</b>	<b>14,808,007</b>
<b>Operating expenses:</b>			
Sales and marketing	12,204,574	9,317,766	6,795,377
Research and development	6,329,190	5,168,695	4,143,257
General and administrative	5,626,719	3,806,914	3,192,735
Acquired in-process research and development	1,000,000		
<b>Total operating expenses</b>	<b>25,160,483</b>	<b>18,293,375</b>	<b>14,131,369</b>
<b>Operating income</b>	<b>514,483</b>	<b>1,935,282</b>	<b>676,638</b>
Interest income	368,080	213,859	134,870
<b>Income before income taxes</b>	<b>882,563</b>	<b>2,149,141</b>	<b>811,508</b>
Provision (benefit) for income taxes, net	587,000	(6,313,000)	22,000
<b>Net income</b>	<b>\$ 295,563</b>	<b>\$ 8,462,141</b>	<b>\$ 789,508</b>
Net income per share basic	\$ 0.03	\$ 0.83	\$ 0.09
Weighted average common shares outstanding basic	11,632,351	10,189,114	8,861,132
Net income per share diluted	\$ 0.02	\$ 0.71	\$ 0.08
Weighted average common shares outstanding diluted	12,535,670	11,848,268	9,821,798

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

**Vital Images, Inc.**  
**Consolidated Statements of Stockholders Equity and Comprehensive Income**

	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders Equity	Comprehensive Income
Balances as of December 31, 2001	8,186,092	\$ 81,861	\$ 28,846,906	\$ (20,877,978)		\$ 8,050,789	
Stock-based compensation			18,279			18,279	
Issuance of common stock upon exercise of stock options	288,008	2,880	1,003,321			1,006,201	
Issuance of common stock under employee stock purchase plan	24,539	245	130,363			130,608	
Issuance of common stock upon exercise of stock warrants	488,370	4,884	1,720,502			1,725,386	
Net income				789,508		789,508	\$ 789,508
Balances as of December 31, 2002	8,987,009	89,870	31,719,371	(20,088,470)		11,720,771	\$ 789,508
Stock-based compensation			137,485			137,485	
Issuance of common stock upon exercise of stock options	559,006	5,590	1,690,005			1,695,595	
Tax benefit related to exercise of stock options			3,189,000			3,189,000	
Issuance of common stock under employee stock purchase plan	12,995	130	150,437			150,567	
Issuance of common stock upon exercise of stock warrants	81,370	814	246,777			247,591	
Issuance of common stock in connection with private placement, net of offering costs	1,500,000	15,000	18,975,515			18,990,515	
Net income				8,462,141		8,462,141	\$ 8,462,141
Balances as of December 31, 2003	11,140,380	111,404	56,108,590	(11,626,329)		44,593,665	\$ 8,462,141
Stock-based compensation			11,507			11,507	
Issuance of common stock upon exercise of stock options	456,380	4,564	1,967,064			1,971,628	
Tax benefit related to exercise of stock options			1,430,000			1,430,000	
Issuance of common stock under employee stock purchase plan	18,344	183	171,648			171,831	
Issuance of common stock upon exercise of stock warrants	15,794	158	18,682			18,840	
Acquisition of HInnovation	376,262	3,763	6,105,791			6,109,554	
Unrealized loss on investments					(47,865)	(47,865)	\$ (47,865)
Net income				295,563		295,563	295,563
Balances as of December 31, 2004	12,007,160	\$ 120,072	\$ 65,813,282	\$ (11,330,766)	\$ (47,865)	\$ 54,554,723	\$ 247,698

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



## Vital Images, Inc.

## Consolidated Statements of Cash Flows

	For the Year Ended December 31,		
	2004	2003	2002
Cash flows from operating activities:			
Net income	\$ 295,563	\$ 8,462,141	\$ 789,508
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,569,390	1,220,468	894,814
Amortization of identified intangibles	1,243,000	120,000	120,000
Acquired in-process research and development	1,000,000		
Provision for doubtful accounts	626,800	46,000	64,000
Deferred income taxes	(878,000)	(9,581,000)	
Tax benefit from stock option transactions	1,430,000	3,189,000	
Amortization of discount and accretion of premium on marketable securities	463,192		
Non-employee stock-based compensation	11,507	137,485	18,279
Changes in operating assets and liabilities, net of effect from acquisition:			
Accounts receivable	(3,839,283)	47,203	(1,397,125)
Prepaid expenses and other assets	(168,864)	(422,212)	59,141
Accounts payable	301,200	499,981	(106,670)
Accrued and other liabilities	1,892,334	(63,204)	383,822
Deferred revenue	3,611,889	698,527	1,611,323
Net cash provided by operating activities	7,558,728	4,354,389	2,437,092
Cash flows from investing activities:			
Purchases of property and equipment	(1,626,777)	(1,879,117)	(1,499,533)
Purchases of marketable securities	(30,433,525)	(6,775,592)	(8,047,536)
Sales of marketable securities	22,454,915	5,205,118	5,539,423
Acquisition of HIInnovation, Inc., net of cash acquired	(6,108,096)		
Net cash used in investing activities	(15,713,483)	(3,449,591)	(4,007,646)
Cash flows from financing activities:			
Proceeds from sale of common stock under stock plans	2,143,459	1,846,162	1,136,809
Proceeds from sale of common stock under stock warrants	18,840	247,591	1,725,386
Proceeds from sale of common stock, net of offering costs		18,990,515	
Net cash provided by financing activities	2,162,299	21,084,268	2,862,195
Net increase (decrease) in cash and cash equivalents	(5,992,456)	21,989,066	1,291,641
Cash and cash equivalents, beginning of year	30,111,613	8,122,547	6,830,906
Cash and cash equivalents, end of year	\$ 24,119,157	\$ 30,111,613	\$ 8,122,547
Supplemental cash flow information:			
Purchases of property and equipment with accounts payable	\$ 301,200	\$ 227,755	\$

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



**Vital Images, Inc.**

**Notes to Consolidated Financial Statements**

**1. Business description**

Vital Images, Inc. (the Company) develops, markets and supports enterprise-wide advanced visualization software for use primarily in clinical diagnosis, disease screening and therapy planning. The Company's software applies proprietary computer graphics and image processing technologies to a wide variety of data supplied by computed tomography (CT), magnetic resonance (MR) and positron emission tomography (PET) scanners. The Company's products allow clinicians to create 2D, 3D and 4D views of human anatomy and to non-invasively navigate within these images to better visualize and understand internal structures and pathologies. The Company believes that its high-speed visualization technology and customized protocols cost-effectively bring 3D visualization and analysis into the routine, day-to-day practice of medicine. The Company, which operates in a single business segment, markets its products to healthcare providers and to manufacturers of diagnostic imaging systems and picture archive and communication systems (PACS) through a direct sales force in the United States and independent distributors in international markets.

The Company is subject to risks and uncertainties, including dependence on information technology spending by customers, well-established competitors, concentration of clients in a limited number of industries, fluctuations of quarterly results, a lengthy and variable sales cycle, dependence on principal products and third-party technology, rapid technological change, development of products that gain market acceptance and international expansion.

**2. Summary of significant accounting policies**

**Basis of presentation**

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, HInnovation, Inc. All significant intercompany accounts and transactions have been eliminated.

**Use of estimates**

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

**Fair value of financial instruments**

The Company's financial instruments consist primarily of cash, cash and cash equivalents, marketable securities, trade accounts receivable and accounts payable for which the current carrying amounts approximate fair market value.

**Cash and cash equivalents**

Cash and cash equivalents consist of cash and temporary investments with maturities of ninety days or less when purchased. The carrying amount of cash equivalents approximates fair value due to the short maturity of these instruments.

**Marketable securities**

Management determines the appropriate classification of marketable securities at the time of purchase and reevaluates such designation as of each balance sheet date. Currently, all marketable securities held by the Company are classified as available-for-sale. Available-for-sale securities are carried at fair value as determined by quoted market prices, with unrealized gains and losses, net of tax, reported as a separate component of stockholders' equity. If an unrealized loss for any investment is considered to be other-than-temporary, the loss will be recognized in the consolidated statements of operations in the period the determination is made. The cost basis of securities sold is determined using the specific identification method. The cost of marketable securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion is included in interest income. Interest and dividends on securities classified as available-for-sale are included in interest income. As of December 31, 2004, all investments mature within one year.



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As of December 31, 2004 and 2003, the Company's marketable securities were as follows:

	December 31, 2004			December 31, 2003			Net Unrealized Gains (Losses)
	Cost Basis	Aggregate Fair Value	Net Unrealized Gains (Losses)	Cost Basis	Aggregate Fair Value	Net Unrealized Gains (Losses)	
Corporate debt	\$ 10,596,591	\$ 10,553,290	\$ (43,301)	\$	\$	\$	
Certificates of deposit	997,414	992,850	(4,564)	2,060,000	2,060,000		
Mutual funds	\$ 11,594,005	\$ 11,546,140	\$ (47,865)	\$ 4,078,587	\$ 4,078,587	\$	

### Accounts receivable and allowance for doubtful accounts

Accounts receivable are initially recorded at a selling price, which approximates fair value upon the sale of goods or services to customers. The Company maintains an allowance for doubtful accounts at an amount estimated to be sufficient to provide adequate protection against losses resulting from extending credit to the Company's customers. In judging the adequacy of the allowance for doubtful accounts, the Company considers multiple factors, including historical bad debt experience, the general economic environment, the need for specific client reserves and the aging of the Company's receivables. This provision is included in operating expenses as a general and administrative expense in the consolidated statements of operations. A considerable amount of judgment is required in assessing these factors. If the factors utilized in determining the allowance do not reflect future performance, then a change in the allowance for doubtful accounts would be necessary in the period such determination has been made which would impact future results of operations.

### Concentration of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and trade accounts receivable. Deposits with the Company's bank may exceed the amount of insurance provided on such deposits. Generally, these deposits may be redeemed upon demand and, therefore, bear minimal risk. Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of marketable securities. Marketable securities consist of corporate debt and certificates of deposit. The Company's investment policy, approved by the Board of Directors, limits the amount the Company may invest in any one type of investment, thereby reducing credit risk concentrations. The Company's customer base is generally concentrated with a small number of customers. The Company reviews the creditworthiness of its customers prior to product shipment and generally does not require collateral.

### Property and equipment

Property and equipment are recorded at cost. Depreciation is computed using the straight-line method over the related asset's estimated useful life, generally three to seven years. Leasehold improvements are amortized over the shorter of their estimated useful lives or the remaining terms of the related leases. The asset cost and related accumulated depreciation or amortization are adjusted for asset retirement or disposal with the resulting gain or loss, if any, credited or charged to results of operations.

**Long-lived assets**

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable, in accordance with Statement of Financial Accounting Standards ( SFAS ) No. 144 Accounting for the Impairment or Disposal of Long-Lived Assets. Events or changes in circumstances that indicate the carrying amount may not be recoverable include, but are not limited to, a significant decrease in the market value of the business or asset acquired, a significant adverse change in the extent or manner in which the business or asset acquired is used, or a significant adverse change in the business climate. If such events or changes in circumstances are present, the undiscounted cash flows method is used to determine whether the asset is impaired. Cash flows would include the estimated terminal value of the asset and exclude any interest charges. To the extent the carrying value of the asset exceeds the undiscounted cash flows over the estimated remaining life of the asset; the impairment is measured using the discounted cash flows. The discount rate utilized would be based on management's best estimate of the related risks and return at the time the impairment assessment is made.

**Goodwill and other intangible assets with indefinite lives**

The Company accounts for goodwill and other intangible assets in accordance with the provisions of SFAS No. 142, Goodwill and Other Intangible Assets . Under SFAS No. 142, goodwill and intangible assets with indefinite lives are not

amortized to expense and must be reviewed for impairment annually or more frequently if events or changes in circumstances indicate that the asset might be impaired. The first step of the goodwill impairment test, used to identify potential impairment, compares the fair value of a reporting unit with its carrying amount, including goodwill. The Company operates as one reporting unit and therefore compares the book value to the market value (market capitalization plus a control premium). If the market value exceeds the book value, goodwill is considered not impaired, thus the second step of the impairment test is not necessary. If the Company's book value exceeds the market value, the second step of the goodwill impairment test is performed to measure the amount of impairment loss, if any. The second step of the goodwill impairment test, used to measure the amount of impairment loss, compares the implied fair value of the goodwill with the book value of the goodwill. If the carrying value of the goodwill exceeds the implied fair value of the goodwill, an impairment loss would be recognized in an amount equal to the excess. Any loss recognized cannot exceed the carrying amount of goodwill. After a goodwill impairment loss is recognized, the adjusted carrying amount of goodwill is its new accounting basis. Subsequent reversal of a previously recognized goodwill impairment loss is prohibited once the measurement of that loss is completed. The Company completed the annual goodwill impairment assessment as of December 31, 2004, upon which no impairment was recorded.

### **Revenue recognition**

The Company licenses its software and sells products and services to end-users and also indirectly through original equipment manufacturers ( OEMs ) and independent distributors (collectively Resellers ). Terms offered by the Company do not generally differ based on whether the customer is an end-user, or a Reseller. The Company offers terms that require payment within 30 to 90 days after product delivery. The Company does not offer rights of return, acceptance clauses or price protection to its customers.

License fees revenue is derived from the licensing of computer software. Hardware revenue is derived from the sale of system hardware, including peripheral equipment. Maintenance and service revenue is derived from software maintenance and from telephone support, installation, training and engineering services. The Company's software licenses are always sold as part of an arrangement that includes maintenance and support and often installation and training services.

Engineering services consist of software modification or development services that are sold separately to OEMs. The Company generally sells hardware as part of a system sale, but it occasionally sells hardware as part of a system upgrade or additional product sale.

The Company recognizes revenue in accordance with American Institute of Certified Public Accountants ( AICPA ) Statement of Position ( SOP ) 97-2, Software Revenue Recognition, as amended by SOP 98-4 and SOP 98-9, as well as Technical Practice Aids issued from time to time by the AICPA and Staff Accounting Bulletin No. 104. The Company recognizes revenue when it is realized or realizable and earned. The Company considers revenue realized or realizable and earned when it has persuasive evidence of an arrangement, the product has been shipped or the services have been provided to the customer, the sales price is fixed or determinable, and collectability is probable. Provided all other revenue recognition criteria are met, license revenue from Resellers is recognized on a sell-in or sell-through basis depending on the arrangement with the Reseller. The Company recognizes revenue from Resellers on a sell-in basis provided the Reseller i) assumes all risk of the purchase, ii) has the ability and obligation to pay regardless of receiving payment from the end user, and iii) has a history of timely payments.

The Company evaluates the credit worthiness of all customers. In circumstances where the Company does not have experience selling to a customer and lacks adequate credit information to conclude that collection is probable, revenue is deferred until the arrangement fees are collected and all other revenue recognition criteria in the arrangement have been met.

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In addition to the aforementioned general policy, the following are the specific revenue recognition policies for services and multiple-element arrangements.

**Software and Hardware** Revenue from license fees and hardware is recognized when shipment of the product has occurred, provided no significant Company obligations remain and the Company's services are not considered essential to the functionality of other elements of the arrangement. See also **Multiple Element Arrangements** below for further information.

**Services** Revenue from maintenance and support arrangements is deferred and recognized ratably over the term of the maintenance and support arrangements. Revenue from training and installation services is recognized as the services are provided to customers. Revenue from engineering services, where the Company is performing significant customization or modification of software, is recognized using contract accounting on a percentage-of-completion basis. The Company records revenue by reference to actual hours incurred to date and the estimated hours remaining to complete the services.

**Multiple-Element Arrangements** The Company enters into arrangements with customers that include a combination of software products, system hardware, specified upgrades, maintenance and support, or installation and training services. For

such arrangements, the Company recognizes revenue using the residual value method. The Company allocates the total arrangement fee among the various elements of the arrangement based on the relative fair value of each of the undelivered elements determined by vendor-specific objective evidence. The fair value of maintenance and support services is based upon the renewal rate for continued service arrangements. The fair value of installation and training services is established based upon separate pricing for the services. In software arrangements for which the Company does not have vendor-specific objective evidence of fair value for all elements, revenue is deferred until the earlier of when vendor-specific objective evidence is determined for the undelivered elements (residual method) or when all elements for which the Company does not have vendor-specific objective evidence of fair value, have been delivered.

**Stock-based compensation**

The Company has stock-based employee and director compensation plans, which are described more fully in Note 6. The Company accounts for stock-based employee compensation arrangements in accordance with the provisions of Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees, and complies with the disclosure provisions of SFAS No. 123, Accounting for Stock-Based Compensation and SFAS No. 148, Accounting for Stock-Based Compensation-Transition and Disclosure-an amendment of Financial Accounting Standards Board ( FASB ) Statement No. 123.

The Company has adopted the disclosure-only provisions of SFAS No. 123. For purposes of the pro forma disclosures below, the estimated fair value of the options is amortized to expense over the options vesting period. Had compensation cost for the Company's stock options been recognized based on the fair value at the grant date consistent with the provisions of SFAS No. 123, the Company's net income would have been adjusted to the pro forma amounts indicated below:

	For the Year Ended December 31,		
	2004	2003	2002
Net income, as reported	\$ 295,563	\$ 8,462,141	\$ 789,508
Deduct: Total stock-based employee compensation expense determined under fair value method for all awards, net of related tax effects	(2,155,282)	(1,387,174)	(1,560,508)
Pro forma net income (loss)	\$ (1,859,719)	\$ 7,074,967	\$ (771,000)
Net income (loss) per share - basic			
As reported	\$ 0.03	\$ 0.83	\$ 0.09
Pro forma	\$ (0.16)	\$ 0.69	\$ (0.09)
Net income (loss) per share - diluted			
As reported	\$ 0.02	\$ 0.71	\$ 0.08
Pro forma	\$ (0.16)	\$ 0.62	\$ (0.09)

The pro forma effects on the net income (loss) for 2004, 2003 and 2002 are not necessarily representative of the pro forma effect that may occur on the net income (loss) in future periods.

**Research and development costs**

Costs related to research, design and development of products are charged to research and development expense as incurred. Software development costs are capitalized beginning when a product's technological feasibility has been established and ending when a product is available for general release to customers. The Company uses the working model approach to determine technological feasibility. Generally, the Company's products are released soon after technological feasibility has been established. As a result, the Company has not capitalized any software development costs, since such costs have not been significant.

**Income taxes**

The Company provides for income taxes using the liability method under SFAS No. 109, Accounting for Income Taxes, which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this statement, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities, using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some component or all of the deferred tax assets will not be realized. Tax rate changes are reflected in income during the period such changes are enacted.

**Computation of net income per share**

Basic earnings per share is computed using net income and the weighted average number of common shares outstanding. Diluted earnings per share reflect the weighted average number of common shares outstanding plus any potentially dilutive shares outstanding during the period. Potentially dilutive shares consist of shares issuable upon the exercise of stock options and warrants.

The computations for basic and diluted net income per share are as follows:

	For the Year Ended December 31,		
	2004	2003	2002
<b>Numerator:</b>			
Net income	\$ 295,563	\$ 8,462,141	\$ 789,508
<b>Denominator:</b>			
Denominator for weighted average common shares outstanding basic	11,632,351	10,189,114	8,861,132
Dilution associated with common stock warrants	5,402	59,389	59,984
Dilution associated with the company's stock based compensation plans	897,917	1,599,765	900,682
<b>Denominator:</b>			
Denominator for weighted average common shares outstanding diluted	12,535,670	11,848,268	9,821,798
Net income per share basic	\$ 0.03	\$ 0.83	\$ 0.09
Net income per share diluted	\$ 0.02	\$ 0.71	\$ 0.08

Potential dilutive shares of common stock excluded from the diluted net income per share computations were 545,000, 172,000 and 94,000 for the years ended December 31, 2004, 2003 and 2002, respectively. Certain potential dilutive shares of common stock were excluded from the diluted earnings per share computation because their exercise prices were greater than the average market price of the common shares during the period and were therefore not dilutive.

**Comprehensive income (loss)**

Comprehensive income (loss) as defined by SFAS No. 130, *Reporting Comprehensive Income*, includes net income and items defined as other comprehensive income (loss). SFAS No. 130 requires that items defined as other comprehensive income (loss), such as foreign currency translation adjustments and unrealized gains and losses on certain marketable securities, be separately classified in the financial statements. Such items are reported in the consolidated statements of stockholders' equity as comprehensive income (loss).



### **New accounting pronouncement**

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*. SFAS No. 123R supersedes APB Opinion No. 25, which requires recognition of an expense when goods or services are provided. SFAS No. 123R requires the determination of the fair value of the share-based compensation at the grant date and the recognition of the related expense over the period in which the share-based compensation vests. SFAS No. 123R permits a prospective or two modified versions of retrospective application under which financial statements for prior periods are adjusted on a basis consistent with the pro forma disclosures required for those periods by the original SFAS No. 123. The Company is required to adopt the provisions of SFAS No. 123R effective July 1, 2005, at which time the Company will begin recognizing an expense for unvested share-based compensation that has been issued or will be issued after that date. Under the retroactive options, prior periods may be restated either as of the beginning of the year of adoption, January 1, 2005 for the Company, or for all periods presented. The Company has not yet finalized its decision concerning the transition option it will utilize to adopt SFAS No. 123R. The Company is currently assessing its stock-based compensation strategy and related tax implications. Future stock-based compensation may differ from pro forma amounts. The Company expects the impact of the adoption of SFAS No. 123R to be material to its consolidated financial statements.

### **3. Acquisition**

The following acquisition was accounted for under the purchase method of accounting under SFAS No. 141, *Business Combinations*, and accordingly, the assets and liabilities acquired were recorded at their estimated fair values at the effective date of the acquisition, and the results of operations have been included in the consolidated statements of operations since the acquisition date. In accordance with SFAS No. 142,

*Goodwill and Other Intangible Assets*, goodwill recorded as a result of the acquisition is subject to an annual impairment test and will not be amortized.

#### **HInnovation, Inc.**

On February 18, 2004, the Company completed the acquisition of HInnovation, Inc. ( *HInnovation* ) in accordance with the terms and conditions of an Acquisition Agreement and Plan of Reorganization (the *Acquisition Agreement* ) dated as of January 8, 2004. HInnovation is a provider of software solutions that allow physicians to use PCs or notebook computers to access 2D, 3D and 4D medical imaging applications securely over the Internet. The acquisition of HInnovation was made to acquire products and technology that will enable the Company to more effectively compete in the distributed computing market for 2D/3D/4D visualization and analysis software.

The total purchase price of the HInnovation acquisition was approximately \$12.6 million. The Company acquired all of the outstanding common stock of HInnovation in exchange for \$5.8 million in cash paid and 376,262 newly issued shares of common stock issued to the stockholders of HInnovation. The common stock was valued at \$6.1 million for accounting purposes. Vital Images stock was valued at \$16.2375 per share, which was equal to the average of the closing sale prices of one share of Vital Images stock as reported on the NASDAQ National Market for the two consecutive trading days occurring before the first public announcement of the signing of the Acquisition Agreement and the two consecutive trading days occurring immediately after such public announcement date. The Company incurred approximately \$400,000 in direct costs of the acquisition and assumed \$400,000 of liabilities. During the fourth quarter of 2004, the Company finalized the valuation of certain contingent liabilities and settled certain tax matters with the former stockholders of HInnovation, which resulted in a reduction in goodwill previously reported in interim periods. The Company did not assume any stock options or warrants.

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In addition, the transaction includes a maximum of \$6.0 million of contingent milestone payments comprised of \$3.0 million in common stock and \$3.0 million in cash. The contingent milestone payments are based on 1) the achievement of certain revenue targets resulting from the sale of products containing HInnovation technology during the 12 month period following the closing date; 2) the porting of Vital Images' product to HInnovation's product platform and the commercial launch thereof; and 3) licensing the HInnovation patented technology within 24 months after the closing date. The number of shares issued under the contingent milestone payments will be determined based on the average closing price of the Company's common stock during the 10 trading days before completion of the milestone objective. However, the Acquisition Agreement provides that the number of shares of Vital Images common stock comprising the contingent consideration cannot exceed 300,000 shares. If, at the time of its issuance, the value of such stock is less than \$3.0 million due to this limitation on the number of shares, Vital Images will pay the shortfall in cash. Any contingent payments made by the Company will result in an increase in goodwill. As of December 31, 2004, no contingent payments had been earned. The first milestone was not met before the February 2005 deadline. As a result, the potential maximum contingent consideration was reduced to \$4.5 million, which consists of \$3.0 million in common stock and \$1.5 million in cash.

The purchase price was allocated to the identified assets of HInnovation. A third-party appraisal firm assisted the Company with the valuation of the identified intangible assets. The valuation resulted in the allocation of \$6.9 million to identifiable intangibles, which will be amortized over periods ranging from three to seven years. The valuation also resulted in the identification of \$1.0 million of acquired in-process research and development costs (IPR&D), which was immediately expensed on the closing date and represents a non-deductible charge for income tax purposes.

At the time of acquisition, HInnovation had development projects in process, including the collaboration module of its Web-based product (the Collaboration Module Project ). The Collaboration Module Project involves the design and development of innovative features for Web-based consultation meetings with interactive and synchronized viewing of full-quality images, annotation and mouse movement. The Collaboration Module Project includes significant and innovative advancements to the HInnovation software platform in the areas of network synchronization of high quality images and user privilege management for online collaboration. The design, verification and other processes involved in the Collaboration Module Project require tools and skills that are new to HInnovation. The appraisal referenced above estimated that \$1.0 million of the purchase price represents the fair value of purchased IPR&D related to the Collaboration Module Project, that it has not yet reached technological feasibility and that it has no alternative future uses. This amount was expensed as a non-recurring, non-tax-deductible charge upon consummation of the acquisition.

The appraisal firm applied the income valuation approach to assist the Company in determining the estimated fair value of the purchased IPR&D. These estimates were based on the following assumptions:

The estimated revenue was based upon HInnovation's estimate of revenue growth over the next seven years from the revenue growth of primarily the Collaboration Module.

The estimated gross margin of 65% to 78% was based upon gross margin for comparable products.

The estimated selling, general and administrative expenses were based on consideration of historical operating expenses as a percentage of revenue and HInnovation's projected operating expenses.

The cost to complete each project was based on estimated remaining labor hours and a fully-burdened labor cost and other direct expenses.

The discount rate used in the alternative income valuation approach was based on the weighted average cost of capital ( WACC ). The WACC calculation produces the average required rate of return of an investment in an operating enterprise based on various required rates of return from investments in various areas of that enterprise. The discount rate used in the alternative valuation approach was 35%. Premiums were added to the WACC to account for the inherent risks in the development of the products, the risks of the products being completed on schedule, and the risk of the eventual sales of the product meeting the expectations of HInnovation.

The first phase of the Collaboration Module was released in the third quarter of 2004. The first phase provides basic collaboration between users allowing one user to present to another user. The second, and more sophisticated, phase of the Collaboration Module will provide two-way collaboration between users allowing both users to interact with the data and is expected to be available for general market release in mid-2005. Through December 31, 2004, the Company has incurred approximately \$267,000 in costs to develop the Collaboration Module. The Company estimates that it will incur another \$33,000 to complete the development of the second phase of the Collaboration Module. Given the uncertainties of the development process, these estimates are subject to change, and deviations from these estimates may occur.

The total purchase price is as follows:

Fair value of common stock issued (376,262 shares)	\$	6,109,554
Cash paid to HInnovation shareholders		5,752,626
Direct acquisition costs		360,259
Liabilities assumed		381,562
	\$	12,604,001

The allocation of the total purchase price is as follows:

Existing software technology, subject to amortization - 5 year life	\$	3,400,000
Patent and patent applications, subject to amortization - 7 year life		3,000,000
Non-compete/employment agreements, subject to amortization - 3 year life		500,000
Goodwill, not subject to amortization		6,052,744
In-process research and development costs		1,000,000
Deferred tax liabilities, net		(1,405,000)
Fair value of assets acquired		51,468
Fair value of cash acquired		4,789
	\$	12,604,001

The following factors contributed to a purchase price that resulted in the recognition of goodwill:

HInnovation had the first Web-based product in the Company's market.

HInnovation had a patent and patent applications that cover certain important aspects of the underlying technology.

HInnovation also had unique technology under development that was included as part of the acquired IPR&D.

The following unaudited pro forma condensed consolidated results of operations have been prepared as if the acquisition of HInnovation had occurred as of the beginning of the periods presented. Pro forma adjustments relate to amortization of identified intangible assets, acquired IPR&D and income taxes. The unaudited pro forma condensed consolidated results of operations are for comparative purposes only and are not necessarily indicative of results that would have occurred had the acquisition occurred as of the beginning of the periods presented, nor are they necessarily indicative of future results.

	For the Year Ended December 31,		
	2004	2003	2002
Revenue	\$ 36,150,047	\$ 27,322,218	\$ 21,116,074
Net income (loss)	\$ 1,172,570	\$ 6,517,277	\$ (1,770,648)
Net income (loss) per share - diluted	\$ 0.09	\$ 0.53	\$ (0.19)

#### 4. Financial statement components

**Allowance for doubtful accounts**

	For the Years Ended December 31,		
	2004	2003	2002
Beginning balance	\$ 235,000	\$ 240,000	\$ 185,000
Provision	626,800	46,000	64,000
Write-offs	(94,800)	(51,000)	(9,000)
Recoveries			
Ending balance	\$ 767,000	\$ 235,000	\$ 240,000

**Property and equipment, net**

	December 31,	
	2004	2003
Equipment	\$ 5,247,471	\$ 3,725,849
Furniture and fixtures	1,516,497	1,474,485
Computer software	765,870	580,986
Leasehold improvements	273,924	273,924
Total property and equipment	7,803,762	6,055,244
Less accumulated depreciation and amortization	(4,581,395)	(3,012,005)
Property and equipment, net	\$ 3,222,367	\$ 3,043,239

Depreciation expense was \$1,569,390 and \$1,220,468 and \$894,814 for the years ended December 31, 2004 and 2003, respectively.

**Licensed technology, net**

In July 2001, the Company entered into an agreement to license technology from a third party. The Company paid an aggregate of \$750,000 to the licensor in 2001. The Company recorded this \$750,000 purchase as licensed technology and is amortizing it over the estimated useful life of the technology of 75 months. This amortization expense is reported as cost of revenue for license fees. As part of this agreement, the Company is also obligated to pay the licensor royalties on the sales of certain products as defined in the agreement. During 2004, 2003 and 2002, \$1.0 million, \$772,000 and \$608,000, respectively, of such royalties were incurred and were reported as cost of revenue for license fees.

	December 31,	
	2004	2003
Licensed technology	\$ 750,000	\$ 750,000
Less accumulated amortization	(420,000)	(300,000)
Licensed technology, net	\$ 330,000	\$ 450,000

Amortization expense was \$120,000 for each of the years ended December 31, 2004, 2003 and 2002, respectively.

**Other intangible assets, net**

Acquired intangible assets subject to amortization were as follows:

	December 31, 2004		December 31, 2003		
Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying	Accumulated Amortization	Net Carrying

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				Value		Value		
Existing software technology	\$	3,400,000	\$	(598,000)	\$	2,802,000	\$	\$
Patents and patent applications		3,000,000		(378,000)		2,622,000		
Non-compete/employment agreements		500,000		(147,000)		353,000		
Total intangible assets subject to amortization	\$	6,900,000	\$	(1,123,000)	\$	5,777,000	\$	\$

Intangible assets subject to amortization are amortized on a straight-line basis over the estimated period of benefit. Amortization expense was \$1.1 million for the year ended December 31, 2004. The estimated future annual amortization expense for identified intangible assets is as follows:



2005	\$	1,284,000
2006		1,284,000
2007		1,133,000
2008		1,116,000
2009 through 2011		960,000
	\$	5,777,000

### Goodwill

The changes in the carrying amount of goodwill for the year ended December 31, 2004 are as follows:

Beginning balance	\$	
Goodwill acquired during the year		6,052,744
Ending balance	\$	6,052,744

### Deferred revenue

	December 31,	
	2004	2003
Maintenance and support	\$ 4,734,764	\$ 3,003,543
Training	2,697,892	1,591,854
Installation	309,200	104,301
Software	454,108	
Hardware and other	218,448	95,326
Total deferred revenue	8,414,412	4,795,024
Less current portion	(8,136,844)	(4,530,333)
Long-term portion of deferred revenue	\$ 277,568	\$ 264,691

## 5. Commitments and contingencies

### Operating lease commitments

The Company rents office space and certain office equipment under operating leases. In addition to minimum lease payments, the office leases require payment of a proportionate share of real estate taxes and building operating expenses. Total rent expense, including an allocation of the lessor's operating costs, was \$715,000, \$678,000 and \$596,000 for the years ended December 31, 2004, 2003 and 2002, respectively.

In March 2004, the Company signed a non-cancelable operating lease for a new office facility in Minnetonka, Minnesota. The new lease term starts in February 2005 and expires in January 2012. The Company moved into the Minnetonka location and moved out of its Plymouth, Minnesota location in February 2005. The Company's office facility in Plymouth expires on July 31, 2005 with the exception of a small portion

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of the space that is under lease until May 31, 2006. Under the terms of the new lease, the Minnetonka lessor will pay the monthly base rent payments and taxes and operating cost rent obligation payments for the Company's former office facility in Plymouth beginning February 2005.

In the first quarter of 2005, the Company estimates that it will record deferred rent of \$1.7 million relating to estimated payments by the Minnetonka lessor for the benefit of the Company. Such payments are considered lease incentives under FASB Technical Bulletin (FTB) 88-1, Issues Relating to Accounting for Leases, and will be amortized as a reduction of rent expense over the term of the Minnetonka lease. Payments by the Minnetonka lessor for the benefit of the Company consist of the following:

\$440,000 relating to lease payments to be made by the Minnetonka lessor to the Plymouth lessor; under FTB 88-1, such payments must be recorded as a lease loss by the Company in the first quarter of 2005.

\$206,000 relating to moving costs reimbursed to the Company by the Minnetonka lessor; moving costs were

expensed as incurred during the first quarter of 2005.

\$1.0 million relating to leasehold improvements paid for by the Minnetonka lessor; under FTB 88-1, such leasehold improvements must be recorded as an asset by the Company and amortized over the shorter of their estimated useful lives or the remaining terms of the related leases.

The minimum lease payments, excluding estimated taxes and operating cost rent obligations, are approximately:

2005	\$	673,000
2006		471,000
2007		618,000
2008		711,000
2009		727,000
Thereafter		1,562,000
Total	\$	4,762,000

#### Purchase commitments

In November 2002, the Company entered into an agreement with R2 Technology, Inc. ( R2 ) to distribute R2's lung nodule CAD software product in conjunction with the Company's products. The Company completed its development work to meet the clinical requirements for selling the lung nodule CAD software with Vitrea 2 on August 26, 2004. Under the agreement, the first purchase was required in the fourth quarter of 2004. The total purchase commitment will be a maximum of \$5.6 million of product over a three-year commitment period. The purchase commitment price the Company must pay will be reduced if the selling price of the lung CAD product when sold directly to end-users by R2 falls below a specified price. The purchase commitment units the Company is required to purchase will be reduced if R2 and its other distributors of the lung CAD product are unable to sell as many units as the Company is required to purchase. As of December 31, 2004, the Company had a commitment with R2 to purchase an estimated \$5.4 million of product for resale over the next 11 quarters. Based on current sales estimates, the Company will be able to sell all product anticipated to be purchased under the obligation. Any changes to these estimates could have an adverse impact on the Company's financial position and results of operations.

As of December 31, 2004, the Company had a commitment to purchase an estimated \$200,000 worth of additional R2 lung nodule CAD software under the agreement that was not fulfilled. The Company and R2 are currently renegotiating the terms of the contract.

#### Other items

Under general contract terms, the Company includes an indemnification clause in its software licensing agreement that indemnifies the licensee against liability and damages arising from any claims of patent, copyright, trademark or trade secret infringement by the Company's software. The Company has incurred insignificant costs as a result of this type of indemnification clause, and the Company does not maintain a product warranty liability related to such indemnification clauses.

The Company has entered into various employment agreements with certain executives of the Company, which provide for severance payments subject to certain conditions and events.

## 6. Stockholders equity

### Background

On October 28, 1996, the Board of Directors of Bio-Vascular, Inc. ( Bio-Vascular ), now known as Synovis Life Technologies, Inc., the former parent of the Company, approved a plan to spin off and establish the Company as an independent, publicly-owned company. On May 12, 1997 (the Distribution Date ), Bio-Vascular distributed all of the shares of the Company to the stockholders of Bio-Vascular (the Distribution ), and on that date the Company began operating as an independent public company. All Bio-Vascular stockholders of record as of May 5, 1997 received one share of the Company s common stock for each two shares of Bio-Vascular stock held on that date and cash in lieu of fractional shares.

### Private placement

In June 2003, the Company completed a private placement of 1.5 million shares of common stock at \$13.50 per share for total gross proceeds of \$20.3 million. After deducting offering costs of \$1.3 million, the Company received net proceeds of

\$19.0 million. A registration statement covering the resale of these shares was declared effective on September 29, 2003 by the Securities and Exchange Commission.

### **Stock option plans**

In May 1997, Bio-Vascular, as the sole shareholder of the Company, approved and adopted the Vital Images, Inc. 1997 Stock Option and Incentive Plan (the "Stock Option Plan"), which became effective on the Distribution Date. Under the terms of the plan, the Board of Directors may grant options and other stock-based awards to key employees to purchase shares of the Company's common stock at an option exercise price equal to or greater than 85% of the fair market value on the date of grant. The options are exercisable at such times, in installments or otherwise, as the Board of Directors may determine. Generally, these options are incentive stock options with a term of eight years and are exercisable as to 28% of the total grant one year after the date of grant and 2% per month thereafter. The total number of shares of common stock that may be issued or awarded under the Stock Option Plan is 3.5 million. As of December 31, 2004, there were 594,841 shares available for the grant of awards under the Stock Option Plan.

Also in May 1997, Bio-Vascular, as the sole shareholder of the Company, approved and adopted the Vital Images, Inc. 1997 Director Stock Option Plan (the "Director Plan") (together with the Stock Option Plan, the "1997 Plans"), which became effective on the Distribution Date. The Director Plan provides non-employee directors with automatic grants of stock options and allows the Board of Directors to make additional discretionary option grants to any or all directors. Options that are granted under the Director Plan are granted with an option price equal to the fair market value on the date of grant, with a term of eight years, are non-qualified options and become exercisable in three equal annual installments beginning on the first occurring December 31 after the date of grant. The total number of shares of common stock that may be issued or awarded under the Director Plan is 300,000. As of December 31, 2004, there were 25,000 shares available for the grant of awards under the Director Plan.

Certain non-plan options were granted to certain officers of the Company in 1998, 1999 and 2002. In February 1998, the Company reserved and granted non-qualified, non-plan options to purchase 300,000 shares to an officer of the Company. These non-plan options had a term of eight years, vested over a two-year period and were granted at exercise prices at least equal to fair market value of the Company's common stock on the date of grant. Of these non-plan options, the Company cancelled options to purchase 100,000 shares in December 1999, and the officer exercised the remaining options to purchase 200,000 shares in August 2003. In December 1999, the Company granted non-qualified, non-plan options to purchase 175,000 shares to another officer of the Company. These non-plan options had a term of eight years, were exercisable as to 28% of the total grant one year after the date of grant and 2% per month thereafter and were granted at exercise prices at least equal to fair market value of the Company's common stock on the date of grant. Of these non-plan options, the Company cancelled options to purchase 80,500 shares in February 2002, and the officer exercised the remaining options to purchase 94,500 shares in 2002. In March 2002, the Company granted non-qualified, non-plan options to purchase 165,000 shares to another officer of the Company. These non-plan options have a term of eight years, are exercisable as to 28% of the total grant one year after the date of grant and 2% per month thereafter and were granted at exercise prices at least equal to fair market value of the Company's common stock on the date of grant. As of December 31, 2004, these options were still outstanding.

### **Non-employee options**

In December 2000, the Company granted options to purchase 10,000 shares to a non-employee consultant. Options to purchase 5,000 shares vest over a four-year period, and the remaining options vested immediately when a specified milestone was achieved, which occurred in May 2003. The options to purchase 5,000 shares that vested in May 2003 were exercised in June 2003. In December 2001, the Company granted options to purchase a total of 4,000 shares to two non-employee consultants and, in December 2002, the Company granted options to purchase an additional 4,000 shares to two non-employee consultants. These options vest over a four-year period. All of the non-plan options

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have a term of eight years and were granted at exercise prices at least equal to fair market value of the Company's common stock on the date of grant. The Company records compensation expense related to these arrangements based upon the fair values of the options during the periods the consultants provide services. Such fair values are measured using the Black-Scholes option-pricing model. The Company recorded \$12,000, \$137,000 and \$18,000 of compensation expense related to these options for each of the years ended December 31, 2004, 2003 and 2002, respectively.

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The following table summarizes stock option activity for 2004, 2003 and 2002:

	Shares Underlying Options	Weighted-Average Exercise Price Per Share
Total outstanding as of December 31, 2001	2,288,456	\$ 4.08
Options granted	677,750	\$ 7.21
Options exercised	(288,008)	\$ 3.49
Options canceled	(216,354)	\$ 4.44
Total outstanding as of December 31, 2002	2,461,844	\$ 4.98
Options granted	618,750	\$ 12.04
Options exercised	(574,381)	\$ 3.55
Options canceled	(65,241)	\$ 7.31
Total outstanding as of December 31, 2003	2,440,972	\$ 7.05
Options granted	514,100	\$ 12.29
Options exercised	(456,380)	\$ 4.32
Options canceled	(172,017)	\$ 9.80
Total outstanding as of December 31, 2004	2,326,675	\$ 8.54
Options exercisable as of:		
December 31, 2002	1,505,069	\$ 3.83
December 31, 2003	1,407,347	\$ 5.09
December 31, 2004	1,409,650	\$ 6.74

Various price ranges and weighted average information for options outstanding and exercisable as of December 31, 2004 are as follows:

Range of Exercise Prices	Number Outstanding as of Dec 31, 2004	Options Outstanding		Options Exercisable		
		Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable as of Dec 31, 2004	Weighted Average Exercise Price	
\$1.13 - \$2.75	208,151	1.15 years	\$ 2.17	208,151	\$ 2.17	
\$3.51 - \$5.70	408,996	3.21 years	\$ 4.90	401,486	\$ 4.90	
\$5.75 - \$7.25	485,410	5.19 years	\$ 7.15	324,535	\$ 7.16	
\$7.34 - \$9.24	259,250	3.77 years	\$ 7.60	239,100	\$ 7.54	
\$9.60 - \$19.13	964,868	6.73 years	\$ 12.40	236,378	\$ 12.53	
	2,326,675	4.96 years	\$ 8.54	1,409,650	\$ 6.74	

**Employee stock purchase plan**

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The 1997 Employee Stock Purchase Plan (the ESPP ) was approved and adopted by Bio-Vascular, as the sole shareholder of the Company, in May 1997. The ESPP, which became effective on July 1, 1997, enables eligible employees to purchase the Company s common stock at 85% of the fair market value of the stock on the date an offering period commences or on the date an offering period terminates, whichever is lower. The ESPP covers an aggregate of up to 250,000 shares of common stock that can be issued and sold to participating employees of the Company through a series of three-month offering periods, beginning July 1, 1997. The ESPP covers substantially all employees, subject to certain limitations. Each employee may elect to have up to 10% of his or her base pay withheld and applied toward the purchase of shares in each such offering period. Purchases under the ESPP for 2004 were 18,344 shares, generating proceeds to the Company of \$172,000 at an



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average purchase price of \$9.37; for 2003 were 12,995 shares, generating proceeds to the Company of \$151,000 at an average purchase price of \$11.59; and purchases for 2002 were 24,539 shares, generating proceeds to the Company of \$131,000 at an average purchase price of \$5.32. As of December 31, 2004, there are 83,109 shares of common stock reserved for purchases under the ESPP.

### Stock-based compensation

For purposes of calculating the fair value of options under FASB Statement No. 123, the weighted average fair values of options granted were:

	For the Years Ended December 31,		
	2004	2003	2002
Options under the 1997 Plans	\$ 8.30	\$ 8.20	\$ 5.03
Non-plan options	\$	\$	\$ 5.13
Options under ESPP	\$ 1.65	\$ 2.04	\$ 0.94

The weighted average fair values for the 1997 Plans and the non-plan options were based on the fair values on the dates of grant. The fair values for the 1997 Plans and the non-plan employee options were calculated using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	For the Years Ended December 31,		
	2004	2003	2002
Expected option life	5.0 years	5.0 years	5.0 years
Expected volatility factor	83.0%	84.7%	85.9%
Expected dividend yield	0%	0%	0%
Risk-free interest rate	3.41%	3.07%	4.69%

The fair values for the non-employee options were calculated using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	For the Years Ended December 31,		
	2004	2003	2002
Expected option life	5.38 years	5.9 years	8.0 years
Expected volatility factor	78.6%	84.5%	85.9%
Expected dividend yield	0%	0%	0%
Risk-free interest rate	3.50%	2.66%	2.81%

The weighted-average fair values of shares under the ESPP were based on the 15% purchase discount.

### Warrants

In December 1999, the Company completed a private placement of 1.65 million units at \$3.25 per unit. Each unit consisted of one share of the Company's common stock and a redeemable, five-year warrant to purchase an additional share of common stock at \$3.75 per share. The warrants were immediately exercisable with an expiration date in December 2004. The warrants could be redeemed by the Company at any time before December 2004 at a redemption price of \$.01 per warrant, upon notice of such redemption, provided that (i) the closing bid price of the Company's common stock exceeded \$5.75 per share for any thirty consecutive trading days prior to such notice and (ii) a registration statement covering the resale of the warrant shares had been filed by the Company with the Securities and Exchange Commission and was effective as of the date of such notice. The Company satisfied the conditions for redemption of the warrants on December 7, 2000. In December 2001, the Company called for redemption of all outstanding warrants. As of December 31, 2003, all 1.65 million warrants had been exercised, generating proceeds of \$1.7 million and \$4.5 million during 2002 and 2001, respectively.

The Company also issued warrants to the selling agent for the December 1999 private placement to purchase 163,651 shares of the Company's common stock at \$3.25 per share. The warrants were immediately exercisable and expired in December 2004. During 2004, 2003 and 2002, warrants to purchase 19,156, 83,063 and 42,492 shares, respectively, were exercised. These warrant exercises generated proceeds of \$18,800, \$248,000, and \$6,000 for the years ended December 31, 2004, 2003 and 2002, respectively. In conjunction with these exercises, during 2004, 2003 and 2002, 3,362, 1,693 and 12,559 shares, respectively, were forfeited as part of cashless exercises. As of December 31, 2004, none of these warrants remained outstanding.

**Rights plan**

In April 1997, the Company declared a dividend distribution of one Preferred Stock Purchase Right for each outstanding share of the Company's common stock (the "Rights"). With certain exceptions, the Rights become exercisable only if one of the following events occurs: (i) an acquiring party accumulates 15% or more of the Company's common stock, (ii) a party announces an offer to acquire 15% or more of the Company's common stock, or (iii) the acquisition of a substantial amount of the Company's common stock by a person whom the Board of Directors has determined is an "Adverse Person" as defined in the underlying Rights Agreement. Each Right entitles the holder to purchase one-thousandth of a share of the Company's Series A Junior Preferred Stock at a price of \$20.00 (the "Exercise Price"). If a person or group becomes the beneficial owner of 15% or more of the Company's common stock or the Board of Directors determines that a person is an Adverse Person, each holder of a Right shall thereafter have the right to receive preferred stock having a fair market value equal to two times the Exercise Price. Upon the occurrence of certain mergers, combinations or acquisitions of the Company's assets, each holder of a Right shall thereafter have the right to receive that number of shares of common stock of the acquiring company which equals the Exercise Price of the Right divided by one-half of the current market price of such common stock as of the date of the occurrence of the event. The Company is generally entitled to redeem the Right at \$.001 per Right at any time until ten days following the acquisition of 15% or more of the Company's common stock or ten days after the point at which the Company's Board of Directors determines that a person is an Adverse Person, as defined by the Rights Agreement. The Rights expire on April 30, 2007, if not previously redeemed or exercised.

**7. Income taxes**

The income tax provision (benefit) for the years ended December 31, 2004, 2003 and 2002 include the following components:

	For the Year Ended December 31,		
	2004	2003	2002
<b>Current income taxes:</b>			
Federal	\$ 25,000	\$ 79,000	\$ 22,000
State	5,000	79,000	22,000
	30,000	79,000	22,000
<b>Deferred income taxes:</b>			
Federal	513,000	(7,657,000)	
State	44,000	1,265,000	
	557,000	(6,392,000)	
Provision (benefit) for income taxes	\$ 587,000	\$ (6,313,000)	\$ 22,000

A reconciliation of the Company's income tax provision (benefit) computed using the federal statutory rate to the tax provision reported in the Company's statements of operations is as follows:

	For the Year Ended December 31,		
	2004	2003	2002
Tax provision computed at the federal statutory rate	\$ 300,000	\$ 726,000	\$ 276,000
State taxes, net of federal benefit	94,000	116,000	24,000
<b>Increase (decrease) in tax from:</b>			
Research and development tax credits	(319,000)	(85,000)	(186,000)
Business meals and entertainment	46,000	34,000	26,000

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Acquired in-process research and development	340,000			
Change in state tax rate	(54,000)			
Change in valuation allowance	226,000	(7,171,000)		(111,000)
Other, net	(46,000)	67,000		(7,000)
Provision (benefit) for income taxes	\$ 587,000	\$ (6,313,000)		\$ 22,000

The significant components of the Company's tax-effected net deferred tax assets, based on an assumed effective tax rate of 37.96% and 37.30% as of December 31, 2004 and 2003, respectively, are as follows:

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	December 31,	
	2004	2003
<b>Current:</b>		
Accrued expenses and allowances	\$ 600,000	\$ 275,000
<b>Total current</b>	<b>\$ 600,000</b>	<b>\$ 275,000</b>
<b>Noncurrent:</b>		
Net operating loss carryforwards	\$ 8,880,000	\$ 8,101,000
Research and development tax credit carryforwards	1,570,000	1,063,000
Depreciation and amortization	434,000	287,000
Deferred revenue	105,000	
Identified intangible assets	(2,193,000)	
Other, net	31,000	2,000
Net deferred tax assets before valuation allowance	8,827,000	9,453,000
Less valuation allowance	(373,000)	(147,000)
<b>Total noncurrent</b>	<b>\$ 8,454,000</b>	<b>\$ 9,306,000</b>

**Net operating loss carryforwards and other tax credit carryforwards as of December 31, 2004**

The Company had federal tax loss carryforwards of approximately \$24.5 million, representing an \$8.3 million deferred tax asset as of December 31, 2004. Of the total federal tax loss carryforward, \$8.5 million was generated through the exercise of stock options. The federal tax loss carryforwards will expire in 2005 through 2023 if not utilized. The Company recorded a \$79,000 valuation allowance related to this deferred tax asset as of December 31, 2004 due to the uncertainty in realization prior to expiration.

The Company had state tax loss carryforwards of approximately \$9.7 million, representing a \$506,000 deferred tax asset as of December 31, 2004. The state tax loss carryforwards will expire in 2005 through 2024 if not utilized. The Company recorded a \$9,000 valuation allowance related to this deferred tax asset as of December 31, 2004 due to the uncertainty in realization prior to expiration.

The Company had foreign tax loss carryforwards of approximately \$144,000, representing a \$43,000 deferred tax asset as of December 31, 2004. The Company provided a full valuation allowance related these deferred tax assets as of December 31, 2004 due to the uncertainty in realization.

The Company had other federal and state tax credits and carryforwards of approximately \$1.6 million, representing a \$1.6 million deferred tax asset as of December 31, 2004. The federal and state credits and carryforwards will expire in 2005 through 2024 if not utilized. The Company had a \$242,000 valuation allowance related to this deferred tax asset as of December 31, 2004 due to the uncertainty in realization prior to expiration of which \$95,000 were recorded in 2004.

**Activity during the year ended December 31, 2004**

The Company's methodology for determining the realizability of its deferred tax assets involves estimates of future taxable income from its core business, the estimated impact of future tax deductions from the exercise of stock options outstanding as of December 31, 2004, and the expiration dates and amounts of net operating loss carryforwards and other tax credits. These estimates are projected through the life of the related deferred tax assets based on assumptions which management believes to be reasonable and consistent with current operating results.

Although the Company had cumulative pre-tax income for financial reporting purposes for the three years ended December 31, 2004, the Company did not pay any significant income taxes over that period due to tax deductions from the exercise of stock options as well as its utilization of net operating losses. In assessing the realizability of its deferred tax assets as of December 31, 2004, the Company considered evidence regarding its ability to generate sufficient future taxable income to realize its deferred tax assets. The primary evidence considered included the cumulative pre-tax income for financial reporting purposes for the past three years; the cumulative tax operating loss for the past three years; the estimated impact of future tax deductions from the exercise of stock options outstanding as of December 31, 2004; and the estimated future taxable income based on historical operating results.

After giving consideration to these factors, the Company concluded that it was more likely than not that tax loss carryforwards that expire in 2005 and other tax credits that expire within the next four years will not be utilized due to the estimated future tax deductions from the exercise of stock options outstanding as of December 31, 2004. As a result, the Company recorded a valuation allowance of \$183,000 for the year ended December 31, 2004. The Company also recorded a valuation allowance of \$43,000 relating to 2004 foreign net operating losses that are subject to uncertainty regarding utilization and, therefore, a full valuation allowance was recorded.

The Company also concluded that it was more likely than not that the net deferred tax assets of \$9.1 million as of December 31, 2004 and the estimated future tax deductions from the exercise of stock options outstanding as of December 31, 2004 would be utilized prior to expiring. Based on this conclusion, the Company would require approximately \$42 million in cumulative future taxable income to be generated at various times over the next twenty years to realize the related net deferred tax assets of \$9.1 million as of December 31, 2004 as well as the estimated future tax deductions from the exercise of stock options outstanding and in-the-money as of December 31, 2004.

In the event that the Company adjusts its estimates of future taxable income or tax deductions from the exercise of stock options; or the Company's stock price increases significantly without a corresponding increase in taxable income, the Company may need to establish additional valuation allowances, which could materially impact its financial position and results of operations.

#### **Activity during the year ended December 31, 2003**

During 2003, the Company concluded that it is more likely than not that substantially all of its net deferred tax assets would be realized, and the Company reversed substantially all of its valuation allowance for net deferred tax assets, which resulted in the recording of a net tax benefit in 2003. The reversal of the deferred tax assets valuation allowance was based upon the Company's historical operating performance and management's expectation that the Company will generate taxable income of at least \$25 million in future periods to allow it to realize its deferred tax assets resulting from the tax benefits associated with its net operating loss carryforwards and a significant portion of its research and development tax credit carryforwards, as well as certain other tax benefits related to book and tax income timing differences. The reversal of the valuation allowance resulted in a tax benefit of \$7,171,000. This reversal, net of other current year state and federal income taxes, resulted in a net tax benefit of \$6,507,000 in 2003.

#### **Net operating loss carryforward limitations**

Under Section 382 of the Internal Revenue Code ( Code ) of 1986, certain stock transactions which significantly change ownership, including the sale of stock and the granting of options to purchase stock, could limit the amount of net operating loss carryforwards that may be utilized on an annual basis to offset taxable income in future periods. Future changes in ownership, as defined by Section 382, could result in additional limitations in the amount of net operating loss carryforwards that may be utilized on an annual basis.

As a result of Bio-Vascular's acquisition of the Company in May 1994, the Company experienced an ownership change as defined by Section 382 of the Code. Under the Code, the amount of pre-acquisition net operating loss carryforwards and research and development credits that can be used to offset future taxable income and income taxes will be limited. As of the date of the Company's acquisition by Bio-Vascular, the Company had approximately \$1,800,000 of net operating loss carryforwards and \$137,000 of research and experimentation credits, both of which will be subject to limitation under the Code.

**8. Employee benefit plan**

The Company maintains the Vital Images, Inc. Salary Savings Plan (the Plan ), which is intended to qualify under Section 401(k) of the Internal Revenue Code, as amended. The Plan covers substantially all employees. Each employee may elect to contribute to the Plan through payroll deductions of up to 25% of his or her salary, subject to certain limitations. At the discretion of the Board of Directors, the Company may make matching contributions equal to a percentage of the salary reduction contributions or other discretionary amounts. The Company paid \$43,600 in matching contributions in 2004. There were no contributions to the Plan by the Company in 2003 or 2002.



## 9. Major customers and geographic data

Customers accounting for more than 10 percent of the Company's total revenue are as follows:

	For the Year Ended December 31,		
	2004	2003	2002
Toshiba Medical Systems Corporation	\$ 18,130,000	\$ 11,554,000	\$ 7,246,000
Percentage of total revenue	50%	42%	34%

The Company's accounts receivable are generally concentrated with a small base of customers. As of December 31, 2004, Toshiba accounted for 23% of the accounts receivable balance. As of December 31, 2003, no single customer accounted for more than 10% of the accounts receivable balance.

All significant long-lived assets of the Company are located in the United States.

Export revenue accounted for 17%, 13% and 10% of total revenue for the years ended December 31, 2004, 2003 and 2002, respectively. Substantially all of the Company's export sales are negotiated, invoiced and paid in U.S. dollars.

Export sales by geographic area are summarized as follows:

	For the Year Ended December 31,		
	2004	2003	2002
Europe	\$ 3,692,000	\$ 2,421,000	\$ 1,094,000
Asia-Pacific	1,320,000	846,000	709,000
Canada	912,000	75,000	161,000
Other	166,000	312,000	49,000
	\$ 6,090,000	\$ 3,654,000	\$ 2,013,000

## 10. Quarterly financial data (unaudited)

The following summarized unaudited quarterly financial data has been prepared using the financial statements of Vital Images, Inc.

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	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
<b>2004</b>				
Total revenue	\$ 7,816,000	\$ 7,960,000	\$ 9,248,000	\$ 11,098,000
Gross profit	\$ 5,479,000	\$ 5,399,000	\$ 6,643,000	\$ 8,154,000
Net income (loss)	\$ (1,352,000)	\$ 78,000	\$ 670,000	\$ 900,000
Earnings per share basic	\$ (0.12)	\$ 0.01	\$ 0.06	\$ 0.08
Earnings per share diluted	\$ (0.12)	\$ 0.01	\$ 0.05	\$ 0.07
<b>2003</b>				
Total revenue	\$ 6,945,000	\$ 7,660,000	\$ 7,404,000	\$ 5,291,000
Gross profit	\$ 5,330,000	\$ 5,627,000	\$ 5,627,000	\$ 3,645,000
Net income (loss)	\$ 801,000	\$ 790,000	\$ 6,814,000	\$ 57,000
Earnings (loss) per share basic	\$ 0.09	\$ 0.08	\$ 0.62	\$ 0.01
Earnings (loss) per share diluted	\$ 0.08	\$ 0.07	\$ 0.53	\$ 0.00

**Vital Images, Inc.**  
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**Index to Exhibits**

<b>Item No.</b>	<b>Description</b>
2.1	Acquisition Agreement and Plan of Reorganization by and among Vital Images, Inc., HInnovation Acquisition, Inc., HInnovation, Inc. and Hui Hu and JMS Co. Ltd. Dated as of January 8, 2004 (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on February 26, 2004 (File No. 0-22229)).
3.1	Articles of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Company's registration statement on Form 10 (File No. 0-22229)).
3.2	By-laws of the Company (incorporated by reference to Exhibit 3.2 to the Company's registration statement on Form 10 (File No. 0-22229)).
4.1	Form of common stock certificate of the Company (incorporated by reference to Exhibit 4.3 to the Company's registration statement on Form 10 (File No. 0-22229)).
4.2	Rights Agreement, dated effective as of May 1, 1997, between the Company and American Stock Transfer and Trust Company, which includes as Exhibit B the form of Rights Certificate (incorporated by reference to Exhibit 4.4 to the Company's registration statement on Form 10 (File No. 0-22229)).
4.3	Certificate of Designation, Preferences and Rights of Series A Junior Preferred Stock of the Company (incorporated by reference to Exhibit 4.5 to the Company's registration statement on Form 10 (File No. 0-22229)).
10.1	Amended and Restated Development, Supply, Marketing and Distribution Agreement dated as of June 1, 2003 by and between Vital Images, Inc. and E-Z-EM, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 3, 2004 (File No. 0-22229)).*
10.2	Schedule of Executive Officer Compensation
21.1	Subsidiaries of Registrant
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith electronically).
31.1	Certification of Chief Executive Officer Pursuant to Rules 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934 and Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith electronically).
31.2	Certification of Chief Financial Officer Pursuant to Rules 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934 and Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith electronically).
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith electronically).
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith electronically).

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\* Portions of such exhibit are treated as confidential pursuant to a request for confidential treatment filed with the Commission by the Registrant.

