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PHASE•FORWARD™

Phase Forward Incorporated

2008 Annual Report to Stockholders

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

FORM 10-K

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

For the fiscal year ended December 31, 2008

or

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

Commission File Number: 000-50839

Phase Forward Incorporated

(Exact name of registrant as specified in its charter)

Delaware	**04-3386549**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

77 Fourth Avenue
Waltham, Massachusetts 02451
(Address of principal executive offices)
(888) 703-1122
(Registrant's telephone number, including area code)

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

Title of each class	**Name of each exchange on which registered**
Common Stock, par value $0.01 per share	The NASDAQ Stock Market LLC

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

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

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

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 this Form 10-K. ☐

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

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☐

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

Aggregate market value of the voting stock held by non-affiliates of the registrant.

Date	**Non-Affiliate Voting Shares Outstanding**	**Aggregate Market Value**
June 30, 2008	41,417,892	$744,279,519

Shares of voting stock held by each officer and director and by each person who owns 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes. The registrant has no shares of non-voting stock authorized or outstanding.

Number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Date	**Class**	**Outstanding Shares**
February 23, 2009	Common Stock, $0.01 par value per share	43,038,279

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the registrant's 2009 Annual Meeting of Stockholders, which is expected to be filed pursuant to Regulation 14A within 120 days of the registrant's fiscal year ended December 31, 2008, are incorporated by reference into Part III of the Form 10-K. With the exceptions of the portions of the Proxy Statement expressly incorporated by reference, such document shall not be deemed filed with this Form 10-K.

PHASE FORWARD INCORPORATED
ANNUAL REPORT ON
FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2008

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PART I

This Annual Report on Form 10-K ("Annual Report") contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities and Exchange Act of 1934, as amended, and is subject to the "safe harbor" created by those sections. This Annual Report contains express or implied forward-looking statements relating to, among other things, Phase Forward's expectations and assumptions concerning management's forecast of financial performance, the performance of Phase Forward's products and services, future business and operations plans of Phase Forward's customers, the ability of Phase Forward's customers to realize benefits from the use of Phase Forward's products and services, the performance of Phase Forward's competitors and future changes in competitive factors, external pricing pressures, the impact on Phase Forward's securities portfolio due to illiquid credit markets/general market conditions, Phase Forward's corporate documents and their effect on shareholder action, changes in government regulations (e.g. HIPAA regulations), and management's plans, objectives and strategies. Some of the forward-looking statements can be identified by the use of forward-looking terms such as "believes," "expects," "may," "will," "should," "could," "seek," "intends," "plans," "estimates," "anticipates" or other comparable terms. Forward-looking statements involve inherent risks and uncertainties. A number of important factors could cause actual results to differ materially from those in the forward-looking statements. We urge you to consider the risks and uncertainties discussed elsewhere in this Annual Report under "Item 1A. Risk Factors" in evaluating our forward-looking statements. We have no plans to update our forward-looking statements to reflect events or circumstances occurring after the date of this report. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made.

Item 1. *Business*

Overview

Phase Forward Incorporated is a provider of integrated enterprise-level software products, services and hosted solutions for use in our customers' global clinical trial and drug safety monitoring activities. Our customers include pharmaceutical, biotechnology and medical device companies, as well as academic institutions, governmental regulatory agencies, contract research organizations, or CROs, and other entities engaged in clinical trial and drug safety monitoring activities. By automating essential elements of the clinical trial and drug safety monitoring processes, we believe our products allow our customers to accelerate the market introduction of new medical therapies and corresponding revenues, reduce overall research and development expenditures, enhance existing data quality control efforts, increase drug safety compliance and reduce clinical and economic risk.

Our electronic data capture and clinical data management products are designed to offer our customers enterprise-level automation of time-consuming, paper-based clinical trial processes and to scale securely, reliably and cost-effectively for clinical trials involving substantial numbers of clinical sites and patients worldwide. Our drug safety products are designed to enable customers to detect, analyze and manage product safety throughout the product life cycle. Our interactive response technologies, which are designed to streamline the randomization process and drug supply chain management of our customers' clinical trials, consist of a unified interactive voice response system, or IVR, and an interactive internet (Web)-based response system, or IWR. We refer to this unified interactive system as our Interactive Response Technology, or IRT. Our products are supported by comprehensive consulting and training services and application hosting and support capabilities on a global scale. Our product line is comprised of four general categories that include the following software products:

- *Electronic Data Capture (EDC)*
  - *InForm™*, our Internet-based electronic data capture solution for collection and transmission of patient information in clinical trials; and
  - *LabPas™*, our system for Phase I clinic automation.

- *Clinical Data Management*
  - *Clintrial™*, our clinical data management solution; and
  - *WebSDM™*, our system for validating and reviewing clinical trial data represented in formats meeting industry standards, such as those established by the Clinical Data Interchange Standards Consortium, or CDISC.
- *Drug Safety*
  - *Empirica™ Trace*, our adverse event management solution for monitoring drug safety and reporting adverse events that occur during and after conclusion of the clinical trial process;
  - *Empirica Signal*, our data mining and signal detection solution for post-marketing data; and
  - *CTSD™*, our signal detection solution for data from clinical trials.
- *Interactive Response Technology (IRT)*
  - *Clarix™*, our Web-integrated interactive response technology.

We generally offer our *InForm, Clintrial* and *Empirica Trace* software products under multi-year enterprise licenses and our other products, excluding *Clarix,* under shorter term, multi-year licenses. Additionally, we offer our *InForm*, *Clarix*, *Empirica Signal*, *CTSD* and *WebSDM* products as a hosted application solution delivered through a standard Web-browser. Our *Clarix* solution is presently available only on a hosted application basis.

Our Strategy

Our objective is for our technology solutions to become the standard for electronic data capture, data management, interactive response technology, drug safety reporting and signal detection in global clinical trial and drug safety monitoring activities. Key strategic directives include:

- *Increase penetration within our existing customer base.* We believe that there is a significant opportunity to increase the adoption of *InForm* within our customer base across all study phases. We also believe that there is a significant opportunity to migrate existing customers that are utilizing one or more components of our product offerings to a comprehensive solution that integrates additional components of our product offerings or our entire suite of software products on an enterprise-wide basis. We believe that a large percentage of our current customers would benefit from the integration of our software solutions and we intend to continue to pursue these cross-selling opportunities. Furthermore, the decentralized nature of many of our customers offers us the opportunity to increase adoption of our currently-deployed software products, services and hosted solutions within their enterprises by targeting additional functional areas and business units. We believe that acquisition of new technologies and offerings will also serve to expand our customer base, creating further cross-selling opportunities within our existing customer base.
- *Expand the customer base for our software products, services and hosted solutions.* We believe that adoption is growing for electronic data capture, integrated clinical data management, drug safety, interactive response technology solutions and other automation solutions in the clinical trial and safety monitoring marketplace. Our current base of over 285 customers includes pharmaceutical, biotechnology and medical device companies, as well as academic institutions, governmental regulatory agencies and CROs of all sizes. We intend to secure additional customers by leveraging our industry position and domain expertise in technology development, sales and customer support.

- *Continue to capitalize on our technology position and expand our product offerings.* Our domain expertise and advanced technologies have enabled us to become well-positioned as a single-source vendor of electronic data capture, interactive response technology, data management, and drug safety software solutions to pharmaceutical, biotechnology, medical device companies and CROs, as well as academic institutions, governmental regulatory agencies and other entities engaged in clinical trial and safety monitoring activities. We intend to strengthen our position by leveraging our technology development resources to enhance our current product offerings and to introduce additional integrated software solutions to our product suite. In addition to continuing to enhance our existing software products, services and hosted solutions through internal development, we intend to develop new software products, services and hosted solutions through internal development, possible acquisitions and relationships with third-party technology providers with the intent of strengthening our market position. For instance, we recently added the *Clarix* interactive response technology solution to our product portfolio as a result of our acquisition of Clarix LLC.
- *Continue to provide a superior level of global customer service and support.* In light of the critical importance of the clinical trial and drug safety monitoring activities of our global customers, the delivery of a high level of multinational customer service and multilingual support with deep regulatory expertise is essential, and we believe a significant differentiating characteristic of our business strategy. We intend to leverage the knowledge and extensive expertise of our employees in the areas of clinical trial management and drug development, drug supply management, drug safety and regulatory approval to provide customers with exceptional support and consulting services that accelerate the adoption of our technologies.

Our Business Model

Our *InForm*, *Clintrial* and *Empirica Trace* software solutions are generally provided to our customers for enterprise adoption through multi-year term licenses of generally two to five years with periodic fees. We also offer fully-hosted solutions of our *InForm*, *Empirica Signal*, *CTSD* and *WebSDM* products for new and existing customers who prefer a hosted solution. Our *Clarix* solution is presently available only on a hosted application basis. We may offer hosted solutions in the future for additional products. Our pricing model and the contractual nature of our services and support solutions, which generally requires us to recognize revenue ratably over the life of a contract, and provides us with a level of multi-year financial reporting stability. We believe this business model differentiates us from many of our competitors, as our current and potential customers frequently look to long-term financial stability as a key criterion in evaluating a vendor to utilize in the clinical development process.

Our Software Solutions and Services

Our software solutions offer integration capabilities with certain complementary commercial applications used by our customers. We believe that all of our software products, services and hosted solutions may be used in a manner that will allow our customers to comply with current applicable global regulatory requirements, including applicable rules established by the U.S. Food and Drug Administration, or FDA, and other governmental regulatory authorities, regarding the use of software in the clinical development process. We have a dedicated team that monitors regulatory developments applicable to our customers and their clinical trial and drug safety monitoring activities.

Our product line is comprised of four general categories (electronic data capture, clinical data management, drug safety and interactive response technology) that include the following primary product and service offerings:

Electronic Data Capture

InForm is our Internet-based electronic data capture software solution that helps reduce the inefficiencies, inaccuracies and costs associated with paper-based clinical data collection methodologies that are traditionally employed at the remote sites where clinical trial participants are monitored. Through the *InForm* platform, our customers can deploy customized electronic case report forms, or eCRFs, for on-site clinical data input, which incorporate automated edit checking and deliver enterprise-level visibility to data at an accelerated rate previously unavailable through paper-based clinical trial data collection approaches. Our *InForm* product also includes an integrated reporting module that gives users timely visibility to the operating efficiencies of the trial and into the clinical data as it is collected. *InForm's* Internet-based platform and automated site assessment capabilities facilitate rapid, cost efficient multi-site deployment. *InForm* is highly scalable and has been utilized by our customers to run clinical trials involving, collectively, hundreds of thousands of patients across multiple continents. In addition to its availability through term licenses, customers may elect to use *InForm* through our fully-hosted deployment program, which includes application hosting as well as clinical trial site assessment, training and support. An offline version of our *InForm* product is also offered where network connections are not reliable or available. We also offer modules and add-on products for the *InForm* software, which include:

- *Central Coding*™ for *InForm*, which enables automatic or manual coding of clinical drug names and indications, adverse event terms and patient medical history.
- *Central Designer*™ for *InForm*, a tool to facilitate the creation of electronic case report forms easier through a centralized development environment with a flexible and intuitive user interface, as well as through increased use of templates and reuse of study components.
- *InForm Adapter*, which provides a set of published Web services interfaces that enable the secure, and in some instances bi-directional, exchange of data and information with the *InForm* environment.
- *InForm CRF Submit*, a module that streamlines the preparation process for archives and electronic submissions to regulatory agencies by producing Adobe® Portable Document Format (PDF) editions of the *InForm* electronic eCRFs.
- *InForm Portal,* which enables clinical trial sponsors to publish relevant clinical trial-related materials for use by clinical investigators utilizing the software through a standard Web-browser.

LabPas is our automation software for Phase I clinic automation. We began offering the *LabPas* solution following our acquisition of Green Mountain in October 2007. The *LabPas* workflow and sample management software targets the critical quality and resource needs of Phase I clinical research. The *LabPas* product supports the deployment of personal digital assistants, or PDAs, to enable clinicians to scan patient and collection vessel barcodes, providing real-time electronic data entry for collection times, comments, dosing, vital signs and adverse events. *LabPas* has additional modules for patient recruitment, management of storage conditions for collected samples and for laboratory information management.

Clinical Data Management

Clintrial is our clinical data management software solution that allows customers to input, monitor, correct, code and analyze clinical data collected through integration with our *InForm* platform or third party solutions, as well as through traditional paper-based methods. Our *Clintrial* platform employs

comprehensive tools for automated data entry control and tracking, error checking, industry-standard clinical coding, quality assurance and data import/export. *Clintrial* features an architecture that can manage thousands of clinical trials per customer and accommodate highly intricate study designs with little degradation of performance over a large amount of data.

WebSDM is our solution for validating and reviewing clinical trial data. Developed through a Cooperative Research and Development Agreement, or CRADA, with the FDA, *WebSDM* helps customers validate and review clinical trial data represented according to industry data standards established by CDISC. The *WebSDM* product loads and validates datasets and permits customers to browse both the clinical data and any discrepancies identified during the validation process, so that data problems may be addressed prior to submission of New Drug Applications to the FDA.

Drug Safety

Empirica Trace is our drug safety software solution that helps customers comply with the complex global safety regulations and reporting deadlines associated with clinical research, post-approval marketing and drug surveillance by expediting the clinical evaluation and tracking of adverse events. Through *Empirica Trace*, our customers can enter adverse event data from multiple sources, code, reconcile and analyze the data reports, and then submit required adverse event reports to regulatory authorities via electronic or paper-based methods. Our *Empirica Trace* product provides customers with near real-time visibility of drug safety data, thereby facilitating compliance with regulatory reporting deadlines and more timely identification of therapeutics that may pose risks to patients. Our *Empirica Trace* product also includes a reporting module that enables users to generate various reports containing safety and adverse event data. The current version of the *Empirica Trace* product integrates with our Electronic Case Submissions Module, or ECSM, automating the exchange of electronic case safety information with regulatory agencies, affiliates and partners.

Empirica Signal is our drug safety software solution for data mining and signal management that allows customers to detect safety signals in databases of adverse event reports. It can operate on in-house adverse event databases (such as adverse event reports collected through our *Empirica Trace* solution), or large databases of reports gathered by public health agencies such as the FDA and the World Health Organization. We also offer an extended version of *Empirica Signal*, called *Signal Management*, which is a workflow solution that helps large organizations assemble and track information on drug-event combinations of interest and to prioritize work among multiple safety reviewers.

CTSD is our drug safety software solution for clinical trials signal detection that supports customers in the early detection of drug safety problems during clinical development. *CTSD* manages a repository of clinical trial data and allows users to specify, execute and interpret data mining runs to detect differences in the safety profile of the drug under development and the corresponding profile for placebo or other comparator treatments. This repository supports the loading of data in formats meeting standards established by CDISC, which develops and supports global, platform-independent data standards that enable information system interoperability to improve medical research and related areas of healthcare. Our *CTSD* product includes built-in safety screens for differences in reported adverse events, critical laboratory values, vital signs, ECG measurements, and other data collected during a clinical trial. *CTSD* also supports workflow for managing and documenting the resolution of any safety signals that are identified.

Interactive Response Technology

Clarix is our Web-integrated interactive response technology that helps streamline the randomization process and drug supply chain management of our customers' clinical trials. It is presently offered only on a hosted application basis. *Clarix* is used for subject randomization, predictive

medication inventory management, and operational management and reporting in clinical trials. By automating the randomization process and centralizing the overall supply chain for dispensing medical kits, our *Clarix* solution helps our customers better manage their medical kit inventories, which reduces drug waste and helps keep costs under control. The *Clarix* operational and reporting functionalities are accessed via a Web interface through a standard Web-browser.

Integrated Offerings

Our software solutions other than *Clarix* may be licensed as stand-alone enterprise applications, as well as part of a combined enterprise solution incorporating certain of our electronic data capture, clinical data management and drug safety products leveraging our current integration solutions. Our *Clarix* solution is presently available only on a hosted application basis, but can be integrated with our hosted *InForm* electronic data capture solution. We intend to continue to develop and expand these interfaces among our products to provide increased integration to our customers.

Services

Our products are supported by comprehensive consulting and training services and application hosting and support capabilities on a global scale. In addition to our U.S. headquarters, we have offices with services personnel in Australia, Belgium, France, India, Japan, Romania and the United Kingdom.

Application Hosting Services. In addition to making our software products other than *Clarix* available to customers through licenses, we offer our *InForm*, *Empirica Signal*, *CTSD* and *WebSDM* software as hosted application solutions delivered through a standard Web-browser, with customer support and training services. Our *Clarix* solution is presently available only on a hosted application basis. To date, our hosted solutions have been related primarily to our *InForm* offering.

Consulting Services. Consulting services include the design and documentation of the processes related to our customers' use of our products and services in their clinical trials and safety monitoring activities. Consulting services also include project planning and management services, guidance on best practices in using our software products, data management and configuration services for data mining and reporting, as well as implementation services consisting of application architecture design, systems integration, installation and validation. Consulting services can be sold on a stand-alone basis or as part of a bundled arrangement. In some circumstances, we sell additional follow on consulting services to a customer at a later date even if the customer purchased consulting services at the time of the initial license purchase under a bundled arrangement.

Customer Support. We have a multinational professional services organization to support our software products and hosted solutions worldwide, including our Japanese versions of our *InForm* and *Clintrial* products. Our multilingual technical support staff is available 24 hours per day, seven days per week. Customer support includes training services, telephone support and software maintenance. We bundle customer support in our software term licenses.

Our Customers

As of December 31, 2008, we had over 285 customers, including all of the top 10 pharmaceutical companies and 17 of the top 20 pharmaceutical companies. In determining the number of customers, we have treated all affiliated entities as one customer, even if we have customer relationships with more than one entity or group within a larger organization. Our representative customers include leading pharmaceutical, biotechnology, medical device companies, regulatory agencies, academic institutions, CROs and other entities engaged in clinical trial and safety monitoring activities. Some of our representative customers include:

Pharmaceutical	Biotechnology	Contract Research Organizations
Alliance Pharma Ltd.	Alexion Pharmaceuticals, Inc.	Gleneagles CRC Plc Ltd.
AstraZeneca Pharmaceuticals LP	Asklep, Inc.	ICON Clinical PLC
Bayer Healthcare AG	Atherogenics, Inc.	Medpace, Inc.
Eli Lilly and Company	Celgene Corporation	PAREXEL International Corporation
Forest Laboratories, Inc.	Genzyme Corporation	PharmaLink FHI, Inc.
GlaxoSmithKline, Inc.	Merck Serono International S.A.	Prologue Research International, Inc.
Institut de Recherches Internationales Servier	Novagen, Limited	Quintiles Transnational Corp.
Mayne Pharma, Inc.		RTI International
Merck & Co., Inc.		Veristat, Inc.
Novartis AG		
Orexigen Therapeutics, Inc.		
Otsuka America Pharmaceutical, Inc.		
Reckitt Benckiser plc		
The Procter & Gamble Company		
sanofi-aventis		
Schering-Plough Research Institute		

Government and Regulatory	Medical Devices	Academic
U.S. Department of Defense (DoD)	Biotronik AG	Aurum Institute for Health Research
U.S. Food and Drug Administration (FDA)	Boston Scientific Corporation	Children's Hospital Boston
U.K. Medicines and Healthcare products Regulatory Agency (MHRA)	CardioDynamics International Corp.	Children's Hospital of Philadelphia
	Conceptus, Inc.	Dana Farber Cancer Institute
	GE Healthcare Ltd.	Duke Clinical Research Institute
	Medtronic, Inc.	Guandong University
	Philips Oral Healthcare, Inc.	Harvard Clinical Research Institute
	Q-MED AB	Massachusetts General Hospital
	Stryker Biotech, LLC	Mayo Clinic College of Medicine
		National Health & Medical Research Council

GlaxoSmithKline accounted for 12% of our revenues in 2008.

Sales and Marketing

We sell our products and services through a direct sales force and through relationships with CROs and other channel arrangements. Our marketing efforts focus on raising awareness for our products and services and generating qualified sales leads. As of December 31, 2008, we had 75 employees in sales and marketing.

Direct Sales. Our direct sales force, which is the source of the majority of our revenues, is operated out of six field offices, as well as our headquarters in Waltham, Massachusetts. In addition, follow-on sales are accomplished by the efforts of sales professionals, sales engineers, project managers and other consulting services professionals.

Channel Arrangements. In Japan, we have established channel relationships to market and sell our *Clintrial* and *Empirica Trace* products, as well as the hosted solution for the Japanese version of our *InForm* product. We also have channel relationships in the United States, Europe and Asia with a number of major CROs that enable them to market and sell our hosted solutions.

Marketing. Our marketing strategy is to generate qualified sales leads, build our brand and establish our technology solutions as the standard for electronic data capture, data management, drug safety and interactive response in the clinical trial and safety monitoring marketplace. Our principal marketing initiatives target key executives and decision makers within our existing and prospective customers, and include:

- hosting of an annual international user conference in the United States and regional conferences in Europe and Japan;
- participation in, and sponsorship of, user conferences for complementary products and services, trade shows, workshops, seminars and industry events;
- publication of articles and opinion pieces in trade magazines and journals;
- participation in industry standards and bodies;
- press and industry analyst relations; and
- direct mail and email campaigns.

The marketing organization also works closely with our customers, our direct sales organization and CROs to collect and prioritize customer feedback to help guide our product development efforts.

Research and Development

We believe that our future success will depend on our ability to continue to enhance and broaden our software products, services and hosted solutions to meet the evolving needs of clinical trial sponsors and other entities engaged in clinical trial and drug safety monitoring activities. As of December 31, 2008, we had 141 employees in research and development. Our research and development efforts are focused on developing new, complementary software solutions, as well as enhancing our existing software solutions through the addition of increased functionality and integration among our various products, as well as through integration of third-party software. From time to time, we supplement our internal research and development resources with outside developers. Our research and development expenses were $16.6 million in 2006, $20.1 million in 2007 and $25.5 million in 2008.

Technology

The technology incorporated into our products is designed to provide customers with ease of use, efficiency, flexibility, data visibility and system scalability to handle high-volume, global trials and drug safety monitoring activities.

Our *InForm* electronic data capture, or EDC, software product, which we have designed to support large numbers of users connecting to the system via the Internet, utilizes three logical tiers: a user interface; a proprietary application server; and a database. End-users of our *InForm* software product and most of its modules and add-on products can utilize a widely-available Web-browser without the need to download or install any software on their computer. The *InForm* product line was developed utilizing Microsoft technologies for the user interface and application server and was designed to

operate with an Oracle database. The *InForm* product also uses the Cognos ReportNet™ product from IBM for enabling *InForm's* reporting capabilities. The *InForm* modules and add-on products are generally developed utilizing Web-based technologies, a Microsoft .NET framework, Web services, service oriented architecture, or SOA, or a combination of these and other leading-edge technologies.

Our *LabPas* product was acquired through our acquisition of Green Mountain in October 2007. *LabPas* is a client/server application utilizing Java applets and Java Servlets to deliver "thin client" compatible Web browser screens. The customer may choose to use either a Microsoft SQL Server® or Oracle database. *LabPas* is implemented within the customer's network and integrates with the network's user security system using Lightweight Directory Access Protocol, or LDAP, Microsoft Active Directory, or Microsoft Windows operating system authentication. On the clinic floor, *LabPas* utilizes Web data entry screens on a Microsoft Pocket PC platform which includes barcode scanning capability. *LabPas* automates the process of preparing for studies by allowing customers to define study protocol events and print labels for samples, treatments, and subjects. During the study, *LabPas* directs the workflow relating to the study events and sample processing.

Our *Clintrial* software is installed on the system of the entity conducting the clinical trial, where data is entered either from a paper case report form that has been sent to such entity by the clinical investigator or by using our *InForm* electronic data capture solution. *Clintrial* is a client/server based system that runs on most versions of Microsoft client operating systems and the Oracle database utilized with the product can run on a wide variety of server operating systems, including Microsoft, Solaris, HP-UX and Linux.

Our *Empirica Trace* drug safety software is a Web-based application that can be installed locally at a central location and then accessed remotely using a widely-available Web-browser. The *Empirica Trace* software was developed using Microsoft's development platform and utilizes an Oracle database that can be used on a wide variety of operating systems including versions from Microsoft, Solaris, HP-UX and Linux. The *Empirica Trace* product also utilizes the Cognos ReportNet™ product from IBM for additional reporting capabilities. The *Clintrial* software product has the ability to synchronize adverse event data with *Empirica Trace*. The *Empirica Trace* product is also able to integrate with other industry-leading clinical data management systems.

Our *Empirica Signal* safety data mining application, *CTSD* signal detection system, and *WebSDM* SDTM-compliant tool for data import, validation, review, and collaboration are Web applications built using a common technical framework that includes Java Server Pages, Java classes and the Oracle database. SDTM is the Study Data Tabulation Model published by CDISC, a leading industry standard-setting body. These applications have the ability to run in the background large computational programs such as high-volume data loading utilities and our proprietary signal detection engine. This "thin client" technical framework facilitates widespread deployment because it allows our customers to access signal detection capabilities within or through corporate firewalls from any desktop or laptop computer running with the Microsoft Windows operating system, without the need for installing applications on client computers. The three applications are built on a common code base (including shared application server, database interface and user interface functionality across products), which facilitates software development, validation, deployment and support.

Our *Clarix* interactive response technology solution was added to our product line through our acquisition of Clarix LLC in September 2008. *Clarix* is a hosted application used for subject randomization, predictive medication inventory management, and operational management and reporting in clinical trials. *Clarix* is designed to support large numbers of users connecting to the system via the Internet or over the telephone. The system utilizes three logical tiers: a user interface; a proprietary application server; and a database. End-users can access the *Clarix* application through any standards-compliant Web browser without the need to download or install any software on their computer. A subset of the features is also available through a fully-integrated telephone interface and

utilizes the same interactive response technology workflows as the Web interface for those features. The *Clarix* product was developed utilizing Microsoft .NET and VXML technologies for the user interface and application server and was designed to operate with a Microsoft SQL Server.

Our products have been designed to allow our customers to deploy them as part of a validated system compliant with laws, regulations and industry guidance applicable to the conduct of clinical trials and drug safety monitoring activities. These laws, regulations and industry guidance may include Good Clinical Practices, 21 CFR Part 11 pertaining to the use of electronic records, password security and signatures, and FDA guidance related to pre-marketing and post-marketing safety surveillance and risk management. We also design our products to meet emerging industry standards such as those published by the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use ("ICH') and CDISC. For example, our *Empirica Trace* drug safety software and its ECSM module support electronic submissions to the FDA and to the EMEA Eudravigilance system using the ICH E2B message format.

We have worked with, and continue to work with, a number of vendors of complementary products, services and technologies to develop integration tools that allow third-party systems to interact with our software products. Our products other than *LabPas* and *Clarix* utilize a database supplied by Oracle Corporation. While *LabPas* is also capable of utilizing an Oracle database, it is typically deployed utilizing Microsoft SQL Server. Although we believe that there are other commercially available databases which our products could utilize, the loss of the right to use the Oracle database, and any delay in procuring a replacement, could adversely affect our business. Our products run on most major versions of the Microsoft operating system.

Competition

The market for electronic data collection, data management, drug safety and interactive response systems is highly competitive, rapidly evolving, fragmented and is subject to changing technology, shifting customer needs, changes in laws and regulations, and frequent introductions of new products and services. We compete with systems and paper-based processes utilized by existing or prospective customers, as well as other commercial vendors of electronic data capture applications, clinical data management systems, drug safety software and interactive response technology, including:

- vendors of stand-alone electronic data capture, data management, drug safety, Phase I clinic automation and interactive response products, such as: ArisGlobal LLC; Datatrak International, Inc.; DrugLogic, Inc.; etrials Worldwide, Inc.; Logos Technologies Ltd.; Medidata Solutions Worldwide, Inc.; and Relsys International, Inc.;
- vendors of electronic data capture, clinical data management, drug safety and interactive response product suites, particularly Oracle Clinical, a business unit of Oracle Corporation, and Perceptive Informatics, a subsidiary of PAREXEL International Corporation;
- systems developed internally by existing or prospective customers;
- CROs with internally developed or acquired electronic data capture solutions, clinical data management systems, drug safety systems, Phase I clinic automation solutions or interactive response technology; and
- consulting firms and systems integrators offering services for clinical trial or drug safety implementations.

Our ability to remain competitive will depend to a great extent upon our ongoing performance in the areas of product development, customer support and service delivery. We believe that the principal competitive factors in our market include the following:

- product functionality and breadth of integration among electronic data capture, clinical data management, drug safety and interactive response solutions;
- performance, security, scalability, flexibility and reliability of the solutions;
- speed and ease of implementation and integration;
- reputation and financial stability of the vendor;
- global reach and depth of expertise and quality of consulting, help-desk, training and other services;
- low total cost of ownership and demonstrable benefits for customers; and
- sales and marketing capabilities, and the quality of customer support.

We believe that we generally compete favorably with our competitors on the basis of these factors. However, some of our competitors and potential competitors have greater name recognition, longer operating histories and significantly greater resources. There can be no assurance that our current or prospective competitors will not offer or develop products or services that are superior to, or that achieve greater market acceptance than, our products and services.

Government Regulation

The software solutions that we design, market and sell are used by organizations that are subject to a complex array of U.S. federal and state laws and regulations, including regulation by the FDA, as well as additional regulations by foreign governments.

The conduct of clinical trials of drugs, biological products and medical devices is subject to regulation by the FDA and other regulatory bodies. Postmarket safety monitoring and reporting is also subject to regulation by FDA and other regulatory bodies. FDA regulations govern many aspects of the clinical trial process, including recordkeeping, reporting, data privacy, and protection of human subjects. Postmarket safety monitoring and reporting is also subject to various regulations. Use of our software products, services and hosted solutions by entities engaged in these activities must be done in a manner that is compliant with these regulations and should be done in a manner that follows applicable regulatory guidance. Failure to do so could, for example, have an adverse impact on a clinical trial sponsor's ability to obtain regulatory approval of new drugs, biological products or medical devices. If our product and service offerings fail to allow our customers and potential customers to operate in a manner that is compliant with applicable regulations and follows regulatory guidance, clinical trial sponsors and other entities engaged in clinical trial and safety monitoring activities may be unwilling to use our software products, services and hosted solutions. Accordingly, we design our product and service offerings to allow our customers and potential customers to operate in a manner that is compliant with applicable regulations and follows applicable regulatory guidance. We also expend considerable time and effort monitoring regulatory developments that could impact the use of our products and services by our customers and use this information in designing or modifying our product and service offerings.

The following is an overview of some of the regulations that our customers and potential customers are required to comply with in the conduct of clinical trials and postmarket safety reporting, as well as in some of the other activities in which our customers may engage.

Government Regulation of Clinical Trials and Adverse Event Reporting

Demand for our software products, services and hosted solutions is largely a function of the regulatory requirements associated with the investigation and approval of drugs, biologics and medical devices, as well as the monitoring of and reporting on the safety of these products. The clinical testing of drugs, biologics and medical devices is subject to regulation by the U.S. Food and Drug Administration, or FDA, and other governmental authorities worldwide. The use of software during the clinical trial process must adhere to the regulations pertaining to Good Clinical Practices and other various codified FDA regulations, and should adhere to regulatory guidance such as the Consolidated Guidance for Industry from the International Conference on Harmonization regarding Good Clinical Practice for Europe, Japan and the United States and other guidance documents. The use of software to assist in postapproval adverse event reporting must adhere to FDA's adverse event reporting regulations for drugs, devices and biological products. Our products, services and hosted solutions are developed using our domain expertise and are designed to allow compliance with applicable rules and regulations, and conformance with applicable guidance. The foregoing regulations and regulatory guidance are subject to change at any time. Changes in regulations and regulatory guidance to either more or less stringent conditions could adversely affect our business and the software products, services and hosted solutions we make available to our customers. Further, a material violation by us or our customers of Good Clinical Practices could result in a warning letter from the FDA, the suspension or termination of clinical trials, investigator disqualification, debarment, the rejection or withdrawal of a product marketing application, criminal prosecution or civil penalties, any of which could have a material adverse effect on our business, results of operations or financial condition.

In recent years, efforts have been made to streamline the drug approval process and coordinate U.S. standards with those of other developed countries. Changes in the level of regulation, including a relaxation in regulatory requirements or the introduction of simplified drug approval procedures, could have a material adverse effect on the demand for our software products, services and hosted solutions. Several competing proposals to reform the system of health care delivery in the United States have been considered and are currently being considered by Congress and the Executive. To date, none of the proposals has been adopted. While it is difficult to predict the impact of any proposal which may be adopted in the future, proposals that cause or contribute to a reduction in clinical research and development expenditures could have a material adverse impact on the demand for our software products, services and hosted solutions. For example, proposals to place caps on drug prices could limit the profitability of existing or planned drug development programs, making investment in new drugs and therapies less attractive to pharmaceutical companies. Likewise, a proposal for government-funded universal health care could subject expenditures for health care to governmental budget constraints and limits on spending. Finally, the uncertainty surrounding the possible adoption and impact of any health care reforms could cause our customers to delay planned research and development until some of these uncertainties are resolved.

Regulation of the use of Electronic Systems in Clinical Trials

In addition to the aforementioned regulations and regulatory guidance, the FDA has developed regulations and regulatory guidance concerning electronic records and electronic signatures. The regulations pertaining to electronic records and electronic signatures are codified in 21 CFR Part 11, and FDA recommendations incorporating 21 CFR Part 11 considerations into clinical trials are provided in a guidance document entitled Computerized Systems Used in Clinical Trials. This regulatory guidance stipulates that computerized systems used to capture or manage clinical trial data must meet certain standards for attributability, accuracy, retrievability, traceability, inspectability, validity, security and dependability. Other guidance documents have been issued that also contain recommendations regarding the implementation of 21 CFR Part 11. We have designed our software to incorporate regulatory requirements and guidelines, but we cannot assure you that the design of our

software solutions will continue to reflect regulatory requirements and guidelines as they change. Any changes in applicable regulations that are inconsistent with the design of any of our software solutions or which reduce the overall level of record-keeping or other controls or performances of clinical trials may have a material adverse effect on our business and operations. If we fail to offer solutions that allow our customers to comply with applicable regulations, it could result in the suspension or termination of on-going clinical trials, the disqualification of data for submission to regulatory authorities, or the withdrawal of approved marketing applications.

Regulation of the Internet

The U.S. government and the governments of some states and foreign countries have also attempted to regulate activities on the Internet. Any new legislation or regulation regarding the Internet could decrease our potential revenues or otherwise harm our business, financial condition and operating results. For instance, proposed federal, state and foreign privacy regulations and other laws restricting the collection, use and disclosure of personal information could limit our customers' ability to use the information in our databases to generate revenues or subject us to additional administrative or compliance burdens or potential liabilities.

Regulation of Personally Identifiable and Medical Information

Regulation of the use, protection and disclosure of personal and medical information is complex and growing. Federal legislation in the United States, known as the Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes a number of requirements on the use and disclosure of "protected health information" which is individually identifiable, including standards for the use and disclosure by the health care facilities and providers who are involved in clinical trials. HIPAA also imposes on these healthcare facilities and providers standards to assure the confidentiality of health information stored or processed electronically, including a series of administrative, technical and physical security procedures. There are also state privacy laws concerning personal and medical information that impose similar or additional requirements. This may affect us in several ways. Many users of our products and services are directly regulated under HIPAA and such state privacy laws, and to the extent our products cannot be utilized in a manner that is consistent with the users' HIPAA compliance requirements, our products will likely not be selected. In addition, we may be directly affected by HIPAA and similar state privacy laws, including the recently adopted Massachusetts data security regulations, which impose stringent information security requirements to all businesses and persons that own, license, store or maintain certain personal information about Massachusetts residents. Under HIPAA and such state privacy laws, to the extent we perform functions or activities on behalf of customers that are regulated by these privacy laws, such customers may be required to obtain satisfactory assurance, in the form of a written agreement or certification that we will comply with a number of the same HIPAA or state law requirements. We may be burdened with compliance with such agreements or certifications, and breach of such an agreement or certification may result in contractual liability to our customer or other adverse consequences. Regulation of personal and medical information generally is increasing at the state and federal levels in the United States and elsewhere, and such regulations may negatively affect our business.

Intellectual Property

Our success and ability to compete are dependent on our ability to develop and maintain the proprietary aspects of our technology and operate without infringing the proprietary rights of others. We rely upon a combination of trademark, trade secret, copyright, patent and unfair competition laws, as well as license agreements and other contractual provisions, to protect our intellectual property and other proprietary rights. In addition, we attempt to protect our intellectual property and proprietary information by requiring our employees and consultants to enter into confidentiality, non-competition

and assignment of inventions agreements. These legal protections afford only limited protection for our technology. We have registered trademarks and service marks in the United States and abroad, and applications for the registration of additional trademarks and service marks. Our principal trademarks are our company name "Phase Forward", the company name of our subsidiary, "Lincoln Technologies", and our product names, "InForm", "Clintrial", "Clintrace", "Empirica", "WebVDME", "CTSD", "WebSDM", "LabPas" and "Clarix." We may or may not choose to register some or all of our trademarks. If we apply for trademark registration, we cannot predict whether registrations will be approved or, if approved, will provide meaningful protection. In addition, we have been granted a patent by the U.S. Patent and Trademark Office. We cannot predict whether this patent will provide meaningful protection. Our agreements with employees, consultants and others who participate in development activities could be breached. We may not have adequate remedies for any breach, and our trade secrets may otherwise become known or independently developed by our competitors or other third parties. In addition, the laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and effective copyright, patent, trademark and trade secret protection may not be available in those jurisdictions.

We have licensed in the past, and expect that we may license in the future, certain of our proprietary rights, such as trademarks, technology or copyrighted material, to third parties. Due to rapid technological change, we believe that factors such as the technological and creative skills of our personnel, new product and service developments and enhancements to existing products and services are more important than the various legal protections of our technology to establishing and maintaining a technology leadership position.

In addition, we license, and expect to continue to license, third-party technologies and other intellectual property rights that are incorporated into some elements of our services and solutions.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our software solutions or to obtain and use information that we regard as proprietary. The laws of many countries do not protect our proprietary rights to as great an extent as do the laws of the United States. Litigation may be necessary in the future to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Any such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on our business, operating results or financial condition. There can be no assurance that our means of protecting our proprietary rights will be adequate or that our competitors will not independently develop similar technology. Any failure to meaningfully protect our intellectual property and other proprietary rights could have a material adverse effect on our business, operating results or financial condition.

In addition, if any of our software solutions is covered by third-party patents or other intellectual property rights, we could be subject to infringement actions. We cannot assure you that our software solutions do not infringe patents held by others or that they will not in the future. Any infringement claims made against us could cause us to incur substantial costs defending against the claim, even if the claim is without merit, and could distract our management from our business. Moreover, any settlement of or adverse judgment resulting from such claims could require us to pay substantial amounts or obtain a license to continue to use the technology that is the subject of the claim, or otherwise restrict or prohibit our use of the technology.

Any required licenses, however, may not be available to us on acceptable terms, if at all. If we do not obtain any required licenses, we could encounter delays in product introductions if we attempt to design around the technology at issue or to find another provider of suitable alternative technology to permit us to continue offering the applicable software solution. In addition, we generally provide in our customer agreements that we will indemnify our customers against third-party infringement claims relating to our technology provided to the customer, which could obligate us to fund significant amounts.

Business Segments and Geographic Information

We view our operations and manage our business as one operating segment. For information regarding net revenues by geographic regions for each of the last three years, see the notes to our 2008 consolidated financial statements contained in this Annual Report.

For information regarding risks and dependencies associated with foreign operations, see risk factors listed in the "*Item 1A. Risk Factors*" contained in this Annual Report.

Employees

As of December 31, 2008, we had a total of 718 employees, with 371 employees at our headquarters in Waltham, Massachusetts, 135 at other locations in the United States, and 212 employees in our Australia, Belgium, France, India, Japan, Romania and United Kingdom offices. Of these employees, 403 are in services, 141 are in research and development, 75 are in sales and marketing and 99 are in general and administration. We also retain outside contractors from time to time to supplement our services and research and development staff on an as needed basis. None of our employees are covered by a collective bargaining agreement. We consider our relations with our employees to be good.

Available Information

We were incorporated in Delaware in 1997. We maintain a number of subsidiaries in the United States and abroad, including Lincoln Technologies, Inc. and Clarix LLC in the United States, Phase Forward Europe Limited in the United Kingdom, Phase Forward SAS in France, Phase Forward Software Services India Private Limited in India, Phase Forward Pty. Limited in Australia, Phase Forward Japan KK in Japan, Lincoln Technologies, SPRL in Belgium and S.C AT&V Software SRL in Romania. We also maintain Phase Forward Securities Corporation, a Massachusetts securities corporation. Our Internet website address is http://www.phaseforward.com. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as well as reports relating to our securities filed by others pursuant to Section 16 of such act, are available through the investor relations page of our internet website free of charge as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (the "SEC"). The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is http://www.sec.gov.

Item 1A. ***Risk Factors***

We operate in a rapidly changing environment that involves a number of risks, some of which are beyond our control. This discussion highlights some of the risks which may affect future operating results. These are the risks and uncertainties we believe are most important for you to consider. Additional risks and uncertainties not presently known to us, which we currently deem immaterial or which are similar to those faced by other companies in our industry or business in general, may also impair our business operations. If any of the following risks or uncertainties actually occurs, our business, financial condition and operating results would likely suffer.

Risks Related to Our Company

Our operating results may fluctuate and could cause the market price of our common stock to fall rapidly and without notice.

Our revenues and operating results are difficult to predict and may fluctuate from quarter to quarter, particularly because of the evolving market in which we operate and our term license model. Our results of operations in any given quarter will be based on a number of factors, including:

- the timing and mix of license and services revenues, and the amount and type of service required in delivering certain projects;
- the timing, size and integration success of potential future acquisitions;
- changes in and timing of our operating expenses;
- changes in our customers' purchasing patterns;
- the impact of the current global financial crisis on our business and our customers' businesses;
- the financial condition of our current and potential customers;
- the timing of our product sales and the length of our sales and implementation cycles;
- our ability to introduce new products and services and enhancements to our existing products and services on a timely basis;
- new competitors and introduction of enhanced products from new or existing competitors;
- our ability to hire and retain qualified personnel;
- changes in the regulatory environment related to the clinical trial and safety evaluation and monitoring market;
- the extent to which our software products, services and hosted solutions achieve or maintain market acceptance; and
- unforeseen legal expenses, including litigation costs.

A significant portion of our operating expenses are relatively fixed in nature and planned expenditures are based in part on expectations regarding future revenues. Accordingly, unexpected revenue shortfalls or operating expenses may decrease our gross margins and could cause significant changes in our operating results from quarter to quarter. Results of operations in any quarterly period should not be considered indicative of the results to be expected for any future period. In addition, our future quarterly operating results may fluctuate and may not meet the expectations of securities analysts or investors. If this occurs, the trading price of our common stock could fall substantially either suddenly or over time.

We may lose or delay revenues related to our hosted solutions and consulting services if our customers terminate or delay their contracted projects with us.

Certain of our hosted and other service and consulting contracts are subject to cancellation by our customers at any time with limited notice. Entities engaged in clinical trials may terminate or delay a

clinical trial for various reasons including the failure of the tested product to satisfy safety or efficacy requirements, unexpected or undesired clinical results, decisions to de-emphasize a particular product or forego a particular clinical trial, decisions to downsize clinical development programs, insufficient patient enrollment or investigator recruitment and production problems resulting in shortages of required clinical supplies. In the case of our hosted solutions, any termination or delay in the clinical trials would likely result in a consequential delay or termination in those customers' service contracts. We have experienced terminations and delays of our customer service contracts in the past and expect to experience additional terminations and delays in the future. Because we do not recognize any portion of a hosted service contract's revenues until the implementation cycle is complete, the termination or delay of our customers' clinical trials could result in decreased or delayed revenues under these contracts which could materially harm our business.

We may acquire or make investments in companies or technologies that could cause disruption of our business and loss of value or dilution to our stockholders.

From time to time, we evaluate potential investments in, and acquisitions of, complementary technologies, services and businesses. We have made in the past, and may make in the future, acquisitions or significant investments in other businesses. For example, we acquired Lincoln Technologies, Inc., or Lincoln, in 2005, Green Mountain Logic, Inc., or Green Mountain, in 2007 and Clarix LLC, or Clarix, in 2008. Entering into an acquisition entails many risks, any of which could harm our business, including:

- difficulties in integrating the operations, technologies, products, existing contracts and personnel of the target company and realizing the anticipated synergies of the combined businesses;
- managing the risks and challenges of entering markets or types of businesses in which we have limited or no direct experience;
- the price we pay or other resources that we devote may exceed the value we eventually realize or the value we could have realized if we had allocated the purchase price or other resources to another opportunity;
- potential loss of key employees, customers and strategic alliances from either our current business or the target company's business;
- the diversion of management's attention from other business concerns; and
- assumption of unanticipated problems or latent liabilities, such as problems with the quality of the target company's products.

In addition, we could discover deficiencies withheld from us in an acquisition due to fraud or otherwise not uncovered in our due diligence prior to the acquisition. These deficiencies could include problems in internal controls, data adequacy and integrity, product quality and regulatory compliance, any of which could result in us becoming subject to penalties or other liabilities. Acquisitions also frequently result in the recording of goodwill and other intangible assets which are subject to potential impairments in the future that could harm our financial results. If any of the foregoing were to occur, our financial condition and results of operations could be materially adversely impacted. In addition, if we finance any future acquisitions by issuing equity securities or convertible debt, our existing stockholders may be diluted or the market price of our stock may be adversely affected. The failure to successfully evaluate and execute acquisitions or investments or otherwise adequately address these risks could materially harm our business and financial results.

The global nature of our business exposes us to multiple risks.

For the year ended 2008, approximately 44% of our revenues were derived from international operations. For the same period, approximately 31% of our revenues were in currencies other than the U.S. dollar. We expect that our international operations will continue to account for a significant

portion of our revenues. As a result of our international operations, we are exposed to many risks and uncertainties, including:

- fluctuations in foreign currency exchange and interest rates;
- potential fluctuations in foreign economies;
- the impact of the current global financial crisis on our business and our customers' businesses;
- difficulties in staffing, managing and supporting operations in multiple countries;
- difficulties in enforcing agreements and collecting receivables through foreign legal systems and other relevant legal issues;
- tariff and international trade barriers;
- fewer legal protections for intellectual property and contract rights abroad;
- different and changing legal and regulatory requirements in the jurisdictions in which we currently operate or may operate in the future;
- difficulties in obtaining any necessary governmental authorizations for the export of our products to certain foreign jurisdictions;
- government currency control and restrictions on repatriation of earnings; and
- political and economic changes, hostilities and other disruptions in regions where we currently operate or may operate in the future.

Negative developments in any of these areas in one or more countries could result in a reduction in demand for our software products, services and hosted solutions, the cancellation or delay of orders already placed, threats to our intellectual property, difficulty in collecting receivables, and a higher cost of doing business, any of which could adversely affect our business, results of operations or financial condition. Moreover, with regard to our international operations, we frequently enter into transactions in currencies other than the U.S. dollar and we incur operating expenses in currencies other than the U.S. dollar. This creates a foreign currency exchange risk for us that could have a material adverse effect on our results of operations and financial condition. Although from time to time, we enter into forward foreign exchange contracts to hedge the foreign currency exposure of non-U.S. dollar denominated third-party and intercompany receivables and cash balances, we cannot assure you that these contracts will be successful in mitigating our foreign currency exposure risk.

Some of our investments are subject to significant market risk.

At December 31, 2008, we held $177.5 million in cash, cash equivalents, short-term and long-term investments. Although we do not issue or invest in financial instruments or their derivatives for trading or speculative purposes, these assets are exposed to a variety of market risks, including changes in interest rates and the market value of our investments. In addition, included within our investment portfolio at December 31, 2008 were $24.1 million of auction rate securities, or ARS, at par value. The types of ARS that we own are backed by student loans, 95% of which are guaranteed under the Federal Family Education Loan Program, and all had credit ratings of AAA (or equivalent) from a recognized rating agency. The ARS are classified as long-term investments in our accompanying consolidated balance sheet included in this Annual Report, and are recorded at fair market value. Historically, the carrying value of ARS approximated fair market value due to the frequent resetting of the interest rates. The auctions have historically provided a liquid market for these securities as investors could readily sell their investments at auction. Auctions are held every 28 days. Following successful auctions in January 2008, all of our ARS have subsequently experienced failed auctions, as the amount of securities submitted for sale has exceeded the amount of purchase orders due to the liquidity issues experienced in the global credit and capital markets. The result of a failed auction is that these ARS continue to pay interest in accordance with their terms until the next successful auction; however, liquidity will be limited until there is a successful auction or until such time as other

markets for these ARS investments develop, unless an alternative liquidation opportunity is presented to the ARS holder. We performed a fair value calculation of our ARS as of December 31, 2008. Based upon the valuations performed, we concluded that the fair value of these ARS at December 31, 2008 was $18.0 million, a decline of $6.0 million from par value. As a result of the recent instability in the market for auction rate securities, there may be a future decline in the value of our auction rate securities. A further decline in the value of these securities that is not temporary could materially adversely affect our liquidity and income.

In November 2008, we accepted an offer from UBS AG, or UBS, with respect to all of our ARS held at the time of the agreement. Under our agreement with UBS, we received certain rights which entitle us to sell our ARS to UBS affiliates during the period from June 30, 2010 to July 20, 2012, for a price equal to par value. In accepting the offer, we granted UBS the authority to sell or auction the ARS at par at any time up until the expiration date of the offer and released UBS from any claims relating to the marketing and sale of ARS. UBS's obligations under the offer are not secured by its assets and do not require UBS to obtain any financing to support its performance obligations under the offer. UBS has disclaimed any assurance that it will have sufficient financial resources to satisfy its obligations under the offer. If UBS has insufficient funding to buy back the ARS and the auction process continues to fail, then we may incur further losses on the carrying value of the ARS.

Recent developments in the financial markets in the United States and elsewhere in the world may adversely affect our operating results and financial condition.

As widely reported, financial markets in the United States, Europe and Asia have been experiencing extreme disruption in recent months, including, among other things, extreme volatility in security prices, severely diminished liquidity and credit availability, rating downgrades of certain investments and declining valuations of others. Governments have taken unprecedented actions intended to address extreme market conditions that include severely restricted credit and declines in real estate values. While currently these conditions have not impaired our ability to access credit markets and finance operations, there can be no assurance that there will not be a further deterioration in financial markets and confidence in major economies. These economic developments affect businesses in a number of ways. The current tightening of credit in financial markets adversely affects the ability of our customers and suppliers to obtain financing for significant purchases and operations, and could result in a decrease in demand for our products and services. Our customers' ability to pay for our software solutions may also be impaired, which may lead to an increase in our allowance for doubtful accounts and write-offs of accounts receivable. Our global business is also adversely affected by decreases in the general level of economic activity, such as decreases in business and consumer spending. We are unable to predict the likely duration and severity of the current disruption in financial markets and adverse economic conditions in the United States and other countries. Should these economic conditions result in our not meeting our revenue growth objectives, our operating results and financial condition could be adversely affected.

Recently, the U.S. dollar has significantly strengthened against certain foreign currencies, including the euro and the British pound. Unless the U.S. dollar weakens from its current levels, this recent exchange rate fluctuation is expected to adversely impact our consolidated revenues, operating profit and net income. Additionally, the United States recently elected a new President and other government legislators. The economic and taxing policies of the new government may have an adverse impact on our future financial results. Until the new legislative agenda is finalized and enacted, it is not possible to determine the impact of such changes, if any.

The loss of one or more major customers could materially and adversely affect our results of operations and financial condition.

Our top five customers accounted for approximately 33% of our revenues during 2008. One customer, GlaxoSmithKline, accounted for approximately 12% of our total revenues for the same

period. The loss of any of our major customers could have a material adverse effect on our results of operations or financial condition. We may not be able to maintain our customer relationships, and our customers may delay performance under or fail to renew their agreements with us, which could adversely affect our results of operations or financial condition. Any reduction in the amount of revenue that we derive from these customers, without an offsetting increase in new sales to other customers, could have a material adverse effect on our operating results. A significant change in the liquidity or financial position of any of these customers could also have a material adverse effect on the collectability of our accounts receivables, our liquidity and our future operating results.

Our business could be seriously harmed by our dependence on a limited number of suppliers.

We depend upon a limited number of suppliers for specific components of our software products and hosted solutions. We may increase our dependence on certain suppliers as we continue to develop and enhance our software and service solutions. Our dependence on a limited number of suppliers leaves us vulnerable to having an inadequate supply of required components, services capacity, price increases, delayed supplier performance and poor component and services quality. For instance, we rely on Oracle Corporation to supply the database component of most of our software solutions and on SunGard Data Systems Inc. to provide server facilities for some of our hosting services. Oracle Corporation also offers a software package that is competitive with our products and services. If we are unable to obtain components for our software solutions from third-party suppliers in the quantities and of the quality that we need, on a timely basis or at acceptable prices, we may not be able to deliver our software products, services and hosted solutions on a timely or cost-effective basis to our customers, and our business, results of operations and financial condition could be seriously harmed. Moreover, delays or interruptions in our service, including without limitation delays or interruptions resulting from a change in suppliers, may reduce our revenues, cause customers to terminate their contracts and adversely affect our customer renewals. If these companies were to terminate their arrangements with us or we were otherwise required to find alternative suppliers to provide the required capacity and quality on a timely basis, sales of our products and services would be delayed. To qualify a new supplier and familiarize it with our products, quality standards and other requirements is a costly and time-consuming process. We cannot assure you that we would be able to establish alternative relationships on acceptable terms.

Interruptions or delays in service from our third-party providers could impair the delivery of our hosted solutions and other services and harm our business.

We host some of our software solutions and information technology systems at third-party facilities. Consequently, the occurrence of a natural disaster, technical or service lapses, other unanticipated problems at the facilities of our third-party providers or a combination of one or more of the foregoing factors could result in unanticipated interruptions in our customers' access to our hosted solutions or impair our access to our information technology systems. Our hosted services may also be subject to sabotage, intentional acts of malfeasance and similar misconduct due to the nature of the Internet. In the past, Internet users have occasionally experienced difficulties with Internet and online services due to system or security failures. We cannot assure you that our business interruption insurance will adequately compensate our customers or us for losses that may occur. Even if covered by insurance, any failure or breach of security of our systems could damage our reputation and cause us to lose customers. Further, certain of our hosted solutions are subject to service level agreements that guarantee up to 99% server availability. In the event that we fail to meet those levels, whether resulting from an interruption in service caused by our technology or that of a third-party provider, we could be subject to customer credits or termination of these customer contracts.

We may be required to spend substantial time and expense before we recognize a significant portion of the revenues, if any, attributable to our customer contracts.

The sales cycle for some of our software solutions frequently takes in excess of nine months from initial customer contact to contract execution. During this time, we may expend substantial time, effort and financial resources without realizing any revenues with respect to the potential sale. In addition, while we generally begin recognizing revenues upon the execution of our agreements for software term licenses and related services, it may be difficult for us to rapidly increase our revenues through additional sales in any period, as license revenues and, when applicable, related services revenues, from new customers are recognized over the applicable license term, typically one to five years. As a result, we may not recognize significant revenues, if any, from some customers despite incurring considerable expense related to our sales, implementation, and service delivery processes. Even if we do realize revenues from a contract, our term license model may keep us from recognizing a significant portion of these revenues (including revenues for related services) during the same period in which sales, implementation, and service delivery expenses were incurred. Timing differences of this nature could cause our service gross margins and profitability to fluctuate significantly from quarter to quarter. In addition, if we enter into an agreement with a customer that specifies or otherwise requires that we deliver a specific product or version that is not yet generally available, our term license pricing model may prevent us from recognizing a significant portion of the license and related service revenues under that contract until delivery of such specified product or version occurs. Accordingly, delays in product or version release dates, whether caused by factors such as unforeseen technology issues or otherwise, could further negatively impact the timing of our revenue under such contracts. Similarly, a decline in new or renewed software term licenses in any one quarter will not necessarily be fully reflected in the revenues in that quarter and may negatively affect our revenues in future quarters. This could also cause our operating results to fluctuate from quarter to quarter.

Failure of our technology and products could harm our business and operating results.

The technology underlying our software products and hosted solutions processes vast amounts of clinical and safety data. Customers relying on our products to collect, manage and report clinical and safety information, randomize patients, and manage inventory and clinical trial operations may have a greater sensitivity to product errors and security vulnerabilities than customers of software products in general. In the past, failures of our technology and human error have negatively impacted the data capture, management or reporting capabilities of our products, and new errors may be detected in the future. Any delay or failure of our technology may result in the disruption of our customers' clinical trial or safety evaluation and monitoring processes and could harm our business and operating results. Product or service errors, as well as any difficulties in introducing, installing and maintaining new products and versions or difficulties training customers and their staffs on the utilization of new products and versions, could materially and adversely affect our reputation, result in loss of revenue or delay in revenue recognition, result in significant costs to us and impair our ability to sell our products and services in the future. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins. In addition, security breaches, whether intentional or accidental, could expose us to a risk of loss of data, litigation and possible liability.

If we are unable to retain our personnel and hire additional skilled personnel, we may be unable to achieve our goals.

Our future success depends upon our ability to attract, train and retain highly skilled employees and contract workers, particularly our management team, sales and marketing personnel, professional services personnel and software engineers. Each of our executive officers and other employees could terminate his or her relationship with us at any time. The loss of any member of our management team might significantly delay or prevent the achievement of our business or development objectives and could materially harm our business. In addition, because of the technical nature of our software

products, services and hosted solutions and the dynamic market in which we compete, any failure to attract and retain qualified direct sales, professional services and product development personnel, as well as our contract workers, could have a material adverse affect on our ability to generate sales, successfully develop new software products, services and hosted solutions or software enhancements or deliver services and solutions as requested by our customers.

Our software products and hosted solutions are at varying stages of market acceptance and the failure of any of our products to achieve or maintain wide acceptance would harm our operating results.

We began offering our *InForm* electronic data capture software solution for clinical trials in December 1998. Although the *Clintrial* and *Empirica Trace* products were introduced over 10 years ago, we did not begin offering these products until after our acquisition of Clinsoft Corporation, or Clinsoft, in 2001. We only began offering our *Empirica Signal, CTSD* and *WebSDM* products after our August 2005 acquisition of Lincoln, our *LabPas* product after our October 2007 acquisition of Green Mountain and our *Clarix* solution after our September 2008 acquisition of Clarix. Continued use of our *InForm, Clintrial* and *Empirica Trace* software products, and broad and timely acceptance of our *Empirica Signal, CTSD, WebSDM, LabPas* and *Clarix* products, as well as integrated solutions combining one or more of our software products, is critical to our future success and is subject to a number of significant risks, some of which are outside our control. These risks include:

- our customers' and prospective customers' desire for and acceptance of our electronic data capture, data management, safety software, Phase I automation solutions and interactive response technologies;
- our ability to meet product development and release schedules;
- our software products and hosted solutions' ability to support large numbers of users and manage vast amounts of data;
- our customers' ability to use our software products and hosted solutions, train their employees and successfully deploy our technology in their clinical trial and safety evaluation and monitoring activities; and
- our ability to significantly expand our internal resources and increase our capital and operating expenses to support the anticipated growth and continued integration of our software products, services and hosted solutions.

Our failure to address, mitigate or manage these risks would seriously harm our business, particularly if the failure of any or all of our software products or hosted solutions to achieve market acceptance negatively affects our sales of our other products and services.

Failure to manage our rapid growth effectively could harm our business.

We have been experiencing a period of rapid growth as a result of personnel hiring and acquisitions that places a significant strain on our operational and financial resources and our personnel. For example, from January 1, 2005 to December 31, 2008, the number our employees increased from 361 to 718. We have also experienced rapid growth in the number of clinical trials we host, the number of customer relationships we manage and the number of end-users of our products. To manage our anticipated future growth effectively, we must continue to maintain and may need to enhance our information technology infrastructure, financial and accounting systems and controls and manage expanded operations in geographically distributed locations. We will also be required to attract, integrate, train and retain a significant number of qualified sales and marketing personnel, professional services personnel, software engineers and other management personnel. Our failure to manage our rapid growth effectively could have a material adverse effect on our business, operating results or financial condition.

Claims that we or our technologies infringe upon the intellectual property or other proprietary rights of a third party may require us to incur significant costs, to enter into royalty or licensing agreements or to develop or license substitute technology.

We have been, and may in the future be, subject to claims that our technologies infringe upon the intellectual property or other proprietary rights of a third party. For instance, in February 2006, we settled a lawsuit against us and one of our customers which alleged that we infringed a patent claimed to be owned by the plaintiffs. We incurred substantial professional fees in connection with this claim and agreed to make a one-time payment of $8.5 million in order to settle this litigation. In addition, the vendors who provide us with technology that we use in our technology could become subject to similar infringement claims. Although we believe that our software solutions do not infringe the patents or other intellectual property rights of any third party, we cannot assure you that our technology does not infringe patents or other intellectual property rights held or owned by others or that they will not in the future. Any future claims of infringement could cause us to incur substantial costs defending against the claim, even if the claim is without merit, and could distract our management from our business. Moreover, any settlement or adverse judgment resulting from the claim could require us to pay substantial amounts or obtain a license to continue to use the technology that is the subject of the claim, or otherwise restrict or prohibit our use of the technology. There can be no assurance that we would be able to obtain a license from the third party asserting the claim on commercially reasonable terms, if at all, that we would be able to successfully develop alternative technology on a timely basis, if at all, or that we would be able to obtain a license from another provider of suitable alternative technology to permit us to continue offering, and our customers to continue using, the applicable technology. In addition, we generally provide in our customer agreements that we will indemnify our customers against third-party infringement claims relating to our technology provided to the customer, which could obligate us to fund significant amounts. Infringement claims asserted against us or our vendors may have a material adverse effect on our business, results of operations or financial condition.

We may be unable to adequately protect, and we may incur significant costs in defending, our intellectual property and other proprietary rights.

Our success depends on our ability to protect our intellectual property and other proprietary rights. We rely upon a combination of trademark, trade secret, copyright, patent and unfair competition laws, as well as license agreements and other contractual provisions, to protect our intellectual property and other proprietary rights. In addition, we attempt to protect our intellectual property and proprietary information by requiring certain of our employees and consultants to enter into confidentiality, non-competition and assignment of inventions agreements. To the extent that our intellectual property and other proprietary rights are not adequately protected, third parties might gain access to our proprietary information, develop and market products or services similar to ours, or use trademarks similar to ours, each of which could materially harm our business. Existing U.S. federal and state intellectual property laws offer only limited protection. Moreover, the laws of other countries in which we market our software products, services and hosted solutions may afford little or no effective protection of our intellectual property. If we resort to legal proceedings to enforce our intellectual property rights or to determine the validity and scope of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail. The failure to adequately protect our intellectual property and other proprietary rights may have a material adverse effect on our business, results of operations or financial condition.

In the course of conducting our business, we possess or could be deemed to possess personal medical information in connection with the conduct of clinical trials, which if we fail to keep properly protected, could subject us to significant liability.

Our software solutions are used to collect, manage and report information in connection with the conduct of clinical trial and safety evaluation and monitoring activities. This information is or could be considered to be personal medical information of the clinical trial participants or patients. Regulation of the use and disclosure of personal medical information is complex and growing. Increased focus on individuals' rights to confidentiality of their personal information, including personal medical information, could lead to an increase of existing and future legislative or regulatory initiatives giving direct legal remedies to individuals, including rights to damages, against entities deemed responsible for not adequately securing such personal information. In addition, courts may look to regulatory standards in identifying or applying a common law theory of liability, whether or not that law affords a private right of action. Since we receive and process personal information of clinical trial participants and patients from customers utilizing our hosted solutions, there is a risk that we could be liable if there were a breach of any obligation to a protected person under contract, standard of practice or regulatory requirement. If we fail to properly protect this personal information that is in our possession or deemed to be in our possession, we could be subjected to significant liability.

We may not be able to obtain capital when desired on favorable terms, if at all, or without dilution to our stockholders.

We anticipate that our current cash and cash equivalents will be sufficient to meet our current needs for general corporate purposes for at least the next twelve months. However, we may need or desire additional financing to execute on our current or future business strategies, including to:

- acquire businesses or technologies;
- enhance our operating infrastructure;
- develop new or enhance existing software products, services and hosted solutions; or
- otherwise respond to competitive pressures.

If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we incur debt financing, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. We cannot assure you that additional financing will be available on terms favorable to us, or at all. In this regard, the availability of such financing may be adversely impacted by current economic conditions, including the effects of the recent disruptions to the credit and financial markets in the United States and worldwide. If adequate funds are not available or are not available on acceptable terms, when we desire them, our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our software products, services and hosted solutions, or otherwise respond to competitive pressures would be significantly limited.

We could incur substantial costs resulting from product liability claims relating to our products or services or our customers' use of our products or services.

Any failure or errors in a customer's clinical trial, post-approval or adverse event reporting obligations caused or allegedly caused by our products or services could result in a claim for substantial damages against us by our customers or the clinical trial participants, regardless of our responsibility for the failure. Although we are generally entitled to indemnification under our customer contracts against claims brought against us by third parties arising out of our customers' use of our products, we

might find ourselves entangled in lawsuits against us that, even if unsuccessful, divert our resources and energy and adversely affect our business. Further, in the event we seek indemnification from a customer, we cannot assure you that a court will enforce our indemnification right if challenged by the customer obligated to indemnify us or that the customer will be able to fund any amounts for indemnification owed to us. We also cannot assure you that our existing general liability insurance coverage will continue to be available on reasonable terms or will be available in amounts sufficient to cover one or more large claims, or that the insurer will not disclaim coverage as to any future claim.

We and our products and services could be subjected to governmental regulation, requiring us to incur significant compliance costs or to cease offering our products and services.

The clinical trial process and safety evaluation, monitoring and reporting activities are subject to extensive and strict regulation by the FDA, as well as other regulatory authorities worldwide. Our electronic data capture, management and safety products and services could be subjected to state, federal and foreign regulations. We cannot assure you that our products and service offerings will comply with applicable regulations and regulatory guidelines as they develop or as they may be applied in the future. If our products or services fail to comply with any applicable government regulations or guidelines, we could incur significant liability or be forced to cease offering our applicable products or services. Also, conforming our products and services to any applicable regulations and guidelines could substantially increase our operating expenses.

Risks Related to Our Industry

We operate in a highly competitive industry and if we are not able to compete effectively, our business and operating results will be harmed.

The market for our software products, services and hosted solutions is characterized by rapidly changing technologies, evolving industry standards and frequent new product and service introductions and enhancements that may render existing products and services obsolete. Accordingly, we are susceptible to rapid and significant declines in market share due to unforeseen changes in the features, functions or pricing of competing products. Barriers to entry are relatively low and, with the introduction of new technologies and new market entrants, we expect that competition will increase. Increased competition is likely to result in pricing pressures, which could negatively impact our sales, gross margins or market share. Our failure to compete effectively could materially adversely affect our business, financial condition or results of operations.

Some of our current competitors, as well as many of our potential competitors, have greater name recognition, longer operating histories and significantly greater resources. As a result, our competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, regulations and laws, or customer requirements. In addition, current and potential competitors have established, and may in the future establish, cooperative relationships with vendors of complementary products, technologies or services to increase the availability of their products to the marketplace. Accordingly, new competitors or alliances may emerge that have greater market share, larger customer bases, more widely adopted proprietary technologies, greater marketing expertise and larger sales forces than we have, which could put us at a competitive disadvantage. Further, in light of these advantages, even if our products and services are more effective than the product or service offerings of our competitors, current or potential customers might accept competitive products and services in lieu of purchasing our software products, services and hosted solutions. We cannot assure you that we can maintain or enhance our competitive position against current and future competitors.

We depend primarily on the pharmaceutical, biotechnology and medical device industries and are therefore subject to risks relating to changes in these industries.

Our business depends on the clinical trial, post-approval and safety evaluation and monitoring activities conducted or sponsored by pharmaceutical, biotechnology and medical device companies and other entities engaged in these activities. General economic downturns, increased consolidation or decreased competition in the industries in which these companies operate could result in fewer products under development or decreased pressure to accelerate product approval which, in turn, could materially adversely impact our revenues. Recent disruptions in the world credit and equity markets as well as the related failures of several large financial institutions may also result in a global downturn in spending on clinical trial, post-approval and safety evaluation and monitoring activities. Any significant downturn in demand and spending for such solutions could lead to increased pressure on us to reduce prices or offer reduced services, and could adversely affect our business, results of operations, and financial condition. The adverse effects of any sustained downturn in demand or spending may be exacerbated by our research and development investments, strategic investments and merger and acquisition activity, as well as customer service and support, which may continue at the same or greater spending levels despite any such downturn. Our operating results may also be adversely impacted by other developments that affect these industries generally, including:

- changes in general business conditions;
- the discovery of safety issues with approved products or products in clinical development;
- changes in the purchasing patterns of entities conducting clinical research and monitoring safety;
- changes in government regulation;
- the assertion of product liability claims;
- changes in governmental price controls or third-party reimbursement practices; and
- changes in medical practices.

In addition, any decrease in research and development expenditures or in the size, scope or frequency of clinical trial, post approval and safety evaluation and monitoring activities conducted or sponsored by pharmaceutical, biotechnology or medical device companies or other entities as a result of the foregoing or other factors could materially adversely affect our operations or financial condition.

Changing customer or prospective customer requirements could decrease the demand for our products and services, which would adversely affect our revenues and operating results.

Our future success will depend in large part on our ability to enhance and broaden our software products, services and hosted solutions to meet the evolving needs of our customers and prospective customers. To achieve our goals, we need to effectively respond to our customers' and prospective customers' needs, technological changes and new industry standards and developments in a timely manner. If we are unable to enhance our existing product and service offerings or develop or acquire new products and services to meet changing requirements, demand for our software products, services and hosted solutions could suffer and our revenues and operating results could be materially adversely affected. We could also incur substantial costs if we need to modify our products or services, or information technology infrastructure, to adapt to technological changes or new industry standards or developments.

Changes in regulations and regulatory guidance applicable to our customers or potential customers and the approval process for their products may result in our inability to continue to do business.

Demand for our software products, services and hosted solutions is largely a function of regulation and regulatory guidance associated with the approval and safety tracking of drugs, biological products

and medical devices imposed upon the clinical trial process and post-approval activities by the U.S. federal government and related regulatory authorities such as the U.S. Food and Drug Administration, or FDA, and by foreign governments. In recent years, efforts have been made to streamline the FDA approval process and coordinate U.S. standards with those of other developed countries. Any change in the scope of applicable regulations and regulatory guidance could alter the type or amount of clinical trial or safety evaluation and monitoring spending or negatively impact interest in our software products, services and hosted solutions. Any regulatory reform that limits or reduces the research and development or safety spending of our customers or potential customers upon which our business depends could have a material adverse effect on our revenues or gross margins.

In addition, any failure to conform our software products, services and hosted solutions to domestic or international changes in regulations and regulatory guidance applicable to our customers or potential customers and the approval process for their products may result in our inability to continue to do business. Changing our software products, services and hosted solutions to allow our customers to comply with future changes in regulation or regulatory guidance, either domestically or internationally, could cause us to incur substantial costs. We cannot assure you that our product and service offerings will allow our customers and potential customers to stay in compliance with regulations and regulatory guidance as they develop. If our product and service offerings fail to allow our customers and potential customers to operate in a manner that is compliant with applicable regulations and regulatory guidance, clinical trial sponsors and other entities engaged in clinical trial and safety evaluation and monitoring activities may be unwilling to use our software products, services and hosted solutions.

Consolidation among our clients could cause us to lose clients, decrease the market for our products and result in a reduction of our revenues.

Our customer base could decline because of consolidation, and we may not be able to expand sales of our products and services to new clients. Consolidation in the pharmaceutical, biotechnology and medical device industries and among CROs has increased in recent years, and this trend could continue in light of the global economic downturn. In addition, new companies or organizations that result from such consolidation may decide that our products and services are no longer needed because of their own internal processes or the use of alternative systems. As these entities consolidate, competition to provide products and services to industry participants will become more intense and the importance of establishing relationships with large industry participants will become greater. These industry participants may try to use their market power to negotiate price reductions for our products and services. Also, if consolidation of larger current customers occurs, the combined organization may represent a larger percentage of business for us and, as a result, we are likely to rely more significantly on the combined organization's revenues to continue to achieve growth.

If entities engaged in clinical trials do not shift from traditional paper-based methods of collecting clinical trial data to electronic system, we may not achieve the market penetration necessary to maintain profitability.

If entities engaged in clinical trials are unwilling to use our electronic data capture solutions or to change the way of collecting clinical trial data, our future growth and market share may be limited. Approximately one-half of all clinical trials started annually rely on pre-printed paper case report forms for data collection. Our efforts to establish an electronic process to capture clinical trial data are a significant departure from the traditional paper-based methods of collecting clinical trial data. As is typical for new and rapidly evolving industries, customer demand for recently-introduced technology is highly uncertain. We may not be successful in persuading entities engaged in clinical trials to change the manner in which they have traditionally collected clinical trial data and to accept our software products, services and hosted solutions. If we fail to convince entities engaged in clinical trials to use our electronic data capture solutions over traditional methods, our revenues may be limited and we may fail to maintain profitability.

Risks Related to our Common Stock

The market price and trading volume of our common stock may be volatile, which could result in substantial losses for investors purchasing shares in the public markets and subject us to securities class action litigation. The current market price of our common stock may not be indicative of future market prices and we may be unable to sustain or increase the value of an investment in our common stock.

The trading price of our common stock may fluctuate significantly and, accordingly, may not be indicative of future trading prices and we may be unable to sustain or increase the value of an investment in our common stock. Some of the factors that may cause the market price of our common stock to fluctuate include:

- changes in general economic, industry and market conditions;
- changes in estimates of our financial results or recommendations by securities analysts;
- financial results that are below estimate of such results;
- investors' general perception of us;
- changes in market valuations of similar companies;
- period-to-period fluctuations in our financial results or those of companies that are perceived to be similar to us;
- announcements by us or our competitors of significant products, contracts, acquisitions or strategic alliances;
- success of competitive products and technologies;
- changes in industry analyst recommendations;
- future issuances of securities or the incurrence of debt by us, or other changes in our capital structure;
- the failure of any of our software products, services and hosted solutions to achieve or maintain commercial success;
- regulatory developments in the United States and foreign countries;
- additions or departures of key personnel; and
- litigation involving our company or our general industry or both.

In addition, the stock market in general, and the NASDAQ Stock Market and the market for technology companies in particular, have recently experienced extreme price and volume fluctuations that may have been unrelated or disproportionate to the operating performance of the listed companies. There have been dramatic fluctuations in the market prices of securities of technology companies such as us. These price fluctuations may be rapid and severe and may leave investors little time to react. Broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. Sharp drops in the market price of our common stock expose us to securities class-action litigation. Such litigation could result in substantial expenses and a diversion of management's attention and resources, which would seriously harm our business, financial condition, and results of operations.

Sales of large blocks of our common stock could cause the market price of our common stock to drop significantly, even if our business is doing well.

Some stockholders may acquire or own large blocks of shares of 5% or more of our outstanding capital. We cannot predict the effect that public sales of these shares or the availability of these shares for sale will have on the market price of our common stock, if any. If our stockholders, and particularly our directors and officers, sell substantial amounts of our common stock in the public market, or if the

public perceives that such sales could occur, this could have an adverse impact on the market price of our common stock, even if there is no relationship between such sales and the performance of our business.

In the future, we may also issue additional shares to our employees, directors or consultants, in connection with corporate alliances or acquisitions, and issue additional shares in follow-on offerings to raise additional capital. Due to these factors, sales of a substantial number of shares of our common stock in the public market could occur at any time. Such sales could reduce the market price of our common stock.

Delaware law and our corporate documents may prevent or frustrate a change in control or a change in management that stockholders believe is desirable.

Provisions of our certificate of incorporation and bylaws and Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include:

- limitations on the removal of directors;
- advance notice requirements for stockholder proposals and nominations;
- the inability of stockholders to act by written consent or to call special meetings; and
- the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval, which could be used to institute a stockholders rights plan, or a poison pill, that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our board of directors.

The affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote is necessary to amend or repeal the above provisions of our certificate of incorporation. In addition, absent approval of our board of directors, our bylaws may only be amended or repealed by the affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote.

In addition, Section 203 of the Delaware General Corporation Law prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions could limit the price that investors might be willing to pay in the future for shares of our common stock.

Item 1B. ***Unresolved Staff Comments***

As of the date of the filing of this Annual Report, there were no unresolved comments regarding our periodic or current reports from the staff of the Securities and Exchange Commission that were issued 180 days or more preceding the end of our 2008 fiscal year.

Item 2. ***Properties***

Our corporate headquarters are located at 77 Fourth Avenue, Waltham, Massachusetts, where we lease approximately 165,129 square feet. The term of the lease expires in 2019, subject to extension under certain conditions for up to two additional five-year terms. We also lease 14,960 square feet of office space in Maidenhead, England for our European headquarters under a lease that expires in May 2012, and we lease smaller offices for our regional locations and individual offices in various locations

to accommodate field sales personnel. We believe these facilities and additional or alternative space available to us will be adequate to meet our needs for the foreseeable future.

Item 3. ***Legal Proceedings***

From time to time and in the ordinary course of business, we are subject to various claims, charges and litigation. Although the outcome of litigation cannot be predicted with certainty and some lawsuits, claims or proceedings may be disposed of unfavorably to us, we do not believe that we are currently a party to any material legal proceedings.

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

No matters were submitted to a vote of security holders in the quarter ended December 31, 2008.

PART II

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

Stock Market Information

Our common stock is traded on the NASDAQ Global Select Market under the symbol PFWD. Prior to January 2, 2009 our common stock was traded on the NASDAQ Global Market. The following table sets forth the high and low sales prices as quoted on the NASDAQ Global Market for the periods indicated, as adjusted to the nearest cent. These over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

	Common Stock Price			
	2008		2007	
	High	Low	High	Low
First quarter	$22.24	$14.33	$15.83	$12.29
Second quarter	19.61	15.90	16.89	13.00
Third quarter	22.99	17.20	20.37	16.15
Fourth quarter	21.17	9.01	25.32	18.30

On February 23, 2009 the last reported sale price of our common stock on The NASDAQ Global Select Market was $14.51 per share.

Holders

As of February 23, 2009 there were approximately 157 stockholders of record of our common stock based on the records of our transfer agent.

Dividends

We currently intend to retain any earnings to fund the operation, development, and expansion of our business. We have not paid any cash dividends on our capital stock in the last two fiscal years and do not currently anticipate paying any cash dividends on our capital stock in the foreseeable future.

Issuer Purchases of Equity Securities

Under the terms of our 2004 Stock Option and Incentive Plan, or 2004 Plan, we have issued shares of restricted stock to our employees. On the date that these restricted shares vest, we withhold, via a net exercise provision pursuant to our applicable restricted stock agreements and the 2004 Plan, the number of vested shares (based on the closing price of our common stock on such vesting date) equal to tax withholdings required by us. The shares withheld from the grantees to settle their tax liability are reallocated to the number of shares available for issuance under the 2004 Plan. For the three months

ended December 31, 2008, we withheld an aggregate of 11,907 common shares under restricted stock awards at a price of $14.14 per share.

Equity Compensation Plan Information

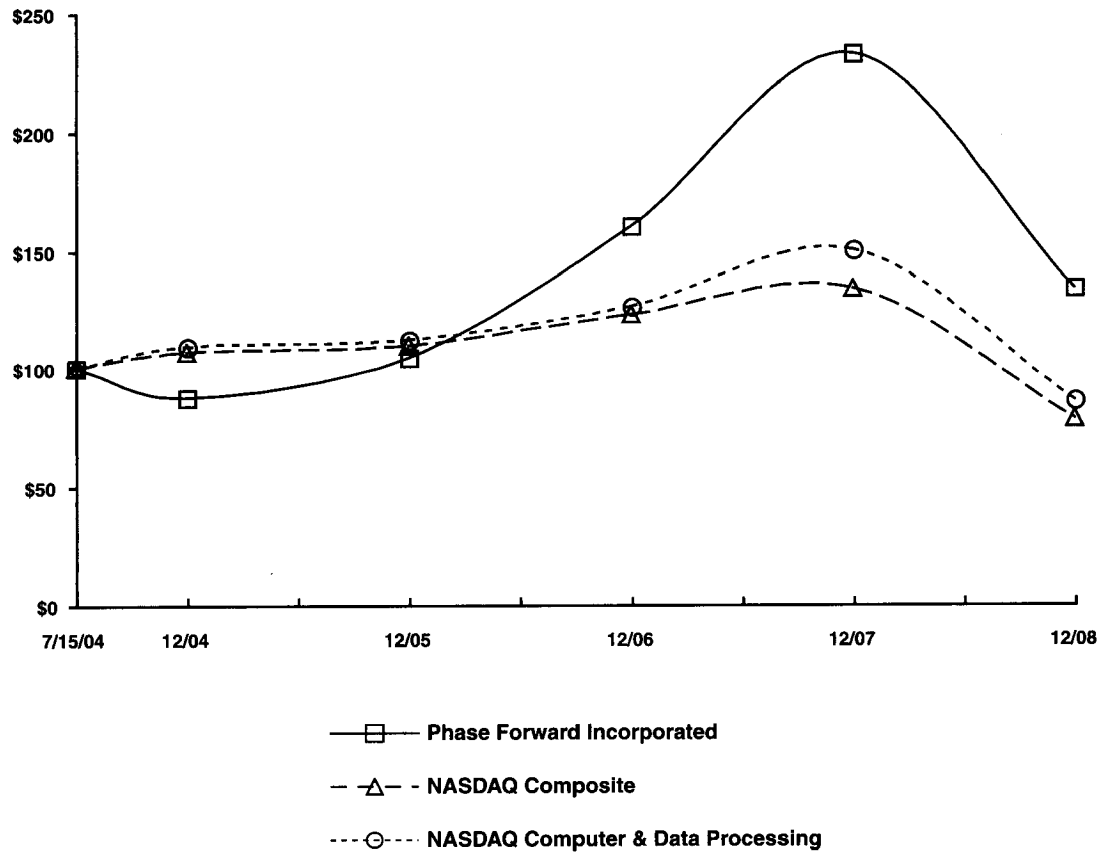
See Part III, Item 12 for information regarding securities authorized for issuance under our equity compensation plans.

Stock Performance Graph

The information contained in the performance graph shall not be deemed to be "soliciting material" or to be "filed" with the SEC, and such information shall not be incorporated by reference into any future filing under the Securities Act or Exchange Act, except to the extent that Phase Forward specifically incorporates it by reference into such filing.

The following graph sets forth the total cumulative stockholder return on our common stock since our common stock began trading on the NASDAQ Global Market on July 15, 2004 as compared to the NASDAQ Composite Index and the NASDAQ Computer & Data Processing Stocks Index. This graph assumes a $100 investment in Phase Forward common stock at the $9.35 per share closing price on July 15, 2004. Historical stock performance is not necessarily indicative of future price performance.

COMPARISON OF 54 MONTH CUMULATIVE TOTAL RETURN*
Among Phase Forward Incorporated, The NASDAQ Composite Index
And The NASDAQ Computer & Data Processing Index



* $100 invested on 7/15/04 in stock or on 6/30/04 in index-including reinvestment of dividends. Fiscal year ending December 31.

Item 6. ***Selected Financial Data***

SELECTED CONSOLIDATED FINANCIAL DATA
(in thousands, except per share data)

The selected historical financial data set forth below as of December 31, 2007 and 2008 and for the years ended December 31, 2006, 2007 and 2008 are derived from our audited consolidated financial statements, which are included elsewhere in this Annual Report. The selected historical financial data set forth below as of December 31, 2004, 2005 and 2006 and for the years ended December 31, 2004 and 2005 are derived from audited consolidated financial statements, which are not included in this Annual Report.

The following selected consolidated financial data should be read in conjunction with our consolidated financial statements, the related notes and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" included elsewhere in this Annual Report. The historical results are not necessarily indicative of the results to be expected for any future period.

	Year Ended December 31,				
	2004	2005(1)	2006	2007(6)	2008(7)
Consolidated Statement of Operations:					
Revenues:					
License	$28,180	$35,001	$ 40,893	$ 48,784	$ 52,704
Service	45,550	52,080	65,720	85,505	117,480
Total revenues	73,730	87,081	106,613	134,289	170,184
Cost of revenues:					
License(3)	1,875	2,513	2,698	2,361	2,715
Service(2), (3)	27,782	31,224	38,663	53,098	70,225
Total cost of revenues	29,657	33,737	41,361	55,459	72,940
Gross margin:					
License	26,305	32,488	38,195	46,423	49,989
Service	17,768	20,856	27,057	32,407	47,255
Total gross margin	44,073	53,344	65,252	78,830	97,244
Operating expenses:					
Sales and marketing(2), (3)	14,403	16,033	21,158	25,209	28,021
Research and development(2), (3)	12,423	14,330	16,621	20,116	25,500
General and administrative(2), (3)	13,246	14,836	18,174	20,220	26,821
Litigation settlement	—	8,500	—	—	—
Lease exit costs	(168)	(92)	—	—	527
In-process research and development	—	—	—	300	—
Total operating expenses	39,904	53,607	55,953	65,845	80,869
Income (loss) from operations	4,169	(263)	9,299	12,985	16,375
Other income (expense):					
Interest income	518	1,735	2,848	7,081	5,863
Interest expense	(394)	(143)	—	—	—
Other income (expense)	(32)	(157)	(19)	(35)	(1,039)
Total other income	92	1,435	2,829	7,046	4,824
Income before provision for (benefit from) income taxes	4,261	1,172	12,128	20,031	21,199
Provision for (benefit from) income taxes	2,392	(2,169)	(221)	(9,170)	7,354
Net income	1,869	3,341	12,349	29,201	13,845
Accretion of preferred stock and dividend declared	8,953	—	—	—	—
Net (loss) income applicable to common stockholders	$(7,084)	$ 3,341	$ 12,349	$ 29,201	$ 13,845
Net (loss) income per share applicable to common stockholders:					
Basic(4)	$ (0.43)	$ 0.10	$ 0.36	$ 0.76	$ 0.33
Diluted(4)	$ (0.43)	$ 0.10	$ 0.35	$ 0.72	$ 0.32
Weighted average number of common shares used in computing per share amounts:					
Basic(4)	16,447	33,026	34,104	38,642	42,092
Diluted(4)	16,447	35,092	35,737	40,739	43,942

	As of December 31,				
	2004	2005(1)	2006	2007(6)	2008(7)
Consolidated Balance Sheet Data:					
Unrestricted cash, cash equivalents, short-term and long-term investments	$ 58,220	$ 60,586	$ 69,635	$182,622	$177,465
Working capital, net of deferred revenue(5)	67,734	71,282	91,708	194,272	193,284
Total assets	115,250	139,944	160,651	305,869	367,890
Total deferred revenue	36,352	46,494	50,655	67,130	88,518
Debt, net of current portion	1,849	—	—	—	—
Accumulated deficit	(104,386)	(101,045)	(88,696)	(59,495)	(45,650)
Total stockholders' (deficit) equity	59,247	66,717	88,021	216,437	237,673

(1) On August 25, 2005, we acquired all of the outstanding capital stock of Lincoln Technologies, Inc. ("Lincoln"), which was accounted for as a purchase under SFAS No. 141, *Business Combinations*. Accordingly, the results of Lincoln have been included in the accompanying consolidated financial statements since the date of acquisition. The Lincoln acquisition is further described in Note 3 of the notes to our 2008 consolidated financial statements contained in this Annual Report.

(2) Cost of revenues and operating expenses include stock-based compensation expense, as follows:

	Year Ended December 31,				
	2004	2005	2006	2007	2008
Cost of service revenues	$ 105	$ 60	$ 258	$ 702	$1,618
Sales and marketing	141	30	502	1,061	1,377
Research and development	312	166	394	813	1,182
General and administrative	1,553	351	1,868	3,002	4,168

(3) Cost of revenues and operating expenses include amortization of intangible assets, as follows:

	Year Ended December 31,				
	2004	2005	2006	2007	2008
Cost of license revenues	$ —	$113	$ 360	$ 403	$ 792
Cost of service revenues	—	—	—	—	61
Sales and marketing	—	—	510	464	693
Research and development	—	127	—	—	—
General and administrative	—	67	—	—	34

(4) For information regarding the computation of per share amounts refer to Note 2 of the notes to our 2008 consolidated financial statements contained in this Annual Report.

(5) Working capital consists of current assets less current liabilities, net of deferred revenue.

(6) On October 30, 2007, we acquired all of the outstanding capital stock of Green Mountain Logic, Inc. ("Green Mountain"), which was accounted for as a purchase under SFAS No. 141. Accordingly, the results of Green Mountain have been included in the accompanying consolidated financial statements since the date of acquisition. The Green Mountain acquisition is further described in Note 3 of the notes to our 2008 consolidated financial statements contained in this Annual Report.

(7) On September 5, 2008, we acquired all of the outstanding membership interests of Clarix LLC ("Clarix"), which was accounted for as a purchase under SFAS No. 141. Accordingly, the results of Clarix have been included in the accompanying consolidated financial statements since the date of acquisition. The Clarix acquisition is further described in Note 3 of the notes to our 2008 consolidated financial statements contained in this Annual Report.

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

The information contained in this section has been derived from our consolidated financial statements and should be read together with our consolidated financial statements and related notes included elsewhere in this Annual Report.

Overview

Phase Forward Incorporated is a provider of integrated enterprise-level software products, services and hosted solutions for use in our customers' global clinical trial and drug safety monitoring activities. Our customers include pharmaceutical, biotechnology and medical device companies, as well as academic institutions, governmental regulatory agencies, contract research organizations, or CROs, and other entities engaged in clinical trial and drug safety monitoring activities. By automating essential elements of the clinical trial and drug safety monitoring processes, we believe our products allow our customers to accelerate the market introduction of new medical therapies and corresponding revenues, reduce overall research and development expenditures, enhance existing data quality control efforts, increase drug safety compliance and reduce clinical and economic risk.

Fiscal Year

Our fiscal year ends on December 31. Reference to 2008, for example, refers to the fiscal year ended December 31, 2008.

Acquisitions

From time to time we have expanded our product and service offerings through the acquisition of other businesses or technologies. These transactions include the acquisitions of Clinsoft Corporation, or Clinsoft, in 2001, Lincoln Technologies, Inc., or Lincoln, in 2005 and the more recent acquisitions of Green Mountain Logic, Inc., or Green Mountain, and Clarix LLC, or Clarix, which are described below.

Clarix

On September 5, 2008, we acquired all of the outstanding membership interests of Clarix, a provider of Web-integrated interactive response technology, or IRT, for clinical trial management. Clarix's Web-integrated IRT is used for subject randomization, predictive medication inventory management, and operational management in reporting clinical trials. The aggregate purchase price was $41.3 million. The acquisition of Clarix was accounted for as a purchase under Statement of Financial Accounting Standards, or SFAS, No. 141, *Business Combinations*. Accordingly, the results of Clarix have been included in our consolidated financial statements since the date of acquisition.

Green Mountain Logic

On October 30, 2007, we acquired all of the outstanding capital stock of Green Mountain Logic, Inc., or Green Mountain, a process automation software company that provides targeted solutions for the life sciences industry, including the *LabPas* Phase I clinic automation software. The acquired technology and products of Green Mountain provide us with a solution targeted for Phase I clinical trials. The aggregate purchase price was $5.4 million. The acquisition of Green Mountain was accounted for as a purchase under SFAS No. 141. Accordingly, the results of Green Mountain have been included in our consolidated financial statements since the date of acquisition.

Litigation Settlement

In February, 2006, we entered into a Settlement Agreement and related License Agreement with Dr. Mark L. Kozam d/b/a MLK Software and Datasci, LLC. The Settlement Agreement relates to a

lawsuit filed by Datasci in 2004 alleging that certain of our products and services and certain products and services of one of our customers, Quintiles, Inc., infringe a United States patent claimed to be owned by Datasci. Under the Settlement Agreement and related License Agreement, we agreed to make a one-time, lump-sum payment to Datasci in the amount of $8.5 million to settle the claim and obtain a perpetual, irrevocable, fully paid worldwide, non-exclusive license to the patent that was the subject of the claim by Datasci. The confidential settlement, in which neither party admits liability, provides for mutual releases and dismissal of all actions between the parties.

Pursuant to SFAS No. 142, *Goodwill and Other Intangible Assets*, we reviewed the attributes of the license obtained and estimated that the license obtained had no value or useful life and that the license would not contribute to our future cash flows, either directly or indirectly. In addition we do not anticipate changing any of our products as a result of the license to this patent. As such, the settlement amount was recorded as a charge to operations. Since the contingency existed as of December 31, 2005 and the settlement was concluded prior to the issuance of our 2005 audited consolidated financial statements, in accordance with SFAS No. 5, *Accounting for Contingencies,* we recorded the impact of the settlement in 2005 as a charge to operations. The settlement was paid during the first quarter of 2006.

Sources of Revenues

We derive our revenues from software licenses and services. Our product line is comprised of four general categories that include the following software products:

- *Electronic Data Capture (EDC)*
  - *InForm,* our Internet-based electronic data capture solution for collection and transmission of patient information in clinical trials; and
  - *LabPas*, our system for Phase I clinic automation.
- *Clinical Data Management*
  - *Clintrial*, our clinical data management solution; and
  - *WebSDM*, our system for validating and reviewing clinical trial data represented in formats meeting industry standards, such as those established by the Clinical Data Interchange Standards Consortium, or CDISC.
- *Drug Safety*
  - *Empirica Trace*, our adverse event management solution for monitoring drug safety and reporting adverse events that occur during and after conclusion of the clinical trial process;
  - *Empirica Signal*, our data mining and signal detection solution for post-marketing data; and
  - *CTSD*, our signal detection solution for data from clinical trials.
- *Interactive Response Technology (IRT)*
  - *Clarix*, our Web-integrated interactive response technology.

License revenues are derived principally from the sale of term licenses for our software products other than *Clarix,* which is presently available only on a hosted application basis. Service revenues are derived principally from our delivery of the hosted solution of our *InForm, Clarix, Empirica Signal, CTSD* and *WebSDM* software products, and consulting services and customer support, including training, for all of our products. We generally recognize revenues ratably over the life of a license or service contract.

Our backlog consists of the total future value of our customer contracts, whether billed or unbilled. Revenues for a future period are a function of a portion of the beginning backlog, new customer

contracts and renewals. Although we do not believe that total backlog is useful to predict revenues in a given period, we do monitor and utilize the amount that is expected to convert to revenues over the next twelve months. As of December 31, 2006 and December 31, 2007, these amounts were approximately $99 million and $126 million, respectively. As of December 31, 2008, we expect between $155 million and $160 million of our total backlog to be recognized as revenues in 2009.

One customer, GlaxoSmithKline, accounted for approximately 18%, 15% and 12% of our total revenues in the years 2006, 2007 and 2008, respectively, and $2.6 million, $1.8 million and $863,000 of accounts receivable outstanding as of December 31, 2006, 2007 and 2008, respectively. Our top 20 customers accounted for approximately 68%, 65% and 62% of our total revenues, net of reimbursable out-of-pocket expenses, in the years 2006, 2007 and 2008, respectively.

License Revenues

We derive our license revenues principally from the sale of term licenses for the following software products: *InForm*, our Internet-based electronic data capture, or EDC, solution; *Clintrial* and *WebSDM*, our clinical data management solutions; our drug safety solutions, including our *Empirica Trace*, *Empirica Signal* and *CTSD* products; and our *LabPas* Phase I clinic automation solution. Although each of our software solutions is available as a stand-alone enterprise application, we offer integrated enterprise solutions incorporating certain of our electronic data capture, data management and drug safety products.

License revenues for our *InForm* electronic data capture software solution, either on a stand-alone or integrated basis, are determined primarily by the number, complexity and duration of the clinical trials and the number of participants in each clinical trial. License revenues for our *Clintrial, WebSDM, Empirica Trace, Empirica Signal, CTSD* and *LabPas* software solutions are determined primarily by the number of users accessing the software solution. Except as discussed below, we enter into software license agreements for our *InForm, Clintrial* and *Empirica Trace* products with terms generally of three to five years with payment terms generally annually in advance. License agreements for our other licensed products are generally annual or multi-year with payment terms generally annually in advance. License revenues are recognized ratably over the duration of the software term license agreement, to the extent that amounts are fixed or determinable and collectable.

Following our acquisition of Clinsoft in August 2001, we began converting holders of Clinsoft perpetual software licenses to our software term license arrangements. We continue to sell additional perpetual licenses of these products in certain situations to our existing customers with the option to purchase customer support, and may in the future do so for new customers based on customer requirements or market conditions. We recognize revenues on the perpetual licenses upon delivery of the software when all other revenue recognition criteria are met. We continue to provide and charge for maintenance and support on our products to those customers who do not convert to our software term license arrangements. We will continue our efforts to convert the remaining former Clinsoft customer base to software term license arrangements. However, we anticipate that some customers will not convert and instead will continue to make annual customer support payments.

Service Revenues

Application Hosting Services. In addition to making our software products other than *Clarix* available to customers through licenses, we offer our *InForm, Empirica Signal, CTSD* and *WebSDM* software as hosted application solutions delivered through a standard Web-browser, with customer support and training services. Our *Clarix* solution is presently available only on a hosted application basis. Service revenues from application hosting services are derived principally from our *InForm* hosted solution.

Revenues resulting from the *InForm* hosting services consist of three stages for each clinical trial:

- *First stage*—trial and application set up, including design of electronic case report forms and edit checks, installation and server configuration of the system;
- *Second stage*—application hosting and related support services; and
- *Third stage*—services required to close out, or lock, the database for the clinical trial.

Revenues resulting from the *Clarix* hosting service also consist of three stages for each clinical trial:

- *First stage*—trial and application set up, including design and set up of the subject randomization and medication inventory management, installation and server configuration of the system;
- *Second stage*—application hosting and related support services; and
- *Third stage*—services required to close out the clinical trial.

Services provided for the first and third stages of both *InForm* and *Clarix* are provided on a fixed fee basis depending upon the complexity of the trial and system requirements. Services for the second stage are charged separately as a fixed monthly fee. We recognize revenues from all stages of the hosting service ratably over the hosting period. Fees charged and costs incurred for the trial system design, set up and implementation are deferred until the start of the hosting period and are amortized and recognized ratably over the estimated hosting period. The deferred costs include direct costs related to the trial and application set up. Fees for the first and third stages of the services are billed based upon milestones. Fees for application hosting and related services in the second stage are generally billed quarterly in advance. Bundled into this revenue element are the revenues attributable to the software license used by the customer.

In the event that an application hosting customer cancels a clinical trial and its related statement of work, all deferred revenues are recognized and all deferred set up costs are expensed. In addition, certain termination-related fees may be charged and if so, such fees are recognized in the period of termination.

Revenues resulting from hosting services for our *Empirica Signal*, *CTSD* and *WebSDM* products consist of installation and server configuration, application hosting and related support services. Services for these offerings are charged monthly as a fixed fee. Revenues are recognized ratably over the period of the service.

In addition, application hosting service revenues include hosting services associated with term license customers and reimbursable out-of-pocket expenses.

Consulting Services. Consulting services include the design and documentation of the processes related to our customers' use of our products and services in their clinical trials and safety monitoring activities. Consulting services also include project planning and management services, guidance on best practices in using our software products, data management and configuration services for data mining and reporting, as well as implementation services consisting of application architecture design, systems integration, installation and validation. Consulting services can be sold on a stand-alone basis or as part of a bundled arrangement. In some circumstances, we sell additional follow on consulting services to a customer at a later date even if the customer purchased consulting services at the time of the initial license purchase under a bundled arrangement. Revenues from consulting services included in either a multiple element software license agreement or in an application hosting agreement are recognized ratably over the term of the arrangement. The value of our consulting services sold within a bundled arrangement is equal to the value of consulting services sold on a stand-alone basis, as the activities performed under both types of arrangements are similar in nature. The associated costs are expensed as incurred. We may also enter into arrangements to provide consulting services separate from a license arrangement. In these situations, revenue is recognized in accordance with the American Institute of

Certified Public Accountants, or AICPA, Statement of Position, or SOP, No. 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts,* on either a time and materials basis or using the proportional performance method. If we are not able to produce reasonably dependable estimates, revenue is recognized upon completion of the project and final acceptance from the customer. If significant uncertainties exist about project completion or receipt of payment, the revenue is deferred until the uncertainty is resolved. Provisions for estimated losses on contracts are recorded during the period in which they are resolved. Provisions for estimated losses on contracts are recorded during the period in which they are identified.

Customer Support. We have a multinational services organization to support our software products and hosted solutions worldwide. Customer support includes multilingual training services, telephone support and software maintenance. We bundle customer support in our software term licenses and allocate 10% of the value of the license to customer support revenues. The customer support services rate of 10% for multi-year term-based licenses reflects a significant discount from the rate for customer support services associated with perpetual licenses due to the reduction in the time period during which the customer can utilize the upgrades and enhancements. We believe this rate is substantive and represents an amount we believe reasonable to be allocated. Our customer support revenues also consist of customer support fees paid by perpetual license customers. Customer support revenues are recognized ratably over the period of the customer support or term license agreement, with payment terms generally annually in advance.

Cost of Revenues and Operating Expenses

We allocate overhead expenses such as rent and occupancy charges and employee benefit costs to all departments based on headcount. As such, general overhead expenses are reflected in cost of service revenues and in the sales and marketing, research and development, and general and administrative expense categories.

Cost of Revenues. Cost of license revenues consists primarily of the amortization of royalties paid for certain modules within our *Clintrial* software product as well as our *InForm* software product. In addition, costs of revenues include expense for the amortization of acquired technologies associated with the acquisitions of Lincoln and Green Mountain. The cost of license revenues vary based upon the mix of revenues from software licenses for our products. We operate our service organization on a global basis as one distinct unit, and do not segment costs for our various service revenue elements. These services include performing application hosting, consulting and customer support services. Costs for these services consist primarily of employee-related costs associated with these services, amortization of the deferred clinical trial set up costs, allocated overhead, outside contractors, royalties associated with providing customer support for use with the *Clintrial* and *InForm* software products and reimbursable out-of-pocket expenses. Cost of services also includes hosting costs that primarily consist of hosting facility fees and server depreciation and amortization of acquired technologies associated with the acquisition of Clarix.

The cost of service revenues vary based upon the number of employees in the service organization, the type of work performed, and royalties associated with revenues derived from providing customer support, as well as costs associated with the flexible use of outside contractors to support internal resources. We supplement the trial design and set up activity for our *InForm* application hosting services through the use of outside contractors. This allows us to utilize outside contractors in those periods where trial design and set up activity is highest while reducing the use of outside contractors in those periods where trial activity lessens, allowing for a more flexible delivery model. The percentage of the services workforce represented by outside contractors varies from period to period depending on the volume of specific support required. The cost of service revenues is significantly higher as a percentage of revenues as compared to our cost of license revenues primarily due to the employee-related and outside contractor expenses associated with providing services.

Gross Margin. Our gross margin on license revenues varies based on the mix of royalty- and non-royalty-bearing license revenues and the amount of amortization of acquired technologies. Our gross margin on service revenues varies primarily due to variations in the utilization levels of the professional service team and the timing of expense and revenue recognition under our service arrangements. In situations where the service revenues are recognized ratably over the software license term, our costs associated with delivery of the services are recognized as the services are performed, which is typically during the first 6 to 12 months of the contract period. Accordingly, our gross margin on service revenues will vary significantly over the life of a contract due to the timing, amount and type of service required in delivering certain projects. In addition, consolidated gross margin will vary depending upon the mix of license and service revenues.

Sales and Marketing. Sales and marketing expenses consist primarily of employee-related expenses, including travel, marketing programs which include product marketing expenses such as trade shows, workshops and seminars, corporate communications, other brand building and advertising, allocated overhead and the amortization of commissions. In addition, sales and marketing include expense for the amortization of acquired technologies associated with the acquisition of Lincoln. We expect that sales and marketing expenses will continue to increase in absolute dollars as commission expense increases with our revenues and as we continue to expand sales coverage and to build brand awareness through what we believe are the most cost effective channels available, but may fluctuate quarter over quarter due to the timing of marketing programs.

Research and Development. Research and development expenses consist primarily of employee-related expenses, allocated overhead and outside contractors. We focus our research and development efforts on increasing the functionality, performance and integration of our software products. We expect that in the future, research and development expenses will increase in absolute dollars as we continue to add features and functionality to our products, introduce additional integrated software solutions to our product suite and expand our product and service offering.

General and Administrative. General and administrative expenses consist primarily of employee-related expenses, professional fees, primarily consisting of expenses for accounting, compliance with the Sarbanes-Oxley Act of 2002, and legal services, including litigation, information technology and other corporate expenses and allocated overhead. We expect that in the future our general and administrative expenses will increase in absolute dollars as we add personnel and incur additional costs related to the growth of our business and operations.

Lease Exit Costs. Lease exit costs were $527,000 in 2008 resulting from the relocation of our corporate headquarters in December 2008. These costs include approximately $429,000 relating to the estimated future obligation under the non-cancelable lease, which expires in February 2009, for our prior headquarters location and approximately $98,000 of write-offs of related abandoned leasehold improvements and fixed assets associated with the prior lease.

In-process Research and Development. In-process research and development expense represents product development efforts that were under way at Green Mountain at the time of acquisition for which technological feasibility had not yet been established. Technological feasibility is established when either of the following criteria is met: (1) detailed program design has been completed, documented and traced to product specifications and its high-risk development issues have been resolved; or (2) a working model of the product has been finished and determined to be complete and consistent with the product design. As of the date of the acquisition, Green Mountain had not completed product designs or working models for the in-process technology, and we determined that there was no future alternative use for the technologies beyond the stated purpose of the specific research and development projects. The fair value of the in-process research and development effort was, therefore, expensed at the time of the acquisition. The estimated fair market value was determined using a discounted cash flow model, based on a discount rate which took into consideration the nature of the expected product

to be developed, history of successful new product introduction, and the project's relatively short development time. Key assumptions used in the in-process research and development valuation consisted of the expected completion date for the in-process project, revenue and expense projections assuming future release of the product, and a risk-adjusted discount rate.

Stock-Based Compensation Expenses. Our cost of service revenues, sales and marketing, research and development, and general and administrative expenses include stock-based compensation expense. Stock-based compensation expense is the fair value of outstanding stock options and restricted stock awards and units, which are recognized over the respective stock option and award or unit service periods. It also includes amortization of the excess of the deemed fair market value over the exercise price of stock options granted prior to when we became a public company. During 2006, 2007 and 2008, we recorded $3.0 million, $5.6 million and $8.3 million of aggregate stock-based compensation expense, respectively.

Foreign Currency Translation

With regard to our international operations, we frequently enter into transactions in currencies other than the U.S. dollar. As a result, our revenues, expenses and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the euro, British pound, Australian dollar, Indian rupee, Japanese yen and Romanian leu. In 2006, 2007 and 2008, approximately 49%, 49% and 44%, respectively, of our revenues were generated in locations outside the United States. During the same periods, 37%, 35% and 31%, respectively, of our revenues were in currencies other than the U.S. dollar, as are many of the associated expenses. In periods when the U.S. dollar declines in value as compared to the foreign currencies in which we conduct business, our foreign currency-based revenues and expenses generally increase in value when translated into U.S. dollars.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, 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 periods. On an ongoing basis, we evaluate our estimates and assumptions with our audit committee, including those related to revenue recognition, deferred set up costs, commissions and royalties, accounts receivable reserves, stock-based compensation expense, long-lived assets, intangibles assets and goodwill, income taxes, lease exit costs, contingencies and litigation. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about • the carrying values of assets and liabilities that are not readily apparent from other sources. There have been no material changes to these estimates for the periods presented in this Annual Report. Our actual results may differ from these estimates under different assumptions or conditions.

We believe that of our significant accounting policies, which are described in Note 2 of the notes to our 2008 consolidated financial statements included in this Annual Report, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations.

Revenue Recognition and Deferred Set Up Costs. We recognize software license revenues in accordance with SOP No. 97-2, *Software Revenue Recognition,* as amended, issued by the AICPA, while revenues resulting from application services are recognized in accordance with Emerging Issues Task Force, or EITF, Issue No. 00-3, *Application of AICPA Statement of Position 97-2 to Arrangements that Include the Right to Use Software Stored on Another Entity's Hardware*, the Securities and Exchange Commission, or SEC, Staff Accounting Bulletin, or SAB, No. 104, *Revenue Recognition*, and EITF Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables.*

Customers generally have the ability to terminate application hosting, consulting and training service agreements upon 30 days notice. License agreements, multiple element arrangements, including license and services agreements and certain application hosting services can generally be terminated by either party for material breach of obligations not corrected within 30 days after notice of the breach.

We recognize revenues when all of the following conditions are satisfied: (1) there is persuasive evidence of an arrangement; (2) the product or service has been provided to the customer; (3) the collection of our fees is probable; and (4) the amount of fees to be paid by the customer is fixed or determinable.

We generally enter into software term licenses for our *InForm*, *Clintrial* and *Empirica Trace* products with our customers for 3- to 5-year periods. License agreements for our *Empirica Signal*, *CTSD* and *WebSDM* products are generally annual or multi-year terms. We do not license our *Clarix* product, which is presently offered only on a hosted application basis. These arrangements typically include multiple elements: software license, consulting services and customer support. We bill our customers in accordance with the terms of the underlying contract. Generally, we bill license fees annually in advance for each year of the license term. Our payment terms are generally net 30 days.

Our software license revenues are earned from the sale of off-the-shelf software requiring no significant modification or customization subsequent to delivery to the customer. Consulting services, which can also be performed by third-party consultants, are deemed to be non-essential to the functionality of the software and typically are for trial configuration, implementation planning, loading of software, building simple interfaces and running test data and documentation of procedures.

Customer support includes training services, telephone support and software maintenance. We generally bundle customer support with the software license for the entire term of the arrangement. As a result, we generally recognize revenues for all elements, including consulting services, ratably over the term of the software license and support arrangement. We allocate the revenues recognized for these arrangements to the different elements based on management's estimate of the relative fair value of each element. For our term-based licenses, we allocate to consulting services the anticipated service effort and value throughout the term of the arrangement at an amount that would have been allocated had those services been sold separately to the customer. The value of our consulting services sold within a bundled arrangement is equal to the value of consulting services sold on a stand-alone basis, as the activities performed under both types of arrangements are similar in nature. The remaining value is allocated to license and support services, with 10% of this amount allocated to support services. The customer support services rate of 10% for multi-year term-based licenses reflects a significant discount from the rate for customer support services associated with perpetual licenses due to the reduction in the time period during which the customer can utilize the upgrades and enhancements. We believe this rate is substantive and represents a reasonable basis of allocation. We have allocated the estimated fair value to our multiple element arrangements to provide meaningful disclosures about each of our revenue streams. The costs associated with the consulting and customer support services are expensed as incurred. There are instances in which we sell software licenses based on usage levels. These software licenses can be based on estimated usage, in which case the license fee charged to the customer is fixed based on this estimate. When the fee is fixed, the revenues are generally recognized ratably over the contractual term of the arrangement. If the fee is based on actual usage, and therefore variable, the revenues are recognized in the period of use. Revenues from certain follow-on consulting services, which are sold separately to customers with existing software licenses and are not considered part of a multiple element arrangement, are recognized as the services are performed.

We continue to sell additional perpetual licenses for the *Clintrial* and *Empirica Trace* software products in certain situations to our existing customers with the option to purchase customer support and may in the future do so for new customers based on customer requirements or market conditions. We have established vendor specific objective evidence of fair value for the customer support. Accordingly, license revenues are recognized upon delivery of the software and when all other revenue

recognition criteria are met. Customer support revenues are recognized ratably over the term of the underlying support arrangement. We continue to generate customer support and maintenance revenues from our perpetual license customer base. Training revenues are recognized as earned.

In addition to making our software products other than *Clarix* available to customers through licenses, we offer our *InForm, Empirica Signal, CTSD* and *WebSDM* software solutions through a hosted application solution delivered through a standard Web-browser. Our *Clarix* solution is presently available only on a hosted application basis.

Revenues resulting from *InForm* and *Clarix* application hosting services consist of three stages for each clinical trial: the first stage involves application set up, including design, implementation of the system and server configuration; the second stage involves application hosting and related support services; and the third stage involves services required to close out the clinical trial. Services provided for the first and third stages are provided on a fixed fee basis based upon the complexity of the trial and system requirements. Services for the second stage are charged separately as a fixed monthly fee. We recognize revenues from all stages of the *InForm* and *Clarix* hosting service ratably over the hosting period. Fees charged and costs incurred for the trial system design, set up and implementation are deferred as applicable, until the start of the hosting period and then amortized and recognized, as applicable, ratably over the estimated hosting period. The deferred costs include incremental direct costs with third parties and certain internal direct costs related to the trial and application set up, as defined under SFAS No. 91, *Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Indirect Costs of Leases*. These costs include salary and benefits associated with direct labor costs incurred during trial set up, as well as third-party subcontract fees and other contract labor costs. Work performed outside the original scope of work is contracted for separately as an additional fee and is generally recognized ratably over the remaining term of the hosting period. Fees for the first and third stages of the services are billed based upon milestones. Fees for application hosting and related services in the second stage are billed quarterly in advance. Bundled into this revenue element are the revenues attributable to the software license used by the customer.

Revenues resulting from hosting services for our *Empirica Signal, CTSD* and *WebSDM* products consist of installation and server configuration, application hosting and related support services. Services for this offering are charged monthly as a fixed fee. Revenues are recognized ratably over the period of the service.

In the event that an application hosting customer cancels a clinical trial and its related statement of work, all deferred revenues are recognized and all deferred set up costs are expensed. In addition, certain termination related fees may be charged and if so, such fees are recognized in the period of termination. Provisions for estimated losses on uncompleted contracts are made on a contract-by-contract basis and are recognized in the period in which such losses become probable and can be reasonably estimated. To date, we have not experienced any material losses on uncompleted application hosting contracts.

We deferred $2.7 million, $3.4 million and $4.5 million of set up costs and amortized $2.1 million, $2.7 million and $3.9 million of set up costs in 2006, 2007 and 2008, respectively. The amortization of deferred set up costs is a component of cost of services.

We may also enter into arrangements to provide consulting services separate from a license arrangement. In these situations, revenue is recognized in accordance with SOP No. 81-1 on either a time and materials basis or using the proportional performance method. If we are not able to produce reasonably dependable estimates, revenue is recognized upon completion of the project and final acceptance from the customer. If significant uncertainties exist about project completion or receipt of payment, the revenue is deferred until the uncertainty is resolved. Provisions for estimated losses on contracts are recorded during the period in which they are identified.

Deferred revenues represent amounts billed or cash received in advance of revenue recognition.

Accounting for Prepaid Sales Commissions and Royalties. For arrangements where we recognize revenue over the relevant contract period, we defer related commission payments to our direct sales force and software license royalties paid to third parties and amortize these amounts over the same period that the related revenues are recognized. This is done to better match commission and royalty expenses with the related revenues. Commission payments are nonrefundable unless amounts due from a customer are determined to be uncollectible or if the customer subsequently changes or terminates the level of service, in which case commissions which were paid are recoverable by us. We deferred $6.4 million, $9.4 million and $9.4 million of commissions and amortized to sales and marketing expense $5.4 million, $7.5 million and $8.6 million in 2006, 2007 and 2008, respectively. Royalties are paid on a percentage of billings basis for certain of our products, and we have the right to recover royalties in the event an arrangement is cancelled. We deferred $2.3 million, $2.5 million and $2.6 million of royalties and amortized to cost of revenues $3.1 million, $2.6 million and $2.7 million in 2006, 2007 and 2008, respectively.

Accounts Receivable Reserve. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We regularly evaluate the collectability of our trade receivables based on a combination of factors, which may include dialogue with the customer to determine the cause of non-payment, the use of collection agencies, and/or the use of litigation. In the event it is determined that the customer may not be able to meet its full obligation to us, we record a specific allowance to reduce the related receivable to the amount that we expect to recover given all information available to us. We continuously monitor collections from our customers and maintain a provision for estimated credit losses based upon our historical experience and any specific customer collection issues that we have identified. While such credit losses have historically been within our expectations and the provisions established, we cannot guarantee that we will continue to experience the same credit loss rates in the future. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Our accounts receivable reserves were $384,000, $270,000 and $578,000 as of December 31, 2006, 2007 and 2008, respectively.

Accounting for Income Taxes. We are subject to income taxes in both the United States and foreign jurisdictions, and we use estimates in determining our provision for income taxes. We account for income taxes in accordance with SFAS No. 109, *Accounting for Income Taxes*, which is the asset and liability method for accounting and reporting for income taxes. We adopted the provisions of FASB Interpretation No., or FIN, 48, *Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement No. 109* on January 1, 2007. Under SFAS No. 109, deferred tax assets and liabilities are recognized based on temporary differences between the financial reporting and income tax bases of assets and liabilities using statutory rates. This process requires that we project our current tax liability and estimate our deferred tax assets and liabilities, including net operating loss and tax credit carryforwards. In assessing the need for a valuation allowance, we have considered our recent operating results, future taxable income projections and all prudent and feasible tax planning strategies.

Accounting for Stock-Based Awards. On January 1, 2006, we adopted the provisions of SFAS No. 123(R), *Share-based Payment*, which requires us to recognize expense related to the fair value of stock-based compensation awards. We elected to use the modified prospective transition method as permitted by SFAS No. 123(R) and therefore have not restated our financial results for prior periods. Under this transition method, stock-based compensation expense includes compensation expense for all stock-based compensation awards granted on or after March 15, 2004 (the filing date for the initial registration statement for our initial public offering), based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R).

Stock options granted prior to March 15, 2004 are minimum value options pursuant to SFAS No. 123, *Accounting for Stock-Based Compensation*. Under the provisions of SFAS No. 123(R), the value of these options will not be recorded in the statement of income subsequent to the date of our

adoption of SFAS No. 123(R). Instead, we will continue to account for these options using Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations.

For service-based options, accounted for under SFAS No. 123(R), we recognize compensation expense on a straight-line basis over the requisite service period of the award. For performance-based options, we recognize expense over the estimated performance period. In addition, SFAS 123(R) requires the benefits of tax deductions in excess of recognized stock-based compensation to be reported as a financing activity rather than an operating activity in the statements of cash flows. This requirement can have the effect of reducing our net operating cash flows and increasing our net financing cash flows in certain periods. To date, we have not recorded these benefits as they have not been realized.

Effective with the adoption of SFAS No. 123(R), we use the Black-Scholes option pricing model to determine the weighted average fair value of options granted. See Note 2 of the notes to our 2008 consolidated financial statements included in this Annual Report for further discussion.

During 2006, 2007 and 2008, we recorded $3.0 million, $5.6 million and $8.3 million of aggregate stock-based compensation expense, respectively, of which $2.6 million, $5.4 million and $8.3 million, respectively, was a result of the adoption of SFAS No. 123(R). The remaining stock-based compensation expense is due to the amortization of stock-based compensation associated with previously issued stock options which amounted to $387,000, $136,000 and $0 in 2006, 2007 and 2008, respectively. As of December 31, 2008, we had $22.8 million of unrecognized stock-based compensation expense related to stock and stock-based awards that we expect to recognize over a weighted average period of 3.0 years.

Other Significant Estimates

Goodwill and Intangible Assets Impairment. We review the carrying value of goodwill and intangible assets periodically based upon the expected future discounted operating cash flows of our business. Our cash flow estimates are based on historical results adjusted to reflect our best estimate of our operating results in future periods. Actual results may differ materially from these estimates. The timing and size of impairment charges, if any, involves the application of management's judgment regarding the estimates and could significantly affect our operating results.

Overview of Results of Operations for the Years Ended December 31, 2007 and 2008

Total revenues increased by 27%, or $35.9 million, in 2008 compared to the same period in 2007 primarily due to an increase in total service revenues of 37%, or $32.0 million, and to a lesser extent, an increase in license revenues of 8%, or $3.9 million.

Our gross margin increased by 23%, or $18.4 million, in 2008 compared to the same period in 2007, primarily due to the increase in service revenues. Services gross margin increased $14.8 million, or 46%, due to increased revenues and increased efficiencies in the service organization. In addition, gross license margin increased $3.6 million, or 8%.

Operating income in 2008 of $16.4 million increased by $3.4 million, or 26%, compared to the same period in 2007. Operating income for 2007 and 2008 included $5.6 million and $8.3 million of stock-based compensation expense, respectively.

The results of 2008 compared to 2007 were impacted by foreign exchange rate fluctuations, resulting in an increase in revenue of approximately $2.5 million, or 2% of revenues, and a decrease in expense of approximately $530,000, or less than 1% of expenses.

As of December 31, 2008, we had $159.4 million of unrestricted cash, cash equivalents and short-term investments, an increase of $871,000 from $158.6 million at December 31, 2007. In addition,

as of December 31, 2008, we had $18.0 million in long-term investments and $5.3 million in long-term assets associated with a securities settlement agreement with UBS AG. In September, 2008, we acquired Clarix for an aggregate purchase price of $41.3 million. As of December 31, 2008, we had no outstanding debt.

Revenues

	Year Ended December 31,					
	2007		2008		Change	
Revenues by Product Line(1)	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
			(in thousands)			
Electronic data capture	$ 96,997	72%	$128,466	75%	$31,469	32%
Clinical data management	21,199	16	23,086	14	1,887	9
Safety	16,093	12	16,786	10	693	4
Interactive response technology	—	—	1,846	1	1,846	NM*
Total	$134,289	100%	$170,184	100%	$35,895	27%

(1) Revenues by Product Line include product license revenues and product-related service revenues.

* Not meaningful

The increase in electronic data capture revenues in 2008 is primarily due to increases in application hosting services and license revenues of $31.1 million and $2.7 million, respectively, compared to the same period in 2007. These increases are partially offset by decreases in both consulting services and customer support, totaling $2.2 million. The increase in clinical data management revenues can be attributed to an increase in license revenues and consulting services revenues of $1.2 million and $769,000, respectively. The increase in safety revenues is primarily due to increases in application hosting services and customer support of $318,000 and $239,000, respectively. The inclusion of interactive response technology revenues in 2008 is due to the introduction of a new offering following the acquisition of Clarix on September 5, 2008.

	Year Ended December 31,					
	2007		2008		Change	
Revenues by Type	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
			(in thousands)			
License	$ 48,784	36%	$ 52,704	31%	$ 3,920	8%
Application hosting services	57,563	43	90,784	53	33,221	58
Consulting services	13,346	10	13,904	8	558	4
Customer support	14,596	11	12,792	8	(1,804)	(12)
Total	$134,289	100%	$170,184	100%	$35,895	27%

Total revenues increased in 2008 as compared to the same period in 2007, primarily due to increases in application hosting services and license revenues. The increase in 2008 revenues associated with our application hosting services was due to a 19% increase in *InForm* production trials under management from 770 at the end of 2007 to 920 at the end of 2008, which includes both *InForm* application hosting services trials as well as trials hosted for our electronic data capture license customers. The increase in *InForm* production trials is primarily from customers who purchase all trial-related services from us and who do not have a separate license to *InForm*, as well as an increase in the average fee per trial. Our application hosting services also increased due to the impact of additional trials under management as a result of our recent acquisition of Clarix. The decrease in customer

support revenues in 2008 was due primarily to decreases in both training services and software support revenues related to electronic data capture, primarily *InForm*. Our revenues were not significantly impacted by price increases or decreases. Inflation had only a nominal impact on our revenues

	Year Ended December 31,					
	2007		2008		Change	
Revenues by Geography	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
			(in thousands)			
United States	$ 68,283	51%	$ 94,555	56%	$26,272	38%
United Kingdom	46,575	35	51,417	30	4,842	10
France	11,901	9	15,099	9	3,198	27
Asia Pacific	7,530	5	9,113	5	1,583	21
International subtotal	66,006	49	75,629	44	9,623	15
Total	$134,289	100%	$170,184	100%	$35,895	27%

The increase in revenues worldwide was primarily due to an increase in application hosting service and license revenues. The increase in U.S. revenues is primarily related to additional application hosting services as well as an increase in electronic data capture and clinical data management license revenues. The growth in international revenues is primarily related to additional application hosting services as well as an increase in consulting revenues related to clinical data management, electronic data capture and safety revenues.

Cost of Revenues

	Year Ended December 31,					
	2007		2008		Change	
Costs of Revenues	Amount	Percentage of Related Revenues	Amount	Percentage of Related Revenues	Amount	%
			(in thousands)			
License	$ 2,361	5%	$ 2,715	5%	$ 354	15%
Services	53,098	62	70,225	60	17,127	32
Total	$55,459	41%	$72,940	43%	$17,481	32%

The costs of license revenues increased in 2008 primarily due to a $389,000 increase in amortization of intangible assets. The increase in cost of services in 2008 was primarily due to increases in employee-related and outside contractor expenses of $7.6 million and $4.5 million, respectively, associated with a headcount increase of 138 people, of which 66 came from the Clarix acquisition, and the delivery of increased services revenues. We also had expense increases for depreciation, stock-based compensation, and hosting facility fees of $2.0 million, $916,000 and $900,000, respectively. Other cost of services expense increased in 2008 by approximately $900,000, including facilities, telephone and royalty expenses.

Gross Margin

Gross Margin	Year Ended December 31, 2007 Amount	2007 Percentage of Related Revenues	2008 Amount	2008 Percentage of Related Revenues	Change Amount	Change %
			(in thousands)			
License	$46,423	95%	$49,989	95%	$ 3,566	8%
Services	32,407	38	47,255	40	14,848	46
Total	$78,830	59%	$97,244	57%	$18,414	23%

The license gross margin percentage was unchanged in 2008 as compared to 2007 at 95% of related revenues as expenses grew proportionately with revenues. The services gross margin percentage increased during 2008 due to lower services expenses as a percentage of related revenues. This was due to increased efficiencies resulting in a decrease in services expense per services employee. The overall gross margin percentage decreased in 2008 due to the decline in license revenue as a percentage of total revenues, which was partially offset by the higher services gross margin percentage. It is likely that gross margin, as a percentage of revenue, will fluctuate quarter by quarter due to the timing and mix of license and service revenues, and the type, amount and timing of service required in delivering certain projects.

Operating Expenses

Operating Expenses	Year Ended December 31, 2007 Amount	2007 Percentage of Revenues	2008 Amount	2008 Percentage of Revenues	Change Amount	Change %
			(in thousands)			
Sales and marketing	$25,209	19%	$28,021	16%	$ 2,812	11%
Research and development	20,116	15	25,500	15	5,384	27
General and administrative	20,220	15	26,821	16	6,601	33
In-process research and development	300	—	—	—	(300)	NM*
Lease exit costs	—	—	527	—	527	NM*
Total	$65,845	49%	$80,869	47%	$15,024	23%

* Not meaningful.

Sales and Marketing. Sales and marketing expenses increased in 2008 primarily due to a $1.2 million increase in commission expense related to an increase in orders and revenues, as well as an increase of $676,000 in employee-related expenses associated with a headcount increase of 11 people. We also experienced increases in stock-based compensation expense of $316,000, amortization expense of $229,000 and recruiting, travel and outside contractor expenses of approximately $267,000. We expect that our sales and marketing expense will continue to increase in absolute dollars as commission expense increases with our revenues and as we continue to expand sales coverage and to build brand awareness through what we believe are the most cost effective channels available. We expect that such increases may fluctuate, however, due to the timing of marketing programs.

Research and Development. Research and development expenses increased in 2008 primarily due to employee-related expenses of $2.8 million associated with a headcount increase of 24 people. There were also expense increases for outside contractors and stock-based compensation expense and facilities, recruiting and depreciation expense of $1.4 million, $369,000 and $507,000, respectively. We expect that our research and development costs will continue to increase in absolute dollars as we continue to add features and functionality to our products, introduce additional integrated software solutions to our product suite and expand our product and service offerings.

General and Administrative. General and administrative expenses increased in 2008 primarily due to an increase in employee-related expenses of $2.6 million and stock-based compensation expense of $1.2 million, related to a headcount increase of 36 people as well as an increase in bonuses. In addition, there were also increases in depreciation expense, professional expense, computer-related and bad debt expense of $735,000, $498,000, $388,000 and $247,000, respectively. Computer-related expenses include hardware and software support agreements as well as computer accessories. Furthermore, there were increases in other general and administrative expenses including recruiting, outside contractors expense, travel and facilities expenses of $714,000. We expect that in the future our general and administrative expenses will increase in absolute dollars as we add personnel and incur additional costs related to the growth of our business and operations.

Lease Exit Costs. Lease exit costs were $527,000 in 2008, resulting from the relocation of our corporate headquarters from 880 Winter Street to 77 Fourth Avenue in Waltham, Massachusetts. These costs include approximately $429,000 relating to the estimated future obligation under the prior non-cancelable lease and approximately $98,000 of write-offs for related abandoned leasehold improvements and fixed assets associated with the lease for our prior headquarters.

In-Process Research and Development. In-process research and development expenses were $300,000 in 2007, resulting from the 2007 acquisition of Green Mountain. In-process research and development expense represents product development efforts that were under way at Green Mountain at the time of acquisition for which technological feasibility had not yet been established. There were no in-process research and development expenses resulting from the acquisition of Clarix in 2008.

Operating Income

	Year Ended December 31,					
	2007		2008		Change	
	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
	(in thousands)					
Operating income	$12,985	10%	$16,375	10%	$3,390	26%

The increase in operating income in 2008 was due to an increase in gross margin, partially offset by an increase in operating expenses.

Other Income (Expense)

	Year Ended December 31,					
	2007		2008		Change	
	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
	(in thousands)					
Other income (expense):						
Interest income	$7,081	5%	$ 5,863	3%	$(1,218)	(17)%
Other expense	(35)	—	(1,039)	—	(1,004)	NM*
Total other income	$7,046	5%	$ 4,824	3%	$(2,222)	(29)%

* Not meaningful.

The decrease in interest income in 2008 was primarily due to a decrease in interest rates. The increase in other expense is primarily attributable to a net $706,000 loss associated with the $6.0 million impairment loss on our auction rate securities, offset by a $5.3 million gain recorded on the securities

settlement agreement. In addition, we had foreign exchange losses associated with exchange rate fluctuations.

(Benefit from) Provision for Income Taxes

	Year Ended December 31,					
	2007		2008		Change	
	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
	(in thousands)					
(Benefit from) provision for income taxes	$(9,170)	(7)%	$7,354	4%	$16,524	NM*

* Not meaningful.

The effective tax rate for 2008 increased to 35% compared to an effective tax rate benefit of 46% for 2007. In 2007, we determined that it was more likely than not that we would realize the full value of our remaining deferred tax asset and therefore reduced the valuation allowance by $22.7 million. The benefit of the release in valuation allowance was realized through reductions to income tax expense of $16.5 million which resulted in an 80% benefit to the effective tax rate and to goodwill of $6.1 million. See Note 6 of the notes to our 2008 consolidated financial statements contained in this Annual Report for further discussion.

Overview of Results of Operations for the Years Ended December 31, 2006 and 2007

Total revenues increased by 26% or $27.7 million in 2007 compared to the same period in 2006 primarily due to an increase in total service revenues of 30% and license revenues of 19%.

Our gross margin increased by 21%, or $13.6 million, in 2007 compared to the same period in 2006, primarily due to the increase in revenues.

Operating income in 2007 of $13.0 million increased by $3.7 million, or 40%, compared to the same period in 2006. Operating income for 2006 and 2007 included $3.0 million and $5.6 million of stock-based compensation expense, respectively.

The results for 2007 were impacted by foreign exchange rate fluctuations, resulting in increases in both revenue and expenses for the period of 3%.

Revenues

	Year Ended December 31,					
	2006		2007		Change	
Revenues by Product Line(1)	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
	(in thousands)					
Electronic data capture	$ 72,300	68%	$ 96,997	72%	$24,697	34%
Clinical data management	22,179	21	21,199	16	(980)	(4)
Safety	12,134	11	16,093	12	3,959	33
Total	$106,613	100%	$134,289	100%	$27,676	26%

(1) Revenues by Product Line include product license revenues and product-related service revenues.

The increase in electronic data capture revenues is primarily due to increases in application hosting services and license revenues of $15.8 million and $5.4 million, respectively. In addition, we had increases in both consulting services and customer support revenues, totaling $3.4 million. The increase

in safety revenues can be attributed to an increase in license revenues and consulting services revenues of $2.8 million and $926,000, respectively. These increases are partially offset by decreases in clinical data management customer support and consulting services revenues, totaling $639,000.

	Year Ended December 31,					
	2006		2007		Change	
Revenues by Type	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
			(in thousands)			
License	$ 40,893	38%	$ 48,784	36%	$ 7,891	19%
Application hosting services	41,596	39	57,563	43	15,967	38
Consulting services	11,357	11	13,346	10	1,989	18
Customer support	12,767	12	14,596	11	1,829	14
Total	$106,613	100%	$134,289	100%	$27,676	26%

Total revenues increased in 2007 as compared to the same period in 2006, primarily due to increases in application hosting and license revenues. The increase in revenues associated with our application hosting services in 2007 was primarily due to an approximately 26% increase in production trials under management from approximately 610 at the end of 2006 to approximately 770 at the end of 2007, which includes both application hosting services trials as well as trials hosted for our electronic data capture license customers. The increase in license, consulting and customer support revenues were primarily the result of additional revenue from electronic data capture and safety products, which grew across all applicable revenue categories and resulted from both new and existing customers. Our revenues were not significantly impacted by price increases or decreases. Inflation had only a nominal impact on our revenues. Revenues were impacted by foreign exchange rate fluctuations, resulting in an increase in revenues for the period of 3%.

	Year Ended December 31,					
	2006		2007		Change	
Revenues by Geography	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
			(in thousands)			
United States	$ 54,490	51%	$ 68,283	51%	$13,793	25%
United Kingdom	35,195	33	46,575	35	11,380	32
France	10,300	10	11,901	9	1,601	16
Asia Pacific	6,628	6	7,530	5	902	14
International subtotal	52,123	49	66,006	49	13,883	27
Total	$106,613	100%	$134,289	100%	$27,676	26%

The increase in revenues worldwide was primarily due to an increase in application hosting service and license revenues. The increase in U.S. revenues is primarily related to additional application hosting services as well as an increase in electronic data capture and safety license revenues. The growth in international revenues is primarily related to additional application hosting services as well as an increase in license revenues relating to all of our products.

Cost of Revenues

Costs of Revenues	Year Ended December 31, 2006 Amount	2006 Percentage of Related Revenues	2007 Amount	2007 Percentage of Related Revenues	Change Amount	Change %
			(in thousands)			
License	$ 2,698	7%	$ 2,361	5%	$ (337)	(12)%
Services	38,663	59	53,098	62	14,435	37
Total	$41,361	39%	$55,459	41%	$14,098	34%

The costs of license revenues decreased in 2007 primarily due to a $491,000 decrease in the cost of royalties associated with our electronic data capture software product. The increase in cost of services in 2007 was primarily due to increases in employee-related and contractor expenses of $5.9 million and $3.7 million, respectively, associated with a headcount increase of 46 people and the delivery of increased services revenues. We also had expense increases for depreciation, computer-related, and facilities of $1.3 million, $953,000 and $623,000, respectively. Computer-related expenses include hardware and software support agreements as well as computer accessories. In addition, there were also increases in stock-based compensation, telephone and recruiting expense of $444,000, $427,000 and $406,000, respectively.

Gross Margin

Gross Margin	Year Ended December 31, 2006 Amount	2006 Percentage of Related Revenues	2007 Amount	2007 Percentage of Related Revenues	Change Amount	Change %
			(in thousands)			
License	$38,195	93%	$46,423	95%	$ 8,228	22%
Services	27,057	41	32,407	38	5,350	20
Total	$65,252	61%	$78,830	59%	$13,578	21%

The license gross margin percentage increased in 2007 due to a decrease in royalty expense primarily relating to our electronic data capture software. The services gross margin percentage decreased during 2007 as our expense increases outpaced our revenue growth. These expense increases were due to investments we made to enhance our ability to manage additional current and future application service provider related business. The overall gross margin percentage decreased in 2007 due to the decline in license revenue as a percentage of total revenues and the lower services gross margin percentage.

Operating Expenses

Operating Expenses	Year Ended December 31, 2006 Amount	2006 Percentage of Revenues	2007 Amount	2007 Percentage of Revenues	Change Amount	Change %
			(in thousands)			
Sales and marketing	$21,158	20%	$25,209	19%	$4,051	19%
Research and development	16,621	16	20,116	15	3,495	21
General and administrative	18,174	17	20,220	15	2,046	11
In-process research and development	—	—	300	—	300	NM*
Total	$55,953	53%	$65,845	49%	$9,892	18%

* Not meaningful.

Sales and Marketing. Sales and marketing expenses increased in 2007 primarily due to a $2.0 million increase in commission expense related to an increase in orders and revenues and in the effective commission rate, as well as due to a $559,000 increase in stock-based compensation expense. We also experienced increases in employee related expenses of $540,000 and in travel of $482,000. In addition, there were increases in marketing programs and outside contractor expense of $164,000 and $119,000, respectively.

Research and Development. Research and development expenses increased in 2007 primarily due to employee-related expenses of $1.7 million associated with a headcount increase of 11 people. There were also expense increases for outside contractors and stock -based compensation expense of $863,000 and $419,000, respectively. Further, there were increases in depreciation and facilities expense of $323,000 and $171,000, respectively.

General and Administrative. General and administrative expenses increased in 2007 primarily due to an increase in stock-based compensation expense of $1.1 million and employee-related expenses of $807,000 related to a headcount increase of 3 people as well as an increase in bonuses. In addition, there were also expense increases in taxes and fees, computer-related expense, depreciation expense, and employee development expenses of $195,000, $167,000, $154,000 and $165,000, respectively. Computer-related expenses include hardware and software support agreements as well as computer accessories. These expense increases were partially offset by an overall decrease in professional fees of $592,000, which included $430,000 of expense related to an acquisition opportunity that was evaluated in 2006, but which we did not pursue, as well as a decrease in bad debt expense of $149,000.

In-Process Research and Development. In-process research and development expenses were $300,000 in 2007, resulting from the 2007 acquisition of Green Mountain. In-process research and development expense represents product development efforts that were under way at Green Mountain at the time of acquisition for which technological feasibility had not yet been established. Technological feasibility is established when either of the following criteria is met: (1) detailed program design has been completed, documented and traced to product specifications and its high-risk development issues have been resolved; or (2) a working model of the product has been finished and determined to be complete and consistent with the product design. As of the date of the acquisition, Green Mountain had not completed product designs or working models for the in-process technology, and we determined that there was no future alternative use for the technologies beyond the stated purpose of the specific research and development projects. The fair value of the in-process research and development effort was, therefore, expensed at the time of the acquisition.

Operating Income

	Year Ended December 31,					
	2006		2007		Change	
	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
	(in thousands)					
Operating income	$9,299	9%	$12,985	10%	$3,686	40%

The increase in operating income in 2007 was primarily due to an increase in revenues, as well as the reduction in operating expenses as a percentage of revenues.

Other Income (Expense)

	Year Ended December 31,					
	2006		2007		Change	
	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
	(in thousands)					
Other income (expense):						
Interest income	$2,848	3%	$7,081	5%	$4,233	149%
Other, net	(19)	—	(35)	—	(16)	(84)
Total other income	$2,829	3%	$7,046	5%	$4,217	149%

The increase in interest income in 2007 was primarily due to an increase in the amount of our interest bearing cash, cash equivalents, and short-term investments. Our cash, cash equivalents and short-term investments increased primarily due to the $89.1 million of net proceeds received from our offering of 6.3 million shares of common stock (including shares sold upon the exercise of the underwriters' overallotment option), which was completed in June 2007.

Benefit from Income Taxes

	Year Ended December 31,					
	2006		2007		Change	
	Amount	Percentage of Revenues	Amount	Percentage of Revenues	Amount	%
	(in thousands)					
Benefit from income taxes	$(221)	—%	$(9,170)	(7)%	$(8,949)	NM*

* Not meaningful.

The effective tax rate benefit for 2007 increased to 46% compared to an effective tax rate benefit of 2% for 2006. In 2007, we determined that it was more likely than not that we would realize the full value of our remaining deferred tax asset and therefore reduced the valuation allowance by an additional $22.7 million. The benefit of the release in valuation allowance was realized through reductions to income tax expense of $16.5 million which resulted in an 80% benefit to the effective tax rate and to goodwill of $6.1 million. We recorded a tax reserve of $531,000 on federal and state research and development tax credits, in accordance with FIN 48, which resulted in a 2.7% increase to the effective tax rate. In 2006, we determined that it was more likely than not that we would realize an additional portion of our deferred tax assets and therefore reduced the valuation allowance by $5.6 million. This benefit of the release in valuation allowance was realized through reductions to income tax expense of $5.4 million which resulted in a 45% benefit to the effective tax rate and to goodwill of $207,000. See Note 6 of the notes to our 2008 consolidated financial statements contained in this Annual Report.

Liquidity and Capital Resources

Our principal sources of liquidity were cash, cash equivalents, and short-term and long-term investments totaling $182.6 million and $177.5 million at December 31, 2007 and December 31, 2008, respectively, and accounts receivable of $35.5 million and $40.0 million, respectively.

Cash provided by and used in operating activities has historically been affected by changes in working capital accounts, primarily deferred revenues, accounts receivable and accrued expenses, and add-backs of non-cash expense items such as depreciation and amortization and stock-based compensation expense. Fluctuations within accounts receivable and deferred revenues are primarily related to the timing of billings of our term license customers and the associated revenue recognition. Movements in deferred costs are related to the volume and stages of hosted clinical trials and movements in accrued expenses and accounts payable are due to the timing of certain transactions.

Net cash provided by operating activities was $65.3 million in 2008, which was more than net income of $13.8 million. The difference is primarily due to non-cash adjustments of $10.2 million of depreciation and amortization expense, $8.3 million of stock-based compensation expense, $6.5 million of deferred income tax expense, a $6.0 million impairment of long-term investments and a $454,000 loss on the disposal of fixed assets, partially offset by a $5.3 million gain on the securities settlement agreement with UBS. Cash provided by working capital and other activities primarily reflected an increase in deferred revenues of $18.9 million, accounts payable of $7.5 million and accrued expenses of $3.9 million. These increases were partially offset by increases in accounts receivable and acquired future billings of $2.9 million, deferred costs of $1.9 million and prepaid expenses and other current assets of $651,000.

Net cash used in investing activities was $66.4 million during 2008, which was primarily due to the purchase of short-term and long-term investments of $57.9 million, cash paid for the acquisition of Clarix of $40.8 million, net of cash acquired, capital expenditures of $21.5 million and an increase in restricted cash associated with our leases of $1.5 million. These decreases in cash were partially offset by $55.3 million of proceeds from maturities of short-term and long-term investments.

Net cash provided by financing activities was $462,000 in 2008, consisting of proceeds from the exercise of stock options of $2.2 million, partially offset by the payment of withholding taxes associated with the vesting of restricted stock awards of $1.7 million.

Substantially all of our long-lived assets as of December 31, 2007 and December 31, 2008 are located in the United States.

We generally do not enter into long-term binding purchase commitments. Our principal commitments consist of obligations under non-cancelable operating leases for office space.

The following table of our material contractual obligations as of December 31, 2008 summarizes the aggregate effect that these obligations are expected to have on our cash flows in the periods indicated:

	Payments Due by Period				
Contractual Obligations	**Total**	**1 year or less**	**2-3 years**	**4-5 years**	**More than 5 years**
			(in thousands)		
Operating lease obligations	$73,029	$7,357	$14,925	$13,424	$37,323
Total	$73,029	$7,357	$14,925	$13,424	$37,323

On February 13, 2008, we entered into a lease with BP Fourth Avenue, L.L.C. to secure office space for our current corporate headquarters at 77 Fourth Avenue, Waltham, Massachusetts. The commencement date for occupancy under the lease was December 2008. The lease for our prior corporate headquarters at 880 Winter Street in Waltham expires in February 2009.

The lease for our current headquarters provides for the rental of 165,129 rentable square feet of space and has an initial term of 10 years and three months. We can, subject to certain conditions, extend this term by exercising up to two consecutive five year options. We are not required to pay any rent for the first three months of the initial lease term. Thereafter, the annual rent on the new lease for years one through five will be $6.6 million, or approximately $548,000 per month. For years six through ten, the annual rent will be $7.2 million, or approximately $603,000 per month. The total base rent payable in the initial term is $69.1 million.

In addition to base rent, commencing on January 1, 2010, the lease for our current headquarters requires us to pay our proportionate share of the amount by which defined operating expenses incurred by the landlord exceed the base year (2009) operating expenses, as defined in the lease. The lease also requires us to pay our proportionate share of the amount by which real estate taxes paid or incurred by the landlord exceed the tax base year (fiscal 2010), as defined in the lease. In addition, we are receiving lease incentives, including free rent for the first three months of occupancy, which totaled approximately $1.6 million, and allowances for tenant improvements totaling approximately $8.1 million. The allowances for tenant improvements are being amortized on a straight-line basis over the lease term as a reduction of rental expense.

In connection with the signing of the lease for our current headquarters, we have deposited with the landlord an unconditional, irrevocable letter of credit in Landlord's favor in the amount of $962,000.

We had a working capital line of credit with a bank under which we could borrow up to $2.0 million, of which $1.5 million was available and $500,000 reserved under a letter of credit associated with our prior leased headquarters. The line of credit expired on March 31, 2008, and was not renewed. As of December 31, 2008, the $500,000 collateral obligation for our prior leased headquarters was secured by a certificate of deposit.

At December 31, 2008, we had $30.4 million of net operating loss carryforwards that may be used to offset future U.S. federal taxable income. These attributes may reduce our future cash tax liability. In addition, we had $18.3 million of net operating losses resulting from excess tax deductions related to stock-based compensation. We will realize the benefit of these excess tax deductions through increases to stockholders' equity in the periods in which the losses are utilized to reduce tax payments. In addition, we had $2.4 million of federal research and development tax credit carryforwards that may be utilized to offset future U.S. taxes. The net operating loss and tax credit carryforward periods extend through 2028. In addition, we had $1.2 million of foreign net operating loss carryforwards that may be used to offset future foreign taxable income. These foreign net operating loss carryforwards have an unlimited carryforward period. We also had $3.8 million of research and development tax credit carryforwards that may be utilized to offset future Massachusetts state taxable income. The Massachusetts tax credit carryforward period extends through 2023. The federal and state net operating loss carryforwards and research and development tax credits are subject to review and possible adjustment by the taxing authorities. Also, the Internal Revenue Code contains provisions that may limit the net operating loss and tax credit carryforwards available in any given year in the event of certain changes in the ownership interests of significant stockholders. We currently expect to realize the benefit of recorded deferred tax assets as of December 31, 2008 of $20.0 million. Our conclusion that such assets will be recovered is based upon our expectation that our future earnings combined with tax planning strategies available to us will provide sufficient taxable income to realize recorded tax assets.

We may be required to make cash outlays related to our unrecognized tax benefits. However, due to the uncertainty of the timing of future cash flows associated with our unrecognized tax benefits, we are unable to make reasonably reliable estimates of the period of cash settlement, if any, with the respective taxing authorities. Accordingly, unrecognized tax benefits of $1.4 million as of December 31, 2008 have been excluded from the contractual obligations table above. For further information on

unrecognized tax benefits, see Note 6 in the notes to our 2008 consolidated financial statements included in this Annual Report.

We believe our existing cash, cash equivalents, short-term investments and cash provided by operating activities and our debt facility will be sufficient to meet our working capital and capital expenditure needs over at least the next 12 months. Our future capital requirements will depend on many factors, including our rate of revenue growth, the expansion of our marketing and sales activities, the timing and extent of spending to support product development efforts, the timing of introductions of new products and services and enhancements to existing products and services and the continuing market acceptance of our products and services. From time to time, we may also enter into agreements with respect to potential investments in, or acquisitions of, businesses, services or technologies, which could also require us to seek additional equity or debt financing. To the extent that existing cash and securities and cash from operations are insufficient to fund our future activities, we may need to raise additional funds through public or private equity or debt financing.

Included within our investment portfolio at December 31, 2008 were $24.1 million of auction rate securities, or ARS, at par value, which are classified as long-term investments on our condensed consolidated balance sheets, and recorded at fair market value. These ARS are debt instruments issued by various states throughout the United States to finance student loans. The types of ARS that we own are backed by student loans, 95% of which are guaranteed under the Federal Family Education Loan Program, and all had credit ratings of AAA (or equivalent) from a recognized rating agency. Historically, the carrying value of ARS approximated fair value due to the frequent resetting of the interest rates. With the liquidity issues experienced in the global credit and capital markets, our ARS have experienced multiple failed auctions. While we continue to earn and receive interest on these investments at the maximum contractual rate, the estimated fair value of these ARS no longer approximates par value.

In November 2008, we accepted an offer from UBS AG, or UBS, with respect to all of our ARS held at the time of the agreement. Under our agreement with UBS, we received certain rights which entitle us to sell our ARS to UBS affiliates during the period from June 30, 2010 to July 20, 2012, for a price equal to par value. In accepting the offer, we granted UBS the authority to sell or auction the ARS at par at any time up until the expiration date of the offer and released UBS from any claims relating to the marketing and sale of ARS. UBS's obligations under the agreement are not secured by its assets and do not require UBS to obtain any financing to support its performance obligations under the agreement. UBS has disclaimed any assurance that it will have sufficient financial resources to satisfy its obligations under the agreement. If UBS has insufficient funding to buy back the ARS and the auction process continues to fail, then we may incur further losses on the carrying value of the ARS.

In prior periods and up through the execution of our signed settlement agreement with UBS in November 2008, the ARS were classified as available-for-sale securities and were reported at fair value, with temporary unrealized gains (losses) excluded from earnings and reported in a separate component of stockholders' equity and other-than-temporary unrealized losses included in earnings. Upon the execution of the settlement agreement with UBS, we elected to make a one-time transfer of the ARS from available-for-sale securities to trade securities. Accordingly, on a prospective basis, all unrealized gains (losses) for these trading securities will be included in earnings.

We performed a fair value calculation of our ARS as of December 31, 2008. Fair value was determined using a secondary market indications method (direct discounts) and a discounted cash flow method as recent auctions of these securities were not successful, resulting in our continuing to hold these securities and issuers paying interest at the maximum contractual rate. This valuation technique considers the following: time left to maturity, the rate of interest paid on the securities, the amount of principal to be repaid to the holders of the securities; the credit worthiness of the issuer and guarantors (if any) and the sufficiency of the collateral; trading characteristics of the securities; ability to borrow

against the ARS; evidence from secondary market sales; and the market-clearing yield for the securities. Based upon the valuation performed, we concluded that the fair value of these ARS at December 31, 2008 was $18.0 million, a decline of $6.0 million from par value. As our signed settlement agreement with UBS indicates that we intend to sell our ARS to UBS affiliates before their stated maturity under the ARS terms, the decline in fair value is deemed other-than-temporary. Accordingly, we recorded a loss on these securities of $6.0 million in our consolidated statement of income for the year ended December 31, 2008. Included in the $6.0 million loss is $1.3 million which had previously been recorded as an unrealized loss on the ARS and recorded in other comprehensive income (loss) in our consolidated statement of stockholder's equity and comprehensive income as of September 30, 2008. Upon execution of the UBS settlement agreement, this amount was reversed from other comprehensive income (loss) and recorded in the consolidated statement of income.

We elected to measure the fair value of the settlement agreement (the "put option") under the fair value option of SFAS No. 159, *The Fair Value Option for Financial Assets and Liabilities—including an amendment of FASB Statement No. 115.* Fair value was determined using a discounted cash flow method which considered the following factors: the term of the agreement, the availability to borrow against the ARS, the creditworthiness of UBS and current market interest rates. Based on the valuation performed, we concluded that the fair value of the put option was $5.3 million. Accordingly, we recorded a gain of $5.3 million in the consolidated statement of income for the year ended December 31, 2008 with a corresponding long term asset, "securities settlement agreement" in the consolidated balance sheet at December 31, 2008.

Recently Issued Accounting Pronouncements

In December 2007, the FASB issued SFAS No. 141 (Revised 2007), *Business Combinations* ("SFAS No. 141(R)"). SFAS No. 141(R) retains the fundamental requirements in SFAS 141 that the acquisition method of accounting (which SFAS No. 141 called the "purchase method") be used for all business combinations and for an acquirer to be identified for each business combination. SFAS 141(R) requires an acquirer to recognize the assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions specified in the Statement. This approach replaces SFAS No. 141's cost-allocation process, which required the cost of an acquisition to be allocated to the individual assets acquired and liabilities assumed based on their estimated fair values. SFAS No. 141(R) retains the guidance in SFAS No. 141 for identifying and recognizing intangible assets separately from goodwill. SFAS 141(R) will now require acquisition costs to be expensed as incurred, restructuring costs associated with a business combination must generally be expensed prior to the acquisition date and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally will affect income tax expense. SFAS No. 141(R) applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008, which is our 2009 fiscal year. Earlier adoption is prohibited. The adoption of SFAS No. 141(R) may have a significant impact on our accounting for future acquisitions.

In December 2007, the FASB released SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements—an amendment of ARB No. 51 ("SFAS No. 160").* SFAS No. 160 was issued to improve the relevance comparability, and transparency of financial information provided in financial statements by establishing accounting and reporting standards for the noncontrolling interest in a subsidiary and for the deconsolidation of a subsidiary. SFAS No. 160 is effective for fiscal years beginning after December 15, 2008 and will be applied prospectively, except for the presentation and disclosure requirements which will be applied retrospectively. The adoption of SFAS No. 160 is not expected to have a material effect on our consolidated financial position or results of operations.

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities an amendment of FASB Statement No. 133* ("SFAS No. 161"). SFAS No. 161 requires

disclosures of how and why an entity uses derivative instruments, how derivative instruments and related hedged items are accounted for and how derivative instruments and related hedged items affect an entity's financial position, financial performance, and cash flows. SFAS No. 161 is effective for fiscal years beginning after November 15, 2008, with early adoption permitted. The adoption of SFAS No. 161 is not expected to have a material effect on our consolidated financial position and results of operations.

In May 2008, the FASB issued SFAS No. 162, *The Hierarchy of Generally Accepted Accounting Principles* ("SFAS No. 162"). SFAS No. 162 identifies the sources of generally accepted accounting principles in the United States and prioritizes the generally accepted accounting principles thereunder. SFAS No. 162 is effective sixty days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles*. The adoption of SFAS No. 162 is not expected to have a material effect on our consolidated financial position and results of operations.

Off-Balance Sheet Arrangements

We do not have any special purpose entities or off-balance sheet arrangements.

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

We are exposed to a variety of market risks, including changes in interest rates and the market value of our investments.

Financial Instruments, Other Financial Instruments

SFAS No. 107, *Disclosure of Fair Value of Financial Instruments*, requires disclosure about fair value of financial instruments. Financial instruments consist of cash equivalents, short-term investments, accounts receivable, accounts payable, forward foreign exchange contracts and a line of credit. The fair value of these financial instruments approximates their carrying amount.

Foreign Currency Exchange Risk

Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the euro, British pound, Australian dollar and Japanese yen. During 2006, 2007 and 2008, 49%, 49% and 44%, respectively, of our revenues were generated in locations outside the United States. During the same periods, 37%, 35% and 31%, respectively, of our revenues were in currencies other than the U.S. dollar. During 2008, 15% of our revenues were in euros, 11% were in the British pound and 5% in Japanese yen. Except for revenue transactions in Japan, we enter into transactions directly with substantially all of our foreign customers. During 2006, 2007 and 2008, 28%, 29% and 27%, respectively, of expenses were in currencies other than the U.S. dollar. During 2008, 15% of our expenses were in British pound, 5% in euro and 5% in Japanese yen.

As of December 31, 2007 and 2008, we had $12.5 million and $11.1 million, respectively, of receivables denominated in currencies other than the U.S. dollar. We also maintain cash accounts denominated in currencies other that the local currency which exposes us to foreign exchange rate movements.

In addition, although our foreign subsidiaries have intercompany accounts that eliminate upon consolidation, such accounts expose us to foreign currency rate movements. Exchange rate fluctuations on short-term intercompany accounts are recorded in our consolidated statements of operations under "other income (expense)", while exchange rate fluctuations on long-term intercompany accounts are recorded in our consolidated balance sheets under "accumulated other comprehensive loss" in stockholders' equity, as they are considered part of our net investment and hence do not give rise to gains or losses.

We have implemented a risk management program under which we measure foreign currency exchange risk monthly and manage those exposures through the use of various operating strategies As more fully described in Note 2 in the notes to our 2008 consolidated financial statements included in this Annual Report, we regularly purchase short-term foreign currency forward contracts, designed to hedge fluctuation in the non-functional currencies of the Company and its subsidiaries against the U.S. dollar. This process is designed to minimize foreign currency translation exposures that could otherwise affect consolidated results of operations. The terms of these contracts are for periods generally for one month.

Currently, our largest foreign currency exposures are the British pound and euro, primarily because our European operations have a higher proportion of our local currency denominated expenses. Relative to foreign currency exposures existing at December 31, 2007 and 2008, a 10% unfavorable movement in foreign currency exchange rates may expose us to significant losses in earnings or cash flows or significantly diminish the fair value of our foreign currency financial instruments. The calculation assumes that each exchange rate would change in the same direction relative to the U.S. dollar.

As of December 31, 2007 and 2008, we entered into forward foreign exchange contracts to hedge approximately $19.8 million and $12.7 million, respectively, of receivables, intercompany accounts and cash balances denominated in currencies other than the U.S. dollar. As of December 31, 2008, we recorded $1.1 million of foreign exchange losses in other income (expense) and accrued expenses as a result of the outstanding forward foreign exchange contracts.

Interest Rate Sensitivity

We had unrestricted cash, cash equivalents, short-term and long-term investments totaling $177.5 million at December 31, 2008. With the exception of auction rate securities, investments in securities are invested primarily in high quality securities of a short duration and are not materially affected by fluctuations in interest rates. The cash and cash equivalents are held for working capital purposes.

Included within our investment portfolio at December 31, 2008 were $24.1 million of auction rate securities, or ARS, at par value, which are classified as long-term investments on our condensed consolidated balance sheets, and recorded at fair market value. These ARS are debt instruments issued by various states throughout the United States to finance student loans. The types of ARS that we own are backed by student loans, 95% of which are guaranteed under the Federal Family Education Loan Program, and all had credit ratings of AAA (or equivalent) from a recognized rating agency. Historically, the carrying value of ARS approximated fair value due to the frequent resetting of the interest rates. With the liquidity issues experienced in the global credit and capital markets, our ARS have experienced multiple failed auctions. While we continue to earn and receive interest on these investments at the maximum contractual rate, the estimated fair value of these ARS no longer approximates par value.

In November 2008, we accepted an offer from UBS AG, or UBS, with respect to all of our ARS held at the time of the agreement. Under our agreement with UBS, we received certain rights which entitle us to sell our ARS to UBS affiliates during the period from June 30, 2010 to July 20, 2012, for a price equal to par value. In accepting the offer, we granted UBS the authority to sell or auction the ARS at par at any time until the expiration date of the offer and released UBS from any claims relating to the marketing and sale of ARS. UBS's obligations under the agreement are not secured by its assets and do not require UBS to obtain any financing to support its performance obligations under the agreement. UBS has disclaimed any assurance that it will have sufficient financial resources to satisfy its obligations under the agreement. If UBS has insufficient funding to buy back the ARS and the auction process continues to fail, then we may incur further losses on the carrying value of the ARS.

In prior periods and up through the execution of our signed settlement agreement with UBS in November 2008, the ARS were classified as available-for-sale securities and were reported at fair value, with temporary unrealized gains and (losses) excluded from earnings and reported in a separate component of stockholders' equity and other-than-temporary unrealized losses included in earnings. Upon the execution of the settlement agreement with UBS, we elected to make a one-time transfer of the ARS from available-for-sale securities to trade securities. Accordingly, on a prospective basis, all unrealized gains (losses) for these trading securities will be included in earnings.

We performed a fair value calculation of our ARS as of December 31, 2008. Fair value was determined using a secondary market indications method (direct discounts) and a discounted cash flow method as recent auctions of these securities were not successful, resulting in our continuing to hold these securities and issuers paying interest at the maximum contractual rate. This valuation technique considers the following: time left to maturity, the rate of interest paid on the securities, the amount of principal to be repaid to the holders of the securities; the credit worthiness of the issuer and guarantors (if any) and the sufficiency of the collateral; trading characteristics of the securities; ability to borrow against the ARS; evidence from secondary market sales; and the market-clearing yield for the securities. Based upon the valuation performed, we concluded that the fair value of these ARS at December 31, 2008 was $18.0 million, a decline of $6.0 million from par value. As our signed settlement agreement with UBS indicates that we intend to sell our ARS to UBS affiliates before their stated maturity under the ARS terms, the decline in fair value is deemed other-than-temporary. Accordingly, we recorded a loss on these securities of $6.0 million in our consolidated statement of income for the year ended December 31, 2008. Included in the $6.0 million loss is $1.3 million which had previously been recorded as an unrealized loss on the ARS and recorded in other comprehensive income (loss) in our consolidated statement of stockholder's equity and comprehensive income as of September 30, 2008. Upon execution of the UBS settlement agreement, this amount was reversed from other comprehensive income (loss) and recorded in the consolidated statement of income.

We elected to measure the fair value of the settlement agreement (the "put option") under the fair value option of SFAS No. 159, *The Fair Value Option for Financial Assets and Liabilities—including an amendment of FASB Statement No. 115.* Fair value was determined using a discounted cash flow method which considered the following factors: term of the agreement, the availability to borrow against the ARS, the creditworthiness of UBS and current market interest rates. Based on the valuation performed, we concluded that the fair value of the put option was $5.3 million. Accordingly, we recorded a gain for $5.3 million in the consolidated statement of income for the year ended December 31, 2008 with a corresponding long term asset, "securities settlement agreement" in the consolidated balance sheet at December 31, 2008.

We believe that, based on our unrestricted cash, cash equivalents and short-term marketable securities balances of $159.4 million at December 31, 2008, which exclude the fair market value of ARS of $18.0 million and the fair value of the securities settlement agreement of $5.3 million, the current lack of liquidity in the credit and capital markets will not have a material impact on our liquidity, cash flow or our ability to fund our operations.

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

The consolidated financial statements and supplementary data of Phase Forward Incorporated are listed under Part IV, Item 15, in this Annual Report.

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

None.

Item 9A. ***Controls and Procedures.***

(1) Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, as ours are designed to do, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As of December 31, 2008, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective at that reasonable assurance level in (i) enabling us to record, process, summarize and report information required to be included in our periodic Securities and Exchange Commission filings within the required time period and (ii) ensuring that information required to be disclosed in the reports that we file or submit under the Securities Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

(2) Report of Management on Internal Control over Financial Reporting

We are responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended, as a process designed by, or under the supervision of our principal executive and principal financial officers and effected by our board of directors, management and other personnel 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 and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and disposition of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

We have assessed the effectiveness of our internal control over financial reporting as of December 31, 2008. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Based on our assessment, we believe that, as of December 31, 2008, our internal control over financial reporting is effective at a reasonable assurance level based on these criteria.

Our independent registered public accounting firm, Ernst & Young, LLP, issued an attestation report on our internal control over financial reporting. This report is contained in Section 4 below.

(3) Changes in Internal Controls Over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

(4) Report of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Phase Forward Incorporated

We have audited Phase Forward Incorporated 's internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Phase Forward Incorporated 's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Report of Management on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit 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 effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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 the policies or procedures may deteriorate.

In our opinion, Phase Forward Incorporated maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Phase Forward Incorporated as of December 31, 2006 and 2007, and the related consolidated statements of income, stockholders' equity and comprehensive income, and cash flows for each of the three years in the period ended December 31, 2008 of Phase Forward Incorporated and our report dated February 26, 2009 expressed an unqualified opinion thereon.

Boston, Massachusetts
February 26, 2009

/s/ Ernst & Young LLP

Item 9B. ***Other Information.***

None.

PART III

Information required by Items 10, 11, 12, 13 and 14 of Part III is omitted from this Annual Report and will be filed in a definitive proxy statement or by an amendment to this Annual Report not later than 120 days after the end of the year covered by this Annual Report.

Our policy governing transactions in our securities by directors, officers and employees permits our officers, directors and certain other persons to enter into trading plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended. We have been advised that: our Vice President of Quality and Regulatory Compliance, Michael Owings; our Senior Vice President and Chief Financial Officer, Rodger Weismann; our Senior Vice President of Worldwide Sales, Stephen J. Powell; and our Vice President of Corporate Development, Martin Young and our Senior Vice President and General Counsel, D. Ari Buchler have each entered into a trading plan covering periods after the date of this Annual Report in accordance with Rule 10b5-1 and our policy governing transactions in our securities. Generally, under these trading plans, the individual relinquishes control over the transactions once the trading plan is put into place. Accordingly, sales under these plans may occur at any time, including possibly before, simultaneously with, or immediately after significant events involving our company.

We anticipate that, as permitted by Rule 10b5-1 and our policy governing transactions in our securities, some or all of our officers, directors and employees may establish trading plans in the future. We intend to disclose the names of executive officers and directors who establish a trading plan in compliance with Rule 10b5-1 and the requirements of our policy governing transactions in our securities in our future quarterly and annual reports on Form 10-Q and 10-K filed with the Securities and Exchange Commission. However, we undertake no obligation to update or revise the information provided herein, including for revision or termination of an established trading plan, other than in such quarterly and annual reports.

PART IV

Item 15. ***Exhibits, Financial Statements and Schedules***

(a) The following documents are filed as part of this report:

(1) Financial Statements

Report of Independent Registered Public Accounting Firm on Consolidated Financial Statements

Consolidated Balance Sheets as of December 31, 2007 and 2008

Consolidated Statements of Income for the years ended December 31, 2006, 2007 and 2008

Consolidated Statements of Stockholders' Equity and Comprehensive Income for the years ended December 31, 2006, 2007 and 2008

Consolidated Statements of Cash Flows for the years ended December 31, 2006, 2007 and 2008

Notes to Consolidated Financial Statements

(2) Financial Statement Schedules

All schedules have been omitted because they are not required or because the required information is given in the Consolidated Financial Statements or Notes thereto.

EXHIBIT INDEX

Exhibit No.	Description
2.1#	Agreement and Plan of Merger by and among Phase Forward, Merger Sub, Lincoln and Lincoln SR dated as of August 16, 2005. (Incorporated by reference herein to Exhibit 2.1 of the Company's Current Report on Form 8-K filed with the SEC on August 31, 2005.)
2.2	Amendment No. 1 to Agreement and Plan of Merger by and among Phase Forward, Lincoln and Lincoln SR dated as of September 13, 2006. (Incorporated by reference herein to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the SEC on September 15, 2006.)
2.3	Unit Purchase Agreement by and Among Clarix LLC, the Member Representative (as defined therein), the Selling Interest Holders listed therein, and Phase Forward Incorporated dated as of September 5, 2008. (Incorporated by reference herein to Exhibit 2.1 of the Company's Current Report on Form 8-K filed with the SEC on September 11, 2008.)
3.1	Amended and Restated Certificate of Incorporation of the Registrant dated July 20, 2004. (Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-113594), as amended.)
3.2	Amended and Restated Bylaws of the Registrant. (Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-113594), as amended.)
4.1	Specimen Certificate for shares of the Registrant's Common Stock. (Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-113594), as amended.)
10.1+	1997 Stock Option Plan. (Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-113594), as amended.)
10.2+	Amended and Restated 2003 Non-Employee Director Stock Option Plan, as amended. (Incorporated by reference herein to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed with the SEC on August 10, 2005.)
10.3+	2004 Stock Option and Incentive Plan as Amended and Restated March 2006. (Incorporated by reference herein to Exhibits 10.1 to the Company's Current Report on Form 8-K filed with the SEC on May 8, 2006.)
10.4+	Amendment No. 1 to the 2004 Stock Option and Incentive Plan as Amended and Restated March 2006. (Incorporated by reference herein to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 3, 2007.)
10.5+	Amended and Restated 2004 Employee Stock Purchase Plan. (Incorporated by reference herein to Exhibit 10.4 of the Company's Annual Report on Form 10-K filed with the SEC on March 13, 2006.)
10.6+	Form of Incentive Stock Option Agreement. (Incorporated by reference herein to Exhibit 10.4 of the Company's Quarterly Report on Form 10-Q filed with the SEC on November 10, 2004.)
10.7+	Form of Non-Statutory Stock Option Agreement. (Incorporated by reference herein to Exhibit 10.5 of the Company's Quarterly Report on Form 10-Q filed with the SEC on November 10, 2004.)
10.8+	Form of Non-Statutory Stock Option Agreement (U.K.). (Incorporated by reference herein to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q filed with the SEC on August 10, 2005.)
10.9+	Form of Stock Option Grant Certificate under the Registrant's Amended and Restated 1997 Stock Option Plan. (Incorporated by reference herein to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the SEC on December 30, 2005.)

Exhibit No.	Description
10.10+	Form of Restricted Stock Award Agreement. (Incorporated by reference herein to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on June 12, 2006.)
10.11+	Form of Restricted Stock Unit Award Agreement. (Incorporated by reference herein to Exhibit 10.24 to the Company's Annual Report on Form 10-K filed with the SEC on March 1, 2007.)
10.12+	Form of Restricted Stock Unit Award Agreement. (Incorporated by reference herein to Exhibit 10.3 of the Company's Current Report on Form 8-K filed with the SEC on March 6, 2007.)
10.13+	Form of Phase Forward Incorporated Restricted Stock Unit Award Agreement for Clarix LLC Founders (Incorporated by reference herein to Exhibit 99.1 to the Company's Registration Statement on Form S-8 (File No. 333-153335).)
10.14+	Form of Phase Forward Incorporated Restricted Stock Unit Award Agreement for Clarix LLC. Employees (Incorporated by reference herein to exhibit 99.1 to the Company's Registration Statement on Form S-8 (File No. 333-153335).)
10.15+	Phase Forward Incorporated Management Incentive Plan (Effective January 1, 2009) (Incorporated by reference herein to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on February 13, 2009.)
10.16+	Summary of cash compensation practices for non-employee directors. (Incorporated by reference herein to Exhibit 10.24 to the Company's Annual Report on Form 10-K filed with the SEC on March 17, 2008.)
10.17+*	Form of Executive Agreement between the Registrant and its officers, as amended March 7, 2005 and June 6, 2006, as restated on February 28, 2008 and as further amended on November 4, 2008.
10.18+	Senior Executive's Service Agreement between Phase Forward Europe Limited and Stephen Powell. (Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-113594), as amended.)
10.19+	Form of Management Retention Agreement. (Incorporated by reference herein to the Exhibit 10.3 to the Company's Current Report on Form 8-K filed with the SEC on September 11, 2008.)
10.20+	Form of Management Retention Agreement. (Incorporated by reference herein to the Exhibit 10.4 to the Current Report on Form 8-K filed with the SEC on September 11, 2008.)
10.21+	Form of Indemnification Agreement between the Registrant and each of its directors and certain executive officers. (Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-113594), as amended.)
10.22	License Agreement by and among Mark L. Kozam d/b/a MLK Software and Datasci, LLC, and the Company. (Incorporated by reference herein to Exhibit 10.5 of the Company's Quarterly Report on Form 10-Q filed with the SEC on May 10, 2006.)
10.23	Sublease Agreement between the Registrant and BMC Software, Inc. (Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-113594), as amended.)
10.24	Lease dated February 13, 2008 between Phase Forward Incorporated and BP Fourth Avenue, L.L.C. (Incorporated by reference herein to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on February 19, 2008.)
10.25	Seventh Loan Modification Agreement with Silicon Valley Bank (Incorporated by reference herein to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 10, 2006.)
21.1*	Subsidiaries of the Registrant.
23.1*	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.

Exhibit No.	Description
31.1*	Certification of CEO pursuant to Rule 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934.
31.2*	Certification of CFO pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934.
32.1*	Certification of CEO pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of CFO pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

+ Indicates a management contract or any compensatory plan, contract or arrangement.

Confidential treatment requested for portions of this document.

* Filed herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on the 27th day of February, 2009.

PHASE FORWARD INCORPORATED

By: /s/ ROBERT K. WEILER
Robert K. Weiler
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ ROBERT K. WEILER Robert K. Weiler	President, Chief Executive Officer and Chairman of the Board (principal executive officer)	February 27, 2009
/s/ RODGER WEISMANN Rodger Weismann	Senior Vice President, Chief Financial Officer and Treasurer (principal accounting officer and principal financial officer)	February 27, 2009
/s/ PAUL A. BLEICHER, M.D., PH.D. Paul A. Bleicher, M.D., Ph.D	Director	February 27, 2009
/s/ AXEL BICHARA Axel Bichara	Director	February 27, 2009
/s/ JAMES I. CASH, JR., PH.D James I. Cash, Jr., Ph.D	Director	February 27, 2009
/s/ RICHARD A. D'AMORE Richard A. D'Amore	Director	February 27, 2009
/s/ GARY E. HAROIAN Gary E. Haroian	Director	February 27, 2009
/s/ KENNETH I. KAITIN, PH.D Kenneth I. Kaitin, Ph.D	Director	February 27, 2009
/s/ DENNIS R. SHAUGHNESSY Dennis R. Shaughnessy	Director	February 27, 2009

Phase Forward Incorporated
Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Phase Forward Incorporated

We have audited the accompanying consolidated balance sheets of Phase Forward Incorporated as of December 31, 2007 and 2008, and the related consolidated statements of income, stockholders' equity and comprehensive income, and cash flows for each of the three years in the period ended December 31, 2008. 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 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Phase Forward Incorporated at December 31, 2007 and 2008, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2008, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Phase Forward Incorporated's internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2009 expressed an unqualified opinion thereon.

Boston, Massachusetts
February 26, 2009

/s/ Ernst & Young LLP

Phase Forward Incorporated
Consolidated Balance Sheets
(in thousands, except per share amounts)

	As of December 31,	
	2007	2008
Assets		
Current assets:		
Cash and cash equivalents	$133,401	$131,550
Restricted cash, current portion	—	500
Short-term investments	25,171	27,893
Accounts receivable, net of allowance of $270 and $578 in 2007 and 2008, respectively	35,515	39,999
Acquired future billings, current portion	—	1,129
Deferred set up costs, current portion	2,062	2,393
Prepaid commissions and royalties, current portion	4,458	4,524
Prepaid expenses and other current assets	4,513	4,773
Deferred income taxes, current portion	10,061	12,895
Total current assets	215,181	225,656
Acquired future billings, net of current portion	—	962
Property and equipment, net	15,967	36,615
Deferred set up costs, net of current portion	1,347	1,630
Prepaid commissions and royalties, net of current portion	3,614	4,277
Intangible assets, net of accumulated amortization of $2,044 and $3,624 in 2007 and 2008, respectively	3,356	27,586
Goodwill	25,511	39,125
Deferred income taxes, net of current portion	16,576	7,107
Restricted cash, net of current portion	—	962
Long-term investments	24,050	18,022
Securities settlement agreement	—	5,322
Other assets	267	626
Total assets	$305,869	$367,890
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,222	$ 8,895
Accrued expenses	19,447	22,686
Deferred rent, current portion	240	—
Leasehold incentive obligation, current portion	—	791
Deferred revenues, current portion	61,750	79,918
Total current liabilities	82,659	112,290
Deferred rent, net of current portion	116	564
Leasehold incentive obligation, net of current portion	—	7,248
Deferred revenues, net of current portion	5,380	8,600
Other long-term liabilities	1,277	1,515
Total liabilities	89,432	130,217
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $0.01 par value: Authorized—5,000 shares Issued—0 shares	—	—
Common stock, $0.01 par value: Authorized—100,000 shares Issued—42,724 and 42,986 shares in 2007 and 2008, respectively	428	430
Additional paid-in capital	274,869	283,676
Treasury stock, 37 shares at cost	(111)	(111)
Accumulated other comprehensive income (loss)	746	(672)
Accumulated deficit	(59,495)	(45,650)
Total stockholders' equity	216,437	237,673
Total liabilities and stockholders' equity	$305,869	$367,890

See accompanying notes.

Phase Forward Incorporated

Consolidated Statements of Income

(in thousands, except per share amounts)

	Year Ended December 31,		
	2006	2007	2008
Revenues:			
License	$ 40,893	$ 48,784	$ 52,704
Service	65,720	85,505	117,480
Total revenues	106,613	134,289	170,184
Costs of revenues:			
License(2)	2,698	2,361	2,715
Service(1), (2)	38,663	53,098	70,225
Total cost of revenues	41,361	55,459	72,940
Gross margin:			
License	38,195	46,423	49,989
Service	27,057	32,407	47,255
Total gross margin	65,252	78,830	97,244
Operating expenses:			
Sales and marketing(1), (2)	21,158	25,209	28,021
Research and development(1), (2)	16,621	20,116	25,500
General and administrative(1), (2)	18,174	20,220	26,821
In-process research and development	—	300	—
Lease exit costs	—	—	527
Total operating expenses	55,953	65,845	80,869
Income from operations	9,299	12,985	16,375
Other income (expense):			
Interest income	2,848	7,081	5,863
Other expense	(19)	(35)	(1,039)
Total other income, net	2,829	7,046	4,824
Income before (benefit from) provision for income taxes	12,128	20,031	21,199
(Benefit from) provision for income taxes	(221)	(9,170)	7,354
Net income	$ 12,349	$ 29,201	$ 13,845
Net income per share applicable to common stockholders:			
Basic	$ 0.36	$ 0.76	$ 0.33
Diluted	$ 0.35	$ 0.72	$ 0.32
Weighted average number of common shares used in net income per share calculations:			
Basic	34,104	38,642	42,092
Diluted	35,737	40,739	43,942

(1) Amounts include stock-based compensation expense, as follows:

Costs of service revenues	$ 258	$ 702	$1,618
Sales and marketing	502	1,061	1,377
Research and development	394	813	1,182
General and administrative	1,868	3,002	4,168

(2) Amounts include amortization expense of acquired intangible assets, as follows:

Cost of license revenues	$360	$403	$792
Cost of service revenues	—	—	61
Sales and marketing	510	464	693
General and administrative	—	—	34

See accompanying notes.

Phase Forward Incorporated

Consolidated Statements of Stockholders' Equity

and Comprehensive Income

(in thousands, except per share amounts)

	Common Stock		Additional Paid-in Capital	Deferred Stock-Based Compensation
	Number of Shares	$0.01 Par Value		
Balance at December 31, 2005	33,720	$337	$168,947	$(611)
Reclassification of deferred stock-based compensation upon adoption of SFAS No. 123(R)	—	—	(611	611
Foreign currency translation adjustment	—	—	—	—
Exercise of common stock options	847	8	3,212	—
Issuance of common stock under employee stock purchase plan	26	1	328	—
Issuance of restricted stock, net of forfeitures	936	9	(9)	—
Stock-based compensation expense	—	—	3,022	—
Tax benefit related to exercise of stock options	—	—	1,656	—
Net income	—	—	—	—
Total comprehensive income				
Balance at December 31, 2006	35,529	355	176,545	—
Foreign currency translation adjustment	—	—	—	—
Issuance of common stock under employee stock-based compensation plans	880	9	3,370	—
Issuance of common stock under employee stock purchase plan	16	—	290	—
Forfeitures of restricted stock awards	(26)	—	—	—
Issuance of common stock under public offering, net of costs	6,325	64	89,086	—
Stock-based compensation expense	—	—	5,578	—
Net income	—	—	—	—
Total comprehensive income				
Balance at December 31, 2007	42,724	428	274,869	—
Foreign currency translation adjustment	—	—	—	—
Issuance of common stock under employee stock-based compensation plans	275	3	1,673	—
Issuance of common stock under employee stock purchase plan	34	—	511	—
Forfeitures of restricted stock awards	(7)	—	—	—
Withholding taxes in connection with restricted stock	—	—	(1,723)	—
Retirement of restricted stock awards	(87)	(1)	1	—
Restricted stock units issued	47	—	—	—
Stock-based compensation expense	—	—	8,345	—
Net income	—	—	—	—
Total comprehensive income				
Balance at December 31, 2008	42,986	$430	$283,676	$ —

Phase Forward Incorporated

Consolidated Statements of Stockholders' Equity

and Comprehensive Income (Continued)

(in thousands, except per share amounts)

	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity	Comprehensive Income (Loss)
Balance at December 31, 2005	$(111)	$ (800)	$(101,045)	$ 66,717	$ —
Reclassification of deferred stock-based compensation upon adoption of SFAS No. 123(R)	—	—	—	—	—
Foreign currency translation adjustment	—	728	—	728	728
Exercise of common stock options	—	—	—	3,220	—
Issuance of common stock under employee stock purchase plan	—	—	—	329	—
Issuance of restricted stock, net of forfeitures	—	—	—	—	—
Stock-based compensation expense	—	—	—	3,022	—
Tax benefit related to exercise of stock options	—	—	—	1,656	—
Net income	—	—	12,349	12,349	12,349
Total comprehensive income					$13,077
Balance at December 31, 2006	(111)	(72)	(88,696)	88,021	
Foreign currency translation adjustment	—	818	—	818	818
Issuance of common stock under employee stock-based compensation plans	—	—	—	3,379	—
Issuance of common stock under employee stock purchase plan	—	—	—	290	—
Forfeitures of restricted stock awards	—	—	—	—	—
Issuance of common stock under public offering, net of costs	—	—	—	89,150	—
Stock-based compensation expense	—	—	—	5,578	—
Net income	—	—	29,201	29,201	29,201
Total comprehensive income					$30,019
Balance at December 31, 2007	(111)	746	(59,495)	216,437	
Foreign currency translation adjustment	—	(1,418)	—	(1,418)	(1,418)
Issuance of common stock under employee stock-based compensation plans	—	—	—	1,676	
Issuance of common stock under employee stock purchase plan	—	—	—	511	
Forfeitures of restricted stock awards	—	—	—	—	
Withholding taxes in connection with restricted stock	—	—	—	(1,723)	
Retirement of restricted stock awards	—	—	—	—	
Restricted stock units issued	—	—	—	—	
Stock-based compensation expense	—	—	—	8,345	
Net income	—	—	13,845	13,845	13,845
Total comprehensive income					$12,427
Balance at December 31, 2008	$(111)	$ (672)	$ (45,650)	$237,673	

See accompanying notes.

Phase Forward Incorporated

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,		
	2006	2007	2008
Operating activities			
Net income	$ 12,349	$ 29,201	$ 13,845
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	5,179	6,928	10,198
Stock-based compensation	3,022	5,578	8,345
In-process research and development fee expense	—	300	—
Loss on disposal of fixed assets	51	—	454
Amortization of leasehold incentive obligation	—	—	(66)
Provision for allowance for doubtful accounts	224	56	322
Tax benefit related to exercise of stock options	(1,656)	—	—
Deferred income taxes	(5,413)	(10,775)	6,525
Non-cash income tax expense	4,658	—	—
Amortization of discounts or premiums on investments	(12)	43	(112)
Impairment of long-term investments	—	—	6,028
Gain on securities settlement agreement	—	—	(5,322)
Other	15	42	—
Changes in assets and liabilities:			
Accounts receivable and acquired future billings	(3,980)	(5,176)	(2,916)
Deferred costs	(535)	(2,450)	(1,925)
Prepaid expenses and other current assets	(636)	(1,476)	(651)
Accounts payable	759	(1,719)	7,485
Accrued expenses	2,100	6,194	3,932
Accrued litigation settlement	(8,500)	—	—
Deferred revenue	4,321	16,292	18,914
Deferred rent	(579)	(589)	196
Net cash provided by operating activities	11,367	42,449	65,252
Investing activities			
Increase in restricted cash	—	—	(1,462)
Proceeds from maturities of short-term and long-term investments	40,188	78,897	55,291
Purchase of short-term and long-term investments	(58,836)	(100,694)	(57,901)
Purchase of property and equipment	(5,230)	(13,407)	(21,501)
(Increase) decrease in other assets	(32)	2	—
Cash paid for acquisitions of businesses, net of cash acquired	(2,000)	(8,891)	(40,848)
Net cash used in investing activities	(25,910)	(44,093)	(66,421)
Financing activities			
Proceeds from issuance of common stock	3,549	92,819	2,185
Tax benefit related to exercise of stock options	1,656	—	—
Withholding taxes in connection with vesting of restricted stock awards	—	—	(1,723)
Net cash provided by financing activities	5,205	92,819	462
Effect of exchange rate changes on cash and cash equivalents	(272)	57	(1,144)
Net (decrease) increase in cash and cash equivalents	(9,610)	91,232	(1,851)
Cash and cash equivalents at beginning of year	51,779	42,169	133,401
Cash and cash equivalents at end of year	42,169	133,401	131,550
Short-term and long-term investments at end of year	27,466	49,221	45,915
Total cash, cash equivalents, short-term and long-term investments at end of year	$ 69,635	$ 182,622	$177,465
Supplemental disclosure of cash flow information			
Cash paid for income taxes	$ 493	$ 388	$ 1,205

See accompanying notes.

Phase Forward Incorporated

Consolidated Statements of Cash Flows (Continued)

(in thousands)

	Year Ended December 31,		
	2006	2007	2008
Supplemental disclosure of non-cash financing activities			
Accrued earn-out in connection with acquisition of Lincoln Technologies, Inc.	$3,500	$ —	$ —
Release of valuation allowance	$ 207	$16,535	$ —
Supplemental disclosure of non-cash investing activities			
Leasehold improvements directly paid by lessor of new facility.	$ —	$ —	$ 8,104
Supplemental disclosure of cash flows related to acquisitions of businesses (Note 3)			
Cash paid for acquisition of Lincoln Technologies, Inc:			
Payment of additional cash consideration upon achievement of certain financial targets	$2,000	$ 3,500	$ —
Cash paid for acquisition of Green Mountain Logic, Inc.:			
Fair value of assets acquired	$ —	$ 306	$ —
Liabilities assumed, including acquisition costs paid	—	(652)	—
Acquired intangible assets	—	1,500	—
Costs in excess of net assets acquired	—	3,943	—
In-process research and development expense	—	300	—
Cash paid	—	5,397	—
Less cash acquired	—	6	—
Cash paid for acquisition of Green Mountain Logic, Inc., net of cash acquired	—	5,391	—
Cash paid for acquisition of Clarix, LLC:			
Fair value of assets acquired	$ —	$ —	$ 4,672
Liabilities assumed, including acquisition costs paid	—	—	(2,917)
Acquired intangible assets	—	—	25,810
Costs in excess of net assets acquired	—	—	13,718
Cash paid	—	—	41,283
Less cash acquired	—	—	435
Cash paid for acquisition of Clarix, LLC., net of cash acquired	—	—	40,848
Total cash paid for acquisitions of businesses, net of cash acquired	$2,000	$ 8,891	$40,848

See accompanying notes.

1. Organization and Operations

Phase Forward Incorporated (the "Company" or "Phase Forward") is a provider of integrated enterprise-level software products, services and hosted solutions for use in its customers' global clinical trial and drug safety monitoring activities. The Company's customers include pharmaceutical, biotechnology and medical device companies, as well as academic institutions, governmental regulatory agencies, contract research organizations ("CROs") and other entities engaged in clinical trial and safety monitoring activities.

The Company has operations in the United States, Australia, Belgium, France, India, Japan, Romania and the United Kingdom.

2. Summary of Significant Accounting Policies

The accompanying consolidated financial statements reflect the application of certain accounting policies as described in this note and elsewhere in the accompanying consolidated financial statements.

The Company believes that a critical accounting policy is one that is both important to the portrayal of the Company's financial condition and results and requires management's most difficult, subjective or complex judgments, often as the result of the need to make estimates about the effect of matters that are inherently uncertain.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Prior Year Financial Statement Reclassifications

Unrecognized tax benefits totaling $1,277, previously recorded as accrued expenses in the consolidated balance sheet as of December 31, 2007 have been reclassified to other long-term liabilities to conform to the current financial statement presentation. This reclassification had no impact on previously reported results of operations or cash provided by operating activities.

Management's Estimates and Uncertainties

The preparation of financial statements in conformity with accounting principles generally accepted in the United States 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 periods.

Significant estimates relied upon in preparing these consolidated financial statements include revenue recognition, allowances for doubtful accounts, provisions for losses on uncompleted contracts, expected future cash flows used to evaluate the recoverability of long-lived assets, estimated fair values of long-lived assets used to record impairment charges related to intangible assets and goodwill, amortization periods, expected future cash flows and assumptions used in determining the fair value and related gains (losses) of long-term investments (auction rate securities) and the settlement agreement entered into with respect to the Company's auction rate securities, restructuring and other

(in thousands, except share and per share amounts)

related charges, contingent liabilities, stock-based compensation expense and the recoverability of the Company's net deferred tax assets and related valuation allowance.

Although the Company regularly assesses these estimates, actual results could differ materially from these estimates. Changes in estimates are recorded in the period in which they become known. The Company bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances. Actual results may differ from management's estimates if these results differ from historical experience or other assumptions do not turn out to be substantially accurate, even if such assumptions were reasonable when made.

The Company is subject to a number of risks similar to those of other companies of similar size in its industry, including, but not limited to, rapid technological changes, competition, limited number of suppliers, customer concentration, integration of acquisitions, government regulations, management of international activities, protection of proprietary rights, patent litigation and dependence on key individuals.

Revenue Recognition and Deferred Set Up Costs

The Company derives revenues from software licenses and services. License revenues are derived principally from the sale of term licenses for the following software products offered by the Company: *InForm™*, *Clintrial™*, *WebSDM™*, *Empirica™ Trace*, *Empirica™ Signal and CTSD™*. Service revenues are derived principally from the Company's delivery of the hosted solutions of its *InForm™*, *Clarix™*, *Empirica Signal*, *CTSD* and *WebSDM* software products, and consulting services and customer support, including training, for all of the Company's products.

The components of revenues are as follows:

	Year Ended December 31,		
	2006	2007	2008
License	$ 40,893	$ 48,784	$ 52,704
Application hosting services	41,596	57,563	90,784
Consulting services	11,357	13,346	13,904
Customer support	12,767	14,596	12,792
Total	$106,613	$134,289	$170,184

The Company recognizes software license revenues in accordance with the American Institute of Certified Public Accountants ("AICPA") Statement of Position ("SOP") No. 97-2, *Software Revenue Recognition,* as amended, while revenues resulting from application hosting services are recognized in accordance with Emerging Issues Task Force ("EITF") Issue No. 00-3, *Application of AICPA Statement of Position 97-2 to Arrangements that include the Right to Use Software Stored on Another Entity's Hardware*, SEC Staff Accounting Bulletin ("SAB") No. 104, *Revenue Recognition,* and EITF Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables.*

Customers generally have the ability to terminate application hosting, consulting and training service agreements upon 30 days notice to the Company. License agreements, multiple element arrangements, including license and service agreements and certain application hosting services can generally be terminated by either party for material breach of obligations not corrected within 30 days after notice of the breach.

The Company recognizes revenues when all of the following conditions are satisfied: (1) there is persuasive evidence of an arrangement; (2) the product or service has been provided to the customer; (3) the collection of fees is probable; and (4) the amount of fees to be paid by the customer is fixed or determinable.

The Company generally enters into software term licenses for its *InForm*, *Clintrial* and *Empirica Trace* products with its customers for 3 to 5-year periods. License agreements for other licensed products are generally for annual or multi-year terms. These arrangements typically include multiple elements: software license, consulting services and customer support. The Company bills its customers in accordance with the terms of the underlying contract. Generally, the Company bills license fees annually in advance for each year of the license term. Payment terms are generally net 30 days.

The Company's software license revenues are earned from the sale of off-the-shelf software requiring no significant modification or customization subsequent to delivery to the customer. Consulting services, which can also be performed by third-party consultants, are deemed to be non-essential to the functionality of the software and typically are for trial configuration, implementation planning, loading of software, building simple interfaces and running test data and documentation of procedures.

Customer support includes training services, telephone support and software maintenance. The Company generally bundles customer support with the software license for the entire term of the arrangement. As a result, the Company generally recognizes revenues for all elements, including consulting services, ratably over the term of the software license and support arrangement. The Company allocates the revenues recognized for these arrangements to the different elements based on management's estimate of the relative fair value of each element. For its term-based licenses, the Company allocates to consulting services, the anticipated service effort and value throughout the term of the arrangement at an amount that would have been allocated had those services been sold separately to the customer. The value of the Company's consulting services sold within a bundled arrangement is equal to the value of consulting services sold on a stand-alone basis, as the activities performed under both types of arrangements are similar in nature. The remaining value is allocated to license and support services, with 10% of this amount allocated to support services. The customer support services rate of 10% for multi-year term-based licenses reflects a significant discount from the rate for customer support services associated with perpetual licenses due to the reduction in the time period during which the customer can utilize the upgrades and enhancements. The Company believes this rate is substantive and represents an amount it believes reasonable to be allocated. The Company has allocated the estimated fair value to its multiple element arrangements to provide meaningful disclosures about each of its revenue streams. The costs associated with the consulting and customer support services are expensed as incurred. There are instances in which the Company sells software licenses based on usage levels. These software licenses can be based on estimated usage, in which case the license fee charged to the customer is fixed based on this estimate. When the fee is fixed, the revenues are generally recognized ratably over the contractual term of the arrangement. If the fee is based on actual usage, and therefore variable, the revenues are recognized in the period of use. Revenues from certain follow-on consulting services, which are sold separately to customers with existing software licenses and are not considered part of a multiple element arrangement, are recognized as the services are performed.

The Company continues to sell additional perpetual licenses for the *Clintrial* and *Empirica Trace* software products in certain situations to its existing customers with the option to purchase customer

support. The Company has established vendor specific objective evidence of fair value for the customer support. Accordingly, license revenues are recognized upon delivery of the software and when all other revenue recognition criteria are met. Customer support revenues are recognized ratably over the term of the underlying support arrangement. The Company generates customer support and maintenance revenues from its perpetual license customer base. Training revenues are recognized as earned.

In addition to making its software products available to customers through licenses, the Company offers its *InForm*, *Empirica Signal*, *CTSD* and *WebSDM* software solutions through a hosted application solution delivered through a standard Web-browser. The Company's *Clarix* solution is presently available only a hosted application basis.

Revenues resulting from *InForm* and *Clarix* application hosting services consist of three stages for each clinical trial: the first stage involves application set up, including design, implementation of the system and server configuration; the second stage involves application hosting and related support services; and the third stage involves services required to close out, or lock, the database for the clinical trial. Services provided for the first and third stages are provided on a fixed fee basis based upon the complexity of the trial and system requirements. Services for the second stage are charged separately as a fixed monthly fee. The Company recognizes revenues from all stages of the *InForm* and *Clarix* hosting service ratably over the hosting period. Fees charged and costs incurred for the trial system design, set up and implementation are deferred until the start of the hosting period and are amortized and recognized ratably over the estimated hosting period. The deferred costs include incremental direct costs with third parties and certain internal direct costs related to the trial and application set up, as defined under Statement of Financial Accounting Standards ("SFAS") No. 91, *Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Indirect Costs of Leases*. These costs include salary and benefits associated with direct labor costs incurred during trial set up, as well as third-party subcontract fees and other contract labor costs. Work performed outside the original scope of work is contracted for separately as an additional fee and is generally recognized ratably over the remaining term of the hosting period. Fees for the first and third stages of the service are billed based upon milestones. Fees for application hosting and related services in the second stage are generally billed quarterly in advance. Bundled into this revenue element are revenues attributable to the software license used by the customer.

Revenues resulting from hosting services for the *Empirica Signal*, *CTSD* and *WebSDM* products consist of installation and server configuration, application hosting and related support services. Services for this offering are generally charged a monthly fixed fee. Revenues are recognized ratably over the period of the service.

In the event that an application hosting customer cancels a clinical trial and its related statement of work, all deferred revenues are recognized and all deferred set up costs are expensed. In addition, certain termination related fees may be charged and if so, such fees are recognized in the period of termination.

Provisions for estimated losses on uncompleted contracts are made on a contract-by-contract basis and are recognized in the period in which such losses become probable and can be reasonably estimated. To date, the Company has not experienced any material losses on uncompleted application hosting or consulting contracts.

The Company deferred $2,685, $3,423 and $4,469 of set up costs and amortized $2,084, $2,663 and $3,855 of set up costs during the years ended December 31, 2006, 2007 and 2008, respectively. The amortization of deferred set up costs is a component of costs of service revenues.

The Company may also enter into arrangements to provide consulting services separate from a license arrangement. In these situations, revenue is recognized in accordance with SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts,* on either a time and materials basis or using the proportional performance method. If the Company is not able to produce reasonably dependable estimates, revenue is recognized upon completion of the project and final acceptance from the customer. If significant uncertainties exist about project completion or receipt of payment, the revenue is deferred until the uncertainty is resolved. Provisions for estimated losses on contracts are recorded during the period in which they are identified.

Deferred revenues represent amounts billed or cash received in advance of revenue recognition.

In accordance with EITF Issue No. 01-14, *Income Statement Characterization of Reimbursements Received for "Out-of-Pocket" Expenses Incurred,* the Company included $635, $776 and $811 of reimbursable out-of-pocket expenses in service revenues and cost of service revenues in the years ended December 31, 2006, 2007 and 2008, respectively.

Internal Use Software and Website Development Costs

The Company follows the guidance of EITF Issue No. 00-2, *Accounting for Web Site Development Costs,* which sets forth the accounting for website development costs based on the website development activity. The Company follows the guidance set forth in SOP No. 98-1, *Accounting for the Cost of Computer Software Developed or Obtained for Internal Use*, in accounting for the development of its on demand use systems. SOP No. 98-1 requires companies to capitalize qualifying computer software costs which are incurred during the application development stage, and to amortize them over the software's estimated useful life. The Company capitalized $396 during the year ended December 31, 2005, related to Company-wide financial systems and a user management system and has included these amounts in purchased computer software in the accompanying consolidated financial statements. The Company capitalized $951 during the year ended December 31, 2008, relating to company-wide financial systems and outside software development costs associated with the Company's hosting operations. No amounts were capitalized during the years ended December 31, 2006 and 2007. The Company amortizes such costs when the systems or software becomes operational. Costs are amortized over the estimated useful life of the respective system or software. Amortization expense was $162, $148 and $67 during the years ended December 31, 2006, 2007 and 2008, respectively.

Computer Software Development Costs and Research and Development Expenses

The Company has evaluated the establishment of technological feasibility of its products in accordance with SFAS No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased or Otherwise Marketed*. The Company sells products in a market that is subject to rapid technological change, new product development and changing customer needs; accordingly, the Company has concluded that technological feasibility is not established until the development stage of the product is nearly complete. The Company defines technological feasibility as the completion of a working model. The time period during which costs could be capitalized, from the point of reaching technological feasibility until the time of general product release, is very short, and consequently, the amounts that could be capitalized are not material to the Company's financial position or results of operations.

Therefore, the Company has charged all such costs to research and development expense in the period incurred.

Prepaid Sales Commissions and Royalties

For arrangements where revenues are recognized over the relevant contract period, the Company defers related commissions paid to its direct sales force and software license royalties paid to third parties, and amortizes these expenses over the period in which the related revenues are recognized.

Commission payments are nonrefundable unless amounts due from a customer are determined to be uncollectible or if the customer subsequently changes or terminates the level of service, in which case commissions paid are recoverable by the Company. The Company deferred $6,410, $9,381 and $9,445 of commissions and amortized to sales and marketing expense $5,409, $7,455 and $8,642 during the years ended December 31, 2006, 2007 and 2008, respectively.

The Company's royalty obligation is based upon the license and customer support revenues earned for certain products in an arrangement. The Company has the right to recover the royalties in the event the arrangement is cancelled. The Company deferred $2,260, $2,497 and $2,622 of royalties and amortized to cost of revenues $3,117, $2,591 and $2,696 during the years ended December 31, 2006, 2007 and 2008, respectively.

Warranties and Indemnification

The Company's software license arrangements and hosting services are typically warranted to perform in a manner consistent with general industry standards that are reasonably applicable and substantially in accordance with the Company's product documentation under normal use and circumstances. The Company's arrangements also include certain provisions for indemnifying customers against liabilities if its products or services infringe a third party's intellectual property rights. See the discussion of possible indemnification obligations in Note 9.

The Company has entered into service level agreements with some of its hosted application customers warranting certain levels of uptime reliability and permitting those customers to receive credits against monthly hosting fees or terminate their agreements in the event that the Company fails to meet those levels.

To date, the Company has not incurred any material costs as a result of such indemnifications and has not accrued any liabilities related to such obligations in the accompanying consolidated financial statements.

Net Income Per Share

Basic and diluted net income per share is presented in conformity with SFAS No. 128, *Earnings Per Share*. Basic net income per common share for all periods presented was determined by dividing net income applicable to common stockholders by the weighted average number of common shares outstanding during the period. Weighted average shares outstanding exclude unvested restricted common stock. Diluted net income per share includes the effects of all dilutive, potentially issuable common shares using the treasury stock method.

(in thousands, except share and per share amounts)

The calculation of basic and diluted net income per share is as follows:

	Year Ended December 31,		
	2006	2007	2008
Numerator:			
Net income applicable to common stockholders	$ 12,349	$ 29,201	$ 13,845
Denominator:			
Weighted average common shares outstanding	34,642,359	39,569,061	42,815,398
Less weighted average unvested restricted common shares outstanding	(538,117)	(927,374)	(723,208)
Basic weighted average common shares outstanding	34,104,242	38,641,687	42,092,190
Dilutive effect of common stock options	1,604,789	1,683,927	1,299,620
Dilutive effect of unvested restricted common stock awards and units	27,476	413,315	550,553
Diluted weighted average common shares outstanding	35,736,507	40,738,929	43,942,363
Net income per share applicable to common stockholders:			
Basic	$ 0.36	$ 0.76	$ 0.33
Diluted	$ 0.35	$ 0.72	$ 0.32

The following common share equivalents and unvested restricted shares have been excluded from the computation of diluted weighted average common shares outstanding as of December 31, 2006, 2007 and 2008 as their effect would have been anti-dilutive.

	As of December 31,		
	2006	2007	2008
Options outstanding	110,983	—	—
Unvested restricted common stock awards and units	27,365	64,720	21,643

Foreign Currency Translation

The financial statements of the Company's foreign subsidiaries are translated in accordance with SFAS No. 52, *Foreign Currency Translation.* The reporting currency for the Company is the U.S. dollar. The functional currency of the Company's subsidiaries in Australia, Belgium, France, Germany, India, Japan, Romania and the United Kingdom are the local currencies of those countries. Accordingly, the assets and liabilities of the Company's foreign subsidiaries are translated into U.S. dollars using the exchange rate in effect at each balance sheet date. Revenue and expense accounts are translated using an average rate of exchange during the period. Gains and losses arising from transactions denominated in foreign currencies are primarily related to intercompany accounts that have been determined to be temporary in nature and cash accounts and accounts receivable denominated in non-functional

currencies. The Company has recorded foreign currency losses of approximately $15, $42 and $554 for the years ended December 31, 2006, 2007 and 2008, respectively, and such losses are included in other income (expense) in the accompanying consolidated statements of income.

Foreign currency translation adjustments are accumulated as a component of other comprehensive income (loss) as a separate component of stockholders' equity.

Derivative Instruments

The Company has adopted the accounting and disclosure requirements of SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. SFAS No. 133 requires that all derivative instruments be recorded on the balance sheet at their fair value. The Company enters into forward foreign exchange contracts to hedge transactions denominated in currencies other than the functional currencies of the Company or its subsidiaries against currency fluctuations. These forward contracts are used to reduce the Company's risk associated with foreign currency exchange rate changes, as the gains or losses on these contracts are intended to offset the gains or losses on the underlying exposures. The Company does not engage in foreign currency speculation. See Note 12 for further discussion on the forward foreign exchange contracts.

Cash, Cash Equivalents, Short-term and Long-term Investments

The Company accounts for its investments in accordance with SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities*. Under SFAS No. 115, securities that the Company has the intent and ability to hold to maturity are reported at amortized cost, which approximates market value, and are classified as held-to-maturity. Securities for which it is not the Company's intent to hold to maturity are classified as either available-for-sale securities or trading securities. Available-for-sale securities are reported at fair value, with temporary unrealized gains (losses) excluded from earnings and reported in a separate component of stockholders' equity and other than temporary unrealized losses included in earnings. Trading securities are reported at fair value, with unrealized gains (losses) included in earnings. The Company considers all highly liquid investments with original maturities of 90 days or less at the time of purchase to be cash equivalents and investments with original maturities of between 91 days and one year to be short-term investments. The Company considers investments with maturities greater than one year to be long-term investments. All securities, with the exception of auction rate securities ("ARS"), are classified as held-to-maturity securities. The auction rate securities are debt instruments issued by various municipalities throughout the United States. In prior periods and up through the execution of the signed settlement agreement with UBS in November 2008 as further discussed below, the ARS were classified as available-for-sale because it was the Company's intent not to hold them to maturity. Upon the execution of the settlement agreement with UBS, the Company elected to make a one-time transfer of the ARS from available-for-sale securities to trade securities. Accordingly, on a prospective basis, all unrealized gains (losses) for these trading securities have been included in earnings.

(in thousands, except share and per share amounts)

Cash, cash equivalents, short-term and long-term investments as of December 31, 2007 and 2008 consist of the following:

	December 31, 2007			
Description	**Contracted Maturity**	**Amortized Cost**	**Fair Market Value**	**Balance Per Balance Sheet**
Cash	Demand	$ 8,718	$ 8,718	$ 8,718
Certificate of deposit	50 days	3,100	3,100	3,100
Money market funds	Demand	121,583	121,583	121,583
Total cash and cash equivalents		$133,401	$133,401	$133,401
Auction rate securities(1)	27 years	$ 10,450	$ 10,450	$ 10,450
Certificate of deposit	173 days	1,502	1,501	1,502
U.S. agency notes	—	—	—	—
Corporate bonds	210 days	13,219	13,222	13,219
Total short-term investments		$ 25,171	$ 25,173	$ 25,171
Auction rate securities	27 years	$ 24,050	$ 24,050	$ 24,050
Total long-term investments		$ 24,050	$ 24,050	$ 24,050

(1) These auction rate securities ("ARS") were successfully liquidated subsequent to December 31, 2007, with no loss.

	December 31, 2008			
Description	**Contracted Maturity**	**Amortized Cost**	**Fair Market Value**	**Balance Per Balance Sheet**
Cash	Demand	$ 22,487	$ 22,487	$ 22,487
Money market funds	Demand	109,063	109,063	109,063
Total cash and cash equivalents		$131,550	$131,550	$131,550
U.S. agency notes	236 days	$ 2,000	$ 2,000	$ 2,000
Municipal bonds	1 day	1,000	1,000	1,000
Corporate bonds	127 days	24,893	24,884	24,893
Total short-term investments		$ 27,893	$ 27,884	$ 27,893
Auction rate securities	26 years	$ 24,050	$ 18,022	$ 18,022
Total long-term investments		$ 24,050	$ 18,022	$ 18,022

The Company has had no realized gains or losses from the sale of cash equivalents or short-term investments.

As of December 31, 2008, the Company held ARS totaling $24,050 at par value, which were classified as long-term investments in the accompanying consolidated balance sheet, and recorded at fair value. These ARS are debt instruments issued by various states throughout the United States to finance student loans. The types of ARS that the Company owns are backed by student loans, 95% of which are guaranteed under the Federal Family Education Loan Program, and all have credit ratings of AAA (or equivalent) from a recognized rating agency. Historically, the carrying value of ARS approximated fair value due to the frequent resetting of the interest rates. With the liquidity issues

experienced in the global credit and capital markets, the Company's ARS have experienced multiple failed auctions. While the Company continues to earn and receive interest on these investments at the maximum contractual rate, the estimated fair value of these ARS no longer approximates par value.

In November 2008, the Company accepted an offer (the "Agreement") from UBS AG ("UBS") with respect to all of the Company's ARS held at the time of the Agreement. As a UBS client who holds ARS, the Company will receive certain rights, which will entitle the Company to sell ARS to UBS affiliates during the period from June 30, 2010 to July 2, 2012 for a price equal to par value. In accepting the offer, the Company granted UBS the authority to sell or auction the ARS at par at any time up until the expiration date of the offer and released UBS from any claims relating to the marketing and sale of ARS. UBS's obligations under the agreement are not secured by its assets and do not require UBS to obtain any financing to support its performance obligations under the agreement. UBS has disclaimed any assurance that it will have sufficient financial resources to satisfy its obligations under the agreement. If UBS has insufficient funding to buy back the ARS and the auction process continues to fail, the Company may incur further losses on the carrying value of the ARS.

The Company performed a fair value calculation of these ARS at December 31, 2008. Fair value was determined using a secondary market indications method (direct discounts) and a discounted cash flow method as recent auctions of these securities were not successful, resulting in the Company continuing to hold these securities and issuers paying interest at the estimated maximum contractual rate. This valuation technique considers the following: time left to maturity, the rate of interest paid on the securities, the amount of principal to be repaid to the holders of the securities; the credit worthiness of the issuer and guarantors (if any) and the sufficiency of the collateral; trading characteristics of the securities; ability to borrow against the ARS; evidence from secondary market sales; and the market-clearing yield for the securities. Based on the valuation performed, the Company concluded that the fair value of these ARS at December 31, 2008 was $18,022, a decline of $6,028 from par value. As the Company's signed settlement agreement with UBS indicates that the Company intends to sell the ARS to UBS affiliates before their stated maturity dates under the ARS terms, the decline in fair value is deemed other-than-temporary. Accordingly, the Company recorded a loss on these securities of $6,028 in the accompanying consolidated statement of income for the year ended December 31, 2008. as it was deemed to be other-than-temporary. Included in the $6,028 loss is $1,255, which had previously been recorded as an unrealized loss on the ARS and recorded in other comprehensive income (loss) in the Company's consolidated statement of stockholder's equity and comprehensive income as of September 30, 2008. Upon execution of the UBS settlement agreement, this amount was reversed from other comprehensive income (loss) and recorded in the consolidated statement of income.

The Company elected to measure the fair value of the settlement agreement (the "put option") under the fair value option of SFAS No. 159, *The Fair Value Option for Financial Assets and Liabilities—including an amendment of FASB Statement No. 115*. Fair value was determined using a discounted cash flow method which considered the following factors: term of the agreement, the availability to borrow against the ARS, the creditworthiness of UBS and current market interest rates. Based on the valuation performed, the Company concluded that the fair value of the put option was $5,322. Accordingly, a gain of $5,322 was recorded in the consolidated statement of income for the year ended December 31, 2008 with a corresponding long term asset, "securities settlement agreement" in the consolidated balance sheet at December 31, 2008.

Refer to Note 13 for further discussion on the adoption of SFAS No. 157, *Fair Value Measurements* and SFAS No. 159.

(in thousands, except share and per share amounts)

Property and Equipment

Property and equipment are stated at cost. Depreciation and amortization are computed using the straight-line method based on the estimated useful lives of the related assets as follows:

Asset Classification	Estimated Useful Life
Office and computer equipment	3-5 years
Purchased computer software	3-5 years
Furniture and fixtures	5-7 years
Leasehold improvements	Life of lease

Property and equipment consists of the following:

	Year Ended December 31,	
	2007	2008
Office and computer equipment	$ 24,026	$ 31,714
Purchased computer software	13,142	16,105
Furniture and fixtures	919	5,520
Leasehold improvements	732	13,650
	38,819	66,989
Less accumulated depreciation	(22,852)	(30,374)
Property and equipment, net	$ 15,967	$ 36,615

Depreciation expense for the years ended December 31, 2006, 2007, and 2008 was $4,309, $6,061 and $8,629, respectively. Repair and maintenance costs are expensed as incurred. Expenditures for maintenance and repairs are charged to expense as incurred, whereas major betterments are capitalized as additions to property and equipment.

Impairment of Long-Lived Assets

The Company accounts for long-lived assets in accordance with the provisions of SFAS No. 144, *Accounting for the Impairment or Disposal of Long Lived Assets*. This statement requires that long-lived assets and certain identifiable intangible assets subject to amortization be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. During this review, the Company reevaluates the significant assumptions used in determining the original cost and estimated lives of long-lived assets. Although the assumptions may vary from asset to asset, they generally include operating results, changes in the use of the asset, cash flows and other indicators of value. Management then determines whether the remaining useful life continues to be appropriate or whether there has been an impairment of long-lived assets based primarily upon whether expected future undiscounted cash flows are sufficient to support the assets' recovery. If impairment exists, the Company would adjust the carrying value of the asset to fair value, generally determined by a discounted cash flow analysis.

For the years ended December 31, 2006, 2007 and 2008, the Company has not identified any impairment of its long-lived assets.

Goodwill and Intangible Assets

Goodwill and intangible assets that have indefinite useful lives are not amortized but are evaluated for impairment annually or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Intangible assets that have finite lives are amortized over their useful lives. Intangible assets that are subject to amortization are reviewed for impairment in accordance with the provisions of SFAS No. 144 as discussed above.

The Company assesses the recoverability of goodwill and other indefinite lived intangible assets in accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*. In assessing the recoverability of goodwill and other intangible assets, the Company must make assumptions regarding the estimated future cash flows and other factors to determine the fair value of these assets. If these estimates or their related assumptions change in the future, the Company may be required to record impairment charges against these assets in the reporting period in which the impairment is determined. The Company has determined, using the guidance of SFAS No. 142, that the Company has one reporting unit based on the Company's organizational structure.

For intangible assets that have indefinite useful lives, the impairment evaluation includes a comparison of the carrying value of the intangible asset to that intangible asset's fair value. The fair value of the asset is based upon the net present value of future cash flows, including a terminal value calculation. If the intangible asset's estimated fair value exceeds its carrying value, no impairment exists. If the fair value of the intangible asset does not exceed its carrying value, then an impairment loss shall be recognized in an amount equal to that excess.

For goodwill, the impairment evaluation includes a comparison of the carrying value of the reporting unit for which goodwill and other intangible assets are attributable, to that reporting unit's fair value. The fair value of the reporting unit is based upon the net present value of future cash flows, including a terminal value calculation. If the reporting unit's estimated fair value exceeds the reporting unit's carrying value, no impairment of goodwill exists. If the fair value of the reporting unit does not exceed its carrying value, then further analysis would be required to determine the amount of the impairment, if any.

If the Company determines that there is an impairment in either an intangible asset or goodwill, the Company will be required to record an impairment charge in the reporting period in which the impairment is determined.

SFAS No. 142 prescribes a two-phase process for impairment testing of goodwill. The first phase screens for impairment at the reporting unit level, while the second phase, if necessary, measures the impairment, if any, of goodwill at the reporting unit level.

Consistent with prior years, the Company conducted its annual impairment test of goodwill during the fourth quarter of its fiscal year. Based on the results of the first step of the goodwill impairment test as of October 1, 2008, the annual goodwill impairment test date, the Company has determined that no impairment had taken place during the years ended December 31, 2006, 2007 or 2008, as the carrying amount of the Company's reporting unit was less than the fair value and, therefore, the second step of the goodwill impairment test was not necessary. Additionally, the Company did not identify any indicators of impairment through December 31, 2008 and was not required to perform an updated analysis at December 31, 2008.

(in thousands, except share and per share amounts)

Additionally, for the year ended December 31, 2008, the Company has determined that no impairment of its indefinite lived intangible asset existed as of the measurement date and, accordingly, no impairment charges were recorded during the year ended December 31, 2008.

Concentration of Credit Risk

Except as follows, the Company has no significant off-balance-sheet risk or credit risk concentrations. Financial instruments that subject the Company to potential credit risks are principally cash and cash equivalents, short-term investments, accounts receivable, forward foreign exchange contracts and the UBS securities settlement agreement. The Company maintains its cash and cash equivalents and forward foreign exchange contracts with credit worthy financial institutions. Concentrated credit risk with respect to accounts receivable is limited to large, creditworthy customers. The Company's customers are principally located in the United States, Europe and Asia. Although the Company is directly affected by the overall financial condition of the pharmaceutical, biotechnology and medical device industries, management does not believe significant credit risk exists as of December 31, 2008. The Company has not experienced significant losses related to receivables from individual customers or groups of customers in any specific industry or geographic area. The Company maintains an allowance for doubtful accounts based on accounts past due according to contractual terms and historical collection experience. Actual losses when incurred are charged to the allowance. The Company's losses related to collection of accounts receivable have consistently been within management's expectations. Due to these factors, no additional credit risk beyond amounts provided for collection losses, which the Company reevaluates on a monthly basis based on specific review of receivable agings and the period that any receivables are beyond the standard payment terms, is believed by management to be probable in the Company's accounts receivable. The Company does not require collateral or enter into master netting agreements to mitigate credit risk.

The following table summarizes the number of customers who individually comprise greater than 10% of total revenue and their aggregate percentage of the Company's total revenue.

	Revenue	
	Number of Customers	Percent of Total Revenue
Year ended December 31:		
2006	1	18%
2007	1	15%
2008	1	12%

As of December 31, 2006, 2007 and 2008, no customer represented greater than 10% of total accounts receivable.

The Company serves all of its hosting customers from third-party Web hosting facilities located in the United States. The Company does not control the operation of these facilities, and they are vulnerable to damage or interruption. The Company maintains redundant systems that can be used to provide service in the event third-party Web hosting facilities become unavailable, although in such circumstances, the Company's service may be interrupted during the transition.

(in thousands, except share and per share amounts)

The following table summarizes activity in the Company's allowance for doubtful accounts.

	Year Ended December 31,		
	2006	2007	2008
Balance at beginning of period	$ 318	$ 384	$270
Provision for allowance for doubtful accounts	224	56	322
Write-offs	(158)	(170)	(14)
Balance at end of period	$ 384	$ 270	$578

Disclosure of Fair Value of Financial Instruments

SFAS No. 107, *Disclosure of Fair Value of Financial Instruments*, requires disclosure about fair value of financial instruments. Financial instruments consist of cash equivalents, short-term and long-term investments, accounts receivable, accounts payable and forward foreign exchange contracts. The estimated fair value of these financial instruments approximates their carrying amount due to the short-term nature of these investments.

Comprehensive Income

SFAS No. 130, *Reporting Comprehensive Income,* establishes standards for reporting and displaying comprehensive income and its components in the consolidated financial statements. Comprehensive income is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Other than reported net income, comprehensive income solely consists of foreign currency translation adjustments and is disclosed in the accompanying consolidated statements of stockholders' equity and comprehensive income.

Stock-Based Compensation

On January 1, 2006, the Company adopted the provisions of SFAS No. 123(R), *Share-based Payment*, which requires the Company to recognize expense related to the fair value of stock-based compensation awards. Management elected to use the modified prospective transition method as permitted by SFAS No. 123(R) and therefore has not restated the Company's financial results for prior periods. Under this transition method, stock-based compensation expense for the years ended December 31, 2006, 2007 and 2008 includes compensation expense for all stock-based compensation awards granted on or after March 15, 2004 (the filing date for the initial registration statement for the Company's initial public offering), based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R).

Stock options granted prior to March 15, 2004, are minimum value options, pursuant to SFAS No. 123. Under the provisions of SFAS No. 123(R), the value of these options will not be recorded in the statement of operations subsequent to the adoption of SFAS No. 123(R). Instead, the Company will continue to account for these options using Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations.

For service-based options, accounted for under SFAS No. 123(R), the Company recognizes compensation expense on a straight-line basis over the requisite service period of the award. For performance-based options, the Company recognizes expense on a straight-line basis over the estimated performance period. In addition, SFAS 123(R) requires the benefits of tax deductions in excess of

(in thousands, except share and per share amounts)

recognized stock-based compensation to be reported as a financing activity rather than an operating activity in the statements of cash flows. This requirement reduces net operating cash flows and increases net financing cash flows in certain periods. To date, the Company has not recorded these benefits as they have not been realized.

Prior to the adoption of SFAS No. 123(R), the Company applied SFAS No. 123, *Accounting for Stock-Based Compensation*, amended by SFAS No. 148, *Accounting for Stock-based Compensation—Transition and Disclosure*, which allowed companies to apply the existing accounting rules under APB Opinion No. 25. Pursuant to APB Opinion No. 25, the Company accounted for its stock-based awards to employees using the intrinsic-value method, under which compensation expense was measured on the date of grant as the difference between the fair value of the Company's common stock and the option exercise price multiplied by the number of options granted. Generally, the Company granted stock options with exercise prices equal to the estimated fair value of its common stock; however, to the extent that the fair value of the common stock exceeded the exercise price of stock options granted to employees on the date of grant, the Company recorded deferred compensation and amortized the expense over the vesting schedule of the options, generally four years. During the years ended December 31, 2003 and 2004, in accordance with APB Opinion No. 25, the Company recorded deferred stock-based compensation resulting from the grant of employee stock options with an exercise price less than the fair value of common stock. Upon the adoption of SFAS No. 123(R) on January 1, 2006, the deferred stock-based compensation balance was netted against additional paid-in capital on the consolidated balance sheet and statement of stockholders equity.

For options accounted for under SFAS No. 123(R), the fair value of each option grant is estimated on the date of grant using the Black-Scholes pricing model. The assumptions used and the resulting estimated fair value for grants during the applicable period are as follows:

	Year Ended December 31,		
	2006	2007(1)	2008(1)
Risk-free interest rate	4.65%	N/A	N/A
Expected dividend yield	—	N/A	N/A
Expected life (years)	4.28	N/A	N/A
Expected volatility	53%	N/A	N/A
Weighted-average fair value per share of options granted	$ 4.21	N/A	N/A
Weighted-average fair value per share of restricted stock awards granted	$12.42	$19.30	$15.94

(1) No stock options were granted in 2007 or 2008.

For purposes of utilizing the Black-Scholes option pricing model and because there was a limited trading history for its common stock, the Company determined the expected life and the volatility for options based on an analysis of reported data for a peer group of companies that have issued stock options with substantially similar terms. The expected life of options granted by the Company has been determined based on the average expected life of the options as reported by this peer group of companies during a similar reporting period. The expected volatility of options granted has been determined using an average of the historical volatility measures of this peer group of companies as well as the historical volatility of the Company's common stock beginning in January 2005. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected life of the stock options. The Company has not paid and does not anticipate paying cash dividends on its

(in thousands, except share and per share amounts)

shares of common stock; therefore, the expected dividend yield is assumed to be zero. In addition, while SFAS No. 123 permitted companies to record forfeitures based on actual forfeitures, which was the Company's historical policy under SFAS No. 123, SFAS No. 123(R) requires companies to utilize an estimated forfeiture rate when calculating stock-based compensation expense for the period. The Company has issued the following types of equity awards which are taken into account when calculating stock-based compensation: (i) restricted stock awards, (ii) restricted stock units, (iii) stock options, referred to below as service-based stock options, that vest in accordance with a schedule determined at the time of grant and (iv) stock options, referred to as milestone options, that vest upon the earlier of attainment of specified milestones or a specified number of years from the date of grant.

The Company applied forfeiture rates derived from an analysis of its historical data in determining the expense recorded in the Company's consolidated statements of income as follows:

	Year Ended December 31,		
	2006	2007	2008
Restricted stock units and awards	8.0%	4.0%	6.3%
Service-based stock options	8.0%	8.0%	9.0%
Milestone options	8.0%	12.0%	12.0%

In 2004, the Company adopted the Phase Forward Incorporated 2004 Employee Stock Purchase Plan (the "2004 ESPP"), which was amended effective December 1, 2005 and is now considered a non-compensatory plan under SFAS No. 123(R) (see Note 11).

During the years ended December 31, 2006, 2007 and 2008, the Company recorded $3,022, $5,578 and $8,345 of aggregate stock-based compensation expense, respectively, of which $2,635, $5,442 and $8,345, respectively, was a result of the adoption of SFAS No. 123(R). The remaining stock-based compensation expense is due to the amortization of stock-based compensation associated with previously issued stock options in accordance with APB Opinion No. 25, which amounted to $387, $136 and $0, in 2006, 2007 and 2008, respectively.

As of December 31, 2008, there was $22,824 of unrecognized stock-based compensation expense related to stock-based awards that is expected to be recognized over a weighted average period of 3.0 years.

Income Taxes

The Company accounts for income taxes in accordance with SFAS No. 109. This statement requires the Company to recognize deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the Company's financial statements or tax returns. Under this method, deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax bases of the assets and liabilities using the enacted tax rates in effect in the years in which the differences are expected to reverse. A valuation allowance against deferred tax assets is recorded if, based on the weight of the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company adopted the provisions of Financial Accounting Standards Board ("FASB") Interpretation No. ("FIN") 48, *Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement No. 109,* on January 1, 2007. FIN 48 clarifies the accounting for uncertainty in income taxes

recognized in an enterprise's financial statements in accordance with SFAS No. 109 and prescribes a recognition threshold and measurement process for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. At the adoption date and as of December 31, 2008, the Company had no material unrecognized tax benefits and no adjustments to liabilities or operations were required.

Advertising Expenses

Advertising costs are expensed as incurred. Advertising expenses totaled $42, $22 and $51 for the years ended December 31, 2006, 2007 and 2008, respectively.

Recently Issued Accounting Pronouncements

In December 2007, the FASB issued SFAS No. 141 (Revised 2007), *Business Combinations.* SFAS No. 141(R) retains the fundamental requirements in SFAS No. 141 that the acquisition method of accounting (which SFAS No.141 called the purchase method) be used for all business combinations and for an acquirer to be identified for each business combination. SFAS 141(R) requires an acquirer to recognize the assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions specified in SFAS No. 141(R). That replaces Statement 141's cost-allocation process, which required the cost of an acquisition to be allocated to the individual assets acquired and liabilities assumed based on their estimated fair values. SFAS No. 141(R) retains the guidance in SFAS No. 141 for identifying and recognizing intangible assets separately from goodwill. SFAS 141(R) will now require acquisition costs to be expensed as incurred, restructuring costs associated with a business combination must generally be expensed prior to the acquisition date and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally will affect income tax expense. SFAS No. 141(R) applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008, which is the Company's 2009 fiscal year. Earlier adoption is prohibited. The adoption of SFAS No. 141(R) may have a significant impact on the Company's accounting for future acquisitions.

In December 2007, the FASB released SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements—an amendment of ARB No. 51.* SFAS No. 160 was issued to improve the relevance comparability, and transparency of financial information provided in financial statements by establishing accounting and reporting standards for the noncontrolling interest in a subsidiary and for the deconsolidation of a subsidiary. SFAS No. 160 is effective for fiscal years beginning after December 15, 2008 and will be applied prospectively, except for the presentation and disclosure requirements which will be applied retrospectively. The adoption of SFAS No. 160 is not expected to have a material effect on the Company's consolidated financial position or results of operations.

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities, an amendment of FASB Statement No. 133.* SFAS No. 161 requires disclosure of how and why an entity uses derivative instruments, how derivative instruments and related hedged items are accounted for and how derivative instruments and related hedged items affect an entity's financial position, financial performance, and cash flows. SFAS No. 161 is effective for fiscal years beginning after November 15, 2008, with early adoption permitted. The adoption of SFAS No. 161 is not expected to have a material effect on the Company's consolidated financial position and results of operations.

(in thousands, except share and per share amounts)

In May 2008, the FASB issued SFAS No. 162, *The Hierarchy of Generally Accepted Accounting Principles*. SFAS No. 162 identifies the sources of generally accepted accounting principles in the United States. SFAS No. 162 is effective sixty days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles*. The adoption of SFAS No. 162 is not expected to have a material effect on the Company's consolidated financial position and results of operations.

3. Acquisitions

Lincoln Technologies, Inc.

On August 25, 2005, the Company acquired all of the outstanding capital stock of Lincoln Technologies, Inc. ("Lincoln"), a provider of products and services for drug safety, clinical trial safety signal detection, and applied data standards. The acquired technology and products of Lincoln provide the Company with an expanded drug safety offering and enhance the Company's ability to offer innovative software and services in the drug safety market. The Company paid a premium for Lincoln to enable it to expand its offerings in the drug safety market and to obtain a valuable workforce.

The aggregate purchase price was $16,667. The acquisition agreement called for additional cash consideration to be paid subject to achievement of certain financial targets in 2005 and 2006, of up to $2,000 and $4,000, respectively. The defined 2005 financial targets were achieved and, accordingly, the Company accrued additional consideration of $2,000 in 2005 which was paid in May 2006. The acquisition agreement was amended in September 2006 to amend the terms of the remaining contingent earn-out payment for which the security holders of Lincoln could be eligible in 2007 under the acquisition agreement. Pursuant to the amendment, the Company agreed to pay the security holders of Lincoln an aggregate of $3,500 in cash on December 26, 2007 in satisfaction of the Company's remaining payment obligations under the acquisition agreement. The $3,500 was accrued as of December 31, 2006. The acquisition of Lincoln was accounted for as a purchase under SFAS No. 141, *Business Combinations*. Accordingly, the results of Lincoln have been included in the audited consolidated financial statements of the Company since the date of acquisition.

The components of the consideration are as follows:

	Amount
Initial cash paid	$11,000
Acquisition costs	167
Payment of earn-out	2,000
Accrued earn-out	3,500
Total purchase price	$16,667

(in thousands, except share and per share amounts)

The following table summarizes the allocation of the initial purchase price to the fair value of the assets acquired and liabilities assumed at the date of acquisition and the additional cash consideration of $2,000 in 2005 and $3,500 in 2006:

	Amount	
Current assets		$ 1,679
Property, plant and equipment		263
Intangible assets subject to amortization:		
Developed technology (five year useful life)	$1,800	
Customer base (five year useful life)	1,600	
Other intangible assets (two to five year useful life)	500	3,900
Goodwill		11,497
Total assets acquired		17,339
Current liabilities		(672)
Net assets acquired		$16,667

The acquired intangible assets and goodwill are subject to review for impairment as indicators of impairment develop and otherwise at least annually. Additionally, the Company assumed certain liabilities in the acquisition including deferred revenue which was recorded at the fair value of the Company's remaining performance obligation using a cost-plus profit approach.

Included in liabilities assumed is a provision for lease abandonment costs of approximately $270 relating to the leased facilities of Lincoln.

A rollforward of the liability for lease abandonment costs is as follows:

	Year Ended December 31,	
	2006	2007
Beginning of period	$ 222	$ 17
Reduction to provision for sublease	(117)	—
Payments made	(125)	(117)
Payments received from sublease	37	100
End of period	$ 17	$ —

Green Mountain Logic, Inc.

On October 30, 2007, the Company acquired all of the outstanding capital stock of Green Mountain Logic, Inc. ("Green Mountain"), a process automation software company that provides targeted solutions for the life sciences industry, including LabPas Phase I clinic automation software. The Company paid a premium to acquire the technology and products of Green Mountain, which provide the Company with a solution targeted for Phase I clinical trials.

The aggregate purchase price was $5,397. The acquisition of Green Mountain was accounted for as a purchase under SFAS No. 141. Accordingly, the results of Green Mountain have been included in the audited consolidated financial statements of the Company since the date of acquisition.

(in thousands, except share and per share amounts)

The components of the consideration are as follows:

	Amount
Initial cash paid	$5,250
Acquisition costs	147
Total purchase price	$5,397

The following table summarizes the allocation of the initial purchase price to the fair value of the assets acquired and liabilities assumed at the date of acquisition:

		Amount
Current assets		$ 287
Property, plant and equipment		19
Intangible assets subject to amortization:		
Developed technology (five year useful life)	$1,300	
Customer base (five year useful life)	100	
Trade name (five year useful life)	100	1,500
Goodwill		3,943
Total assets acquired		5,749
Current liabilities		(267)
Long-term liabilities (deferred tax liabilities)		(385)
In-process R&D expense		300
Net assets acquired		$5,397

The acquired intangible assets and goodwill are subject to review for impairment as indicators of impairment develop and otherwise at least annually. Additionally, the Company assumed certain liabilities in the acquisition including deferred revenue which was recorded at the fair value of the Company's remaining performance obligation using a cost-plus profit approach.

The Company has not furnished proforma financial information relating to the Green Mountain acquisition because such information is not material to the Company's financial results.

Clarix LLC

On September 5, 2008, the Company acquired all of the outstanding membership interests of Clarix LLC ("Clarix"), a provider of Web-integrated interactive response technology ("IRT") for clinical trial management. Clarix's Web-integrated IRT is used for subject randomization, predictive medication inventory management, and operational management in reporting clinical trials. The aggregate purchase price was $41,283. The Company acquired the technology of Clarix, to allow the Company to penetrate the IRT market and extend its electronic data capture solution. There were no earn-out provisions as a result of the acquisition. The acquisition of Clarix was accounted for as a purchase under SFAS No. 141. Accordingly, the results of Clarix have been included in the consolidated financial statements of the Company since the date of acquisition.

(in thousands, except share and per share amounts)

The components of the consideration are as follows:

	Amount
Cash paid	$40,000
Acquisition costs	1,283
Total purchase price	$41,283

The following table summarizes the allocation of the purchase price to the fair value of the assets acquired and liabilities assumed at the date of acquisition:

		Amount
Current assets		$ 3,323
Property, plant and equipment		227
Intangible assets subject to amortization:		
Developed technology (eight year useful life)	$12,360	
Customer base (thirteen year useful life)	8,310	
Trade name (indefinite useful life)	4,110	
Non-compete agreements (three year useful life)	310	
Customer backlog (three year useful life)	720	25,810
Other assets, long-term		1,122
Goodwill		13,718
Total assets acquired		44,200
Current liabilities		(1,021)
Deferred revenue		(1,896)
Net assets acquired		$41,283

The acquired intangible assets and goodwill are subject to review for impairment as indicators of impairment develop and otherwise at least annually. Additionally, the Company assumed certain liabilities in the acquisition including deferred revenue which was recorded at the fair value of the Company's remaining performance obligation using a cost-plus profit approach.

The Company has not furnished pro forma financial information relating to the Clarix acquisition because such information is not material to the Company's financial results.

4. Goodwill and Intangible Assets

Goodwill and intangible assets that have indefinite lives are not amortized but are evaluated for impairment annually or whenever events or changes in circumstances indicate the carrying value may not be recoverable. Intangible assets that have finite lives are amortized over their useful lives.

(in thousands, except share and per share amounts)

A rollforward of the net carrying amount of goodwill is as follows:

	Year Ended December 31,	
	2007	2008
Balance at beginning of year	$27,820	$25,511
Release of valuation allowance related to acquired net operating losses—(see Note 6)	(6,130)	—
Increase associated with the acquisition of Green Mountain (see Note 3)	3,943	—
Increase associated with the acquisition of Clarix (see Note 3)	—	13,718
Purchase price adjustments	(122)	(104)
Balance at end of year	$25,511	$39,125

The utilization of or release of the valuation allowance related to acquired net operating losses reflects an actual or anticipated reduction in cash payments to local taxing authorities for income taxes that are not reflected as a benefit in the income tax provision for financial statement purposes, but rather as a reduction to goodwill. In 2007, the Company determined that it was more likely than not that it would realize the full value of its deferred tax asset and therefore reduced the remaining valuation allowance by $22,665. The benefit of the release in valuation allowance was realized through reductions to income tax expense of $16,535 and to goodwill of $6,130.

In connection with the acquisition of the Clarix (Note 3), the Company identified certain acquired intangible assets which were determined to have an indefinite life. The assets, which relate to the tradename of Clarix, totaled $4,110.

Acquired intangible assets subject to amortization are amortized over their estimated useful lives based on either the pattern in which the economic benefits of the intangible asset are consumed or on a straight-line method. The estimated useful life represents the anticipated term of the acquired intangible assets. Intangible assets, excluding goodwill and tradenames with indefinite useful lives, which relate to the acquisitions of Lincoln, Green Mountain and Clarix consist of the following as of December 31, 2007 and 2008:

		As of December 31, 2007		As of December 31, 2008	
Description	Estimated Useful Life	Gross Carrying Value	Accumulated Amortization	Gross Carrying Value	Accumulated Amortization
Developed technology and know-how	5 - 8 years	$3,100	$ 890	$15,460	$1,743
Customer relationships	5 - 13 years	1,700	756	10,010	1,309
Non-compete agreements	2 - 3 years	300	300	610	335
Tradename	5 years	300	98	300	157
Customer backlog	3 - 5 years	—	—	720	80
Total		$5,400	$2,044	$27,100	$3,624

Amortization expense related to intangible assets for the years ended December 31, 2006, 2007 and 2008 was $870, $867 and $1,580, respectively.

(in thousands, except share and per share amounts)

The estimated remaining amortization expense for each of the five succeeding fiscal years and thereafter is as follows:

Year ended December 31,	Amount
2009	$ 3,046
2010	3,394
2011	2,887
2012	2,686
2013	2,515
2014 and thereafter	8,948
Total	$23,476

5. Accrued Expenses

Accrued expenses consist of the following:

	As of December 31,	
	2007	2008
Accrued payroll and related benefits	$12,084	$14,108
Accrued royalties	2,010	1,839
Loss on foreign exchange contracts	—	1,059
Lease exit costs	—	527
Accrued other expenses	5,353	5,153
	$19,447	$22,686

6. Income Taxes

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

	Year Ended December 31,		
	2006	2007	2008
Domestic	$10,624	$18,348	$19,232
Foreign	1,504	1,683	1,967
Total	$12,128	$20,031	$21,199

(in thousands, except share and per share amounts)

The (benefit from) provision for income taxes in the accompanying consolidated statements of income consists of the following:

	Year Ended December 31,		
	2006	2007	2008
Current provision :			
Federal	$ 4,062	$ 876	$ 496
State	625	(9)	165
Foreign	505	738	168
Total	$ 5,192	$ 1,605	$ 829
Deferred (benefit) provision:			
Federal	$(4,785)	$ (9,925)	$5,671
State	(741)	(755)	465
Foreign	113	(95)	389
Total	$(5,413)	(10,775)	$6,525
Total (benefit) provision	$ (221)	$ (9,170)	$7,354

The Company has used net operating losses to reduce the income tax payable in the years ended December 31, 2006, 2007 and 2008. Generally, tax laws require net operating loss carryforwards to be used in the order generated. As a result, in the years ended December 31, 2006, 2007 and 2008, a portion of the operating losses utilized by the Company related to net operating losses acquired in the Clinsoft acquisition to offset taxable income. The benefit of these net operating losses has been reflected as a reduction to goodwill (see Note 4).

A reconciliation of the federal statutory rate to the Company's effective tax rate is as follows:

	Year Ended December 31,		
	2006	2007	2008
Federal statutory rate	34%	35%	35%
State tax	3	3	3
Tax credits (research and development)	—	(5)	(6)
Increase in tax reserves	—	4	1
Decrease in valuation allowance	(45)	(83)	—
Stock-based compensation expense	5	—	—
Other	1	—	2
Effective tax rate	(2)%	(46)%	35%

(in thousands, except share and per share amounts)

The approximate income tax effect of each type of temporary difference and carryforward as of December 31, 2007 and 2008 is as follows:

	As of December 31,	
	2007	2008
Net operating loss carryforwards	$21,799	$11,623
Nondeductible reserves and other	29	1,117
Deferred compensation	1,905	2,792
Tax credits (research & development, AMT & foreign taxes)	4,168	5,470
Acquired intangible assets	(1,264)	(1,000)
	$26,637	$20,002

The Company is subject to income taxes in both the United States and foreign jurisdictions, and uses estimates in determining its provision for income taxes. The Company accounts for income taxes in accordance with SFAS No. 109, which is the asset and liability method for accounting and reporting for income taxes. Under SFAS No. 109, deferred tax assets and liabilities are recognized based on temporary differences between the financial reporting and income tax bases of assets and liabilities using statutory rates. This process requires the Company to project its current tax liability and estimate its deferred tax assets and liabilities, including net operating loss and tax credit carryforwards. In assessing the need for a valuation allowance, the Company considered its recent operating results, future taxable income projections and all prudent and feasible tax planning strategies. In the year ended December 31, 2006, the Company determined that it was more likely than not that the Company would realize an additional portion of its deferred tax asset and therefore reduced the valuation allowance by an additional $5,620. The benefit of the release in valuation allowance was realized through reductions to income tax expense of $5,413 and to goodwill of $207. In the year ended December 31, 2007, the Company determined that it was more likely than not that it would realize the full value of its remaining deferred tax asset and therefore reduced the valuation allowance by an additional $22,665. The benefit of the release in valuation allowance was realized through reductions to income tax expense of $16,535 and to goodwill of $6,130.

At December 31, 2008, the Company had $30,426 of net operating loss carryforwards that may be used to offset future U.S. federal taxable income. In addition, the Company had $18,251 of net operating losses resulting from excess tax deductions related to stock-based compensation. The Company will realize the benefit of these excess tax deductions through increases to stockholders equity in the periods in which the losses are utilized to reduce tax payments. The Company had $2,437 of federal research and development tax credit carryforwards that may be utilized to offset future U.S. taxable income. The net operating loss and tax credit carryforward periods extend through 2028. The Company had $1,190 of foreign net operating loss carryforwards that may be used to offset future foreign taxable income. These foreign net operating loss carryforwards have an unlimited carryforward period. The Company also had $3,774 of research and development tax credit carryforwards that may be utilized to offset future Massachusetts state income tax. The Massachusetts tax credit carryforward period extends through 2023. The federal and state net operating loss carryforwards and research and development tax credit carryforwards are subject to review and possible adjustment by the taxing authorities. Also, the Internal Revenue Code contains provisions that may limit the net operating loss and tax credit carryforwards available in any given year in the event of certain changes in the ownership interests of significant stockholders.

(in thousands, except share and per share amounts)

On January 1, 2007, the Company adopted the provisions of FIN 48. The Company did not record an increase in the liability for unrecognized income tax benefits as a result of the adoption of FIN 48. As of December 31, 2007 and 2008 the liability for unrecognized income tax benefits was $1,154 and $1,387, respectively. Of the balance as of December 31, 2008, $1,387 would favorably impact the Company's tax rate if recognized. The Company recognizes interest and penalties as a component of income tax expense. As of December 31, 2007 and 2008, the Company had an accrual of $123 and $127, respectively, for the payment of interest and penalties related to its unrecognized tax positions.

The reconciliation of the gross amount of unrecognized tax benefits as of December 31, 2007 and 2008 is as follows:

	Year Ended December 31, 2007	Year Ended December 31, 2008
Balance at beginning of period	$ 388	$1,374
Increase related to prior year tax positions	700	—
Increase related to current year tax positions	286	279
Balance at end of period	$1,374	$1,653

As of December 31, 2008, the Company does not expect the amount of unrecognized tax benefits to change significantly over the next twelve months.

The Company files income tax returns in the federal United States, various U.S. state jurisdictions and various foreign jurisdictions. The statute of limitations for federal and state tax authorities is closed for years prior to December 31, 2005, although carryforward attributes that were generated prior to 2005 may still be subject to examination if they either have been or will be utilized to offset taxable income in tax years 2005 and forward. The statute of limitations for foreign tax jurisdictions is closed for tax years prior to December 31, 2003.

The Company's current intention is to reinvest the total amount of its unremitted foreign earnings in the local jurisdiction, to the extent they are generated and available, or to repatriate the earnings only when tax-effective. As such, the Company has not provided U.S. tax expense on $2,300 of the unremitted earnings of its foreign subsidiaries. If such earnings were distributed, it would result in approximately $117 of incremental U.S. tax expense.

7. Lease Exit Costs

The Company recorded lease exit costs of $527 for the year ended December 31, 2008 that related to the relocation of the Company's corporate headquarters in December 2008. Of this amount, $429 represented the loss on a facilities lease and $98 related to the abandonment of the related fixed assets and leasehold improvements. The facility lease loss represented two months of rent remaining under the Company's former lease and related operating expenses. The Company has recorded the lease exit costs in accrued expenses in the accompanying consolidated balance sheet.

8. Restricted Cash and Debt

As of December 31, 2007, the Company had a working capital line of credit with a bank under which the Company could borrow up to $2,000, of which $1,500 was available and $500 reserved under a letter of credit associated with the Company's leased former headquarters. The line of credit expired on March 31, 2008, and was not renewed. As of December 31, 2008, the $500 collateral obligation for

(in thousands, except share and per share amounts)

the Company's leased former headquarters was secured by a certificate of deposit. The certificate of deposit has been classified as "Restricted cash, current portion" in the accompanying consolidated balance sheet.

In connection with the signing of a lease on February 13, 2008 to secure office space for the Company's current corporate headquarters at 77 Fourth Avenue, Waltham, Massachusetts, the Company deposited with the landlord an unconditional, irrevocable letter of credit in the landlord's favor in the amount of $962, secured by a certificate of deposit. The certificate of deposit has been classified as "Restricted cash, net of current portion" in the accompanying consolidated balance sheet.

9. Commitments and Contingencies

Operating Leases

The Company conducts its operations in facilities under non-cancelable operating leases expiring through February 2019. Under the terms of the leases the Company is required to make the following payments:

	Amount
Year ended December 31,	
2009	$ 7,357
2010	7,662
2011	7,263
2012	6,821
2013	6,603
2014 and thereafter	37,323
Total minimum lease payments	$73,029

Certain of the Company's leases have escalating rent payments. In accordance with SFAS 13, *Accounting for Leases,* the Company records rent expense on a straight line basis over the term of the lease. Rent expense for the periods ended December 31, 2006, 2007 and 2008 was approximately $3,079, $3,349 and $4,251, respectively. As of December 31, 2007 and 2008, the Company has deferred rent of approximately $356 and $564, respectively, of which $116 and $564, respectively, is classified as a long-term liability in the accompanying consolidated balance sheets.

The Company does not have any special purpose entities or any off balance sheet financing arrangements.

Contingencies

From time to time and in the ordinary course of business, the Company is subject to various claims, charges and litigation. Intellectual property disputes often have a risk of injunctive relief which, if imposed against the Company, could materially and adversely affect its financial condition, or results of operations. From time to time, third parties have asserted and may in the future assert intellectual property rights to technologies that are important to the Company's business and have demanded and may in the future demand that the Company license their technology. Although the outcome of litigation cannot be predicted with certainty and some lawsuits, claims or proceedings may be disposed of unfavorably to the Company, which could materially and adversely affect its financial condition or results of operations, the Company does not believe that it is currently a party to any material legal proceedings.

For example, the Company entered into a Settlement Agreement and related License Agreement relating to a lawsuit filed by Datasci, LLC in 2004 alleging that certain of the Company's products and services and certain products and services of one of the Company's customers, Quintiles, Inc., infringe a United States patent claimed to be owned by Datasci. Under the Settlement Agreement and related License Agreement, the Company agreed to make a one-time, lump-sum payment to Datasci in the amount of $8,500 to settle the claim and obtain a perpetual, irrevocable, fully paid worldwide, non-exclusive license to the patent that was the subject of the claim. The confidential settlement, in which neither party admits liability, provides for mutual releases and dismissal of all actions between the parties.

Pursuant to SFAS No. 142, the Company reviewed the attributes of the license obtained and estimated that the license obtained had no value or useful life and that the license would not contribute to the Company's future cash flows, either directly or indirectly. In addition, the Company does not anticipate changing any of its products as a result of the license to this patent. As such, the settlement amount was recorded as a charge to operations. Since the contingency existed as of December 31, 2005 and the settlement was concluded prior to the issuance of the 2005 audited consolidated financial statements, in accordance with SFAS No. 5, the Company recorded the impact of the settlement in 2005 as a charge to operations. The settlement was paid during the first quarter of fiscal 2006.

10. Leasehold Incentive Obligations

In conjunction with the February 2008 lease agreement for the Company's current headquarters, the landlord agreed to reimburse the Company for up to a specified amount of leasehold improvements. In accordance with SFAS No. 13 and FASB Technical Bulletin 88-1, *Issues Relating to Accounting for Leases*, the leasehold improvements are recognized in property and equipment on the consolidated balance sheet, with the corresponding reimbursement recognized as "leasehold incentive obligations" on the consolidated balance sheet. The amount of the incentive will be amortized on a straight-line basis over the lease term as a reduction of rental expense at the beginning of occupancy. The leasehold improvements in property, plant and equipment will be amortized over the shorter of the lease term or the estimated useful life of the asset. For the year ended December 31, 2008, the Company amortized $66 of the leasehold incentive obligations as a reduction to rent expense.

For additional information regarding the February 2008 lease agreement, see Note 9.

11. Stockholders' Equity

Common Stock

For the years ended December 31, 2006, 2007 and 2008, the Company issued 847,055, 899,933, and 275,081 shares of common stock resulting in proceeds of $3,220, $3,379 and $1,676, respectively, from the exercise of common stock options. For the years ended December 31, 2006, 2007 and 2008, the Company issued 25,210, 16,156 and 33,703 shares of common stock resulting in proceeds of $329, $290 and $511, respectively, in connection with the Company's 2004 ESPP.

On May 29, 2007, the Company sold 5,500,000 shares of common stock at $15.00 per share in a public offering, resulting in proceeds of $77,455 after deducting underwriters' discounts and offering related expenses. The Company also granted the underwriters an option for 30 days to purchase up to an additional 825,000 shares to cover over-allotments, if any, which was exercised in full on June 1,

2007, resulting in net proceeds of $11,695 after deducting underwriters' discounts. A summary of the terms of the offering can be found in the Company's Registration Statement No. 333-142328 on Form S-3, as filed with the Securities and Exchange Commission (the "SEC").

Stock-Based Compensation Plans

The Company currently has one plan under which it may grant stock-based compensation awards to its directors, employees and non-employees. The Company has two additional plans under which there are awards outstanding, but under which no future awards may be made.

In 2004, the Board of Directors and stockholders approved the Phase Forward Incorporated 2004 Stock Option and Incentive Plan (the "2004 Plan") which became effective upon the closing of the Company's initial public offering. The Company had reserved for issuance an aggregate of 1,500,000 shares of common stock under the 2004 Plan. Under the 2004 Plan, the Board of Directors may grant stock options and other equity interests in the Company to employees of the Company and non-employees. The exercise price of each option is determined by the Board of Directors. Stock options may not be granted with an exercise price less than the fair market value of the stock on the date of grant, as defined by the Board of Directors. Options granted under the 2004 Plan generally vest over a four to seven year period and expire ten years from the grant date. In February 2005, the Company granted options to certain employees to purchase a total of 419,000 shares of common stock that vest upon the earlier of attainment of specified milestones or 7 years from the date of grant. Of these February 2005 option grants, 197,000 options have since vested due to the achievement of milestones, 50,000 options were forfeited, and 172,000 remain unvested. Generally, the remainder of equity awards granted were service-based and vest over a period of four years from the date of grant. On May 3, 2006, the Company's stockholders approved an amendment to the 2004 Plan to increase the number of shares available for issuance from 1,500,000 shares to 3,500,000 shares. In 2006, the Company issued 1,113,175 unvested restricted stock awards and restricted stock units under the 2004 Plan. Generally, the balances of these unvested restricted stock awards and units vest 50% in two years; 75% in three years and 100% in four years. A total of 400,000 unvested restricted stock awards were granted to the Company's Chief Executive Officer and vest 25% in three years; 50% in four years and 100% in five years. In 2007, the Company issued 589,144 unvested restricted stock units under the 2004 Plan. Generally, the balances of these unvested restricted stock options and units vest 50% in two years; 75% in three years and 100% in four years. In 2008, the Company issued 988,307 unvested restricted stock units under the 2004 Plan. Generally, the balances of these unvested restricted stock options and units vest 50% in two years; 75% in three years and 100% in four years. On October 20, 2008, the Company approved the lapsing of restrictions on 25,000 restricted stock awards to its Former Chairman of the Board and Chief Strategy Officer resulting in additional stock-based compensation expense of $332 in 2008, of which $54 represented incremental expense. In addition, the Company approved the acceleration of the vesting of 6,250 shares of incentive stock options to the same individual. The acceleration resulted in additional stock-based compensation expense of $45 in 2008, of which $29 represented incremental expense.

On May 2, 2007, the Company's stockholders approved an amendment to the 2004 Plan to increase the number of shares available for issuance under the plan by 481,505 shares, bringing total shares authorized for issuance under the 2004 Plan to 3,981,505. The increase is equal to the number of shares that were available for issuance under the Company's two other stock plans (the Phase Forward Incorporated 1997 Stock Option Plan and the Phase Forward Incorporated 2003 Non-Employee Director Stock Option Plan) at the date of the amendment. As part of that amendment,

the Company decided that it will no longer issue any further shares under its two other plans. As of December 31, 2008, the Company had 443,665 shares available for grant under the 2004 Plan.

In 1997, the Company adopted the Phase Forward Incorporated 1997 Stock Option Plan (the "1997 Plan"). On May 2, 2007, the Company's stockholders approved an amendment to the 2004 Plan as discussed above. As part of that amendment, the Company decided that it will no longer issue any further shares under the 1997 Plan. Prior to the May 2, 2007 amendment to the 2004 Plan, under the 1997 Plan, the Board of Directors could grant incentive and nonqualified stock options to employees of the Company and non-employees. The exercise price of each option was determined by the Board of Directors. Incentive stock options could not be granted with an exercise price less than the fair market value of the stock on the date of grant, as defined by the Board of Directors. Options granted under the 1997 Plan generally vest over four or five year periods and expire ten years from the grant date. In January and March 2004, the Company granted options to certain employees to purchase a total of 205,000 shares of common stock that vest upon the earlier of 7 years from date of grant or the attainment of specified milestones. Options to purchase 178,750 shares have since either vested upon the attainment of specified milestones in accordance with the original provisions of the award or been modified to change the vesting provisions to a 4-year service period. Options to purchase 26,250 shares were accelerated in December 2004. There was no incremental stock-based compensation in excess of the amounts that were previously recorded as deferred compensation.

In 2003, the Board of Directors and stockholders approved the Phase Forward Incorporated 2003 Non-Employee Director Stock Option Plan (the "2003 NED Plan"). As part of the amendment to the 2004 Plan as discussed above, the Company decided that it will no longer issue any further shares under the 2003 NED Plan. The Company reserved for issuance an aggregate of 362,000 shares of common stock under the 2003 NED Plan. Effective April 20, 2004, the 2003 NED Plan was amended to increase the number of shares the Company could grant under this plan to 562,000 shares. The 2003 NED Plan provided solely for the automatic, one-time grant of a nonqualified stock option to a non-employee director upon initial election to the Company's Board of Directors to purchase 100,000 shares of common stock. On September 23, 2005, the 2003 NED Plan was amended to reduce the one-time grant from 100,000 to 50,000 stock options. The exercise price of the options could not be less than 100% of the fair market value on the grant date. Options vest fully on the fifth anniversary of the date of grant, so long as the non-employee director has continuously served on the Board of Directors through such vesting date. If the non-employee director meets certain board attendance criteria, options may vest earlier at a rate of one-sixteenth at the end of each fiscal quarter following the date of grant.

Non Plan Awards

Restricted stock unit awards for the year ended December 31, 2008 included an aggregate of 210,254 restricted stock units awarded to former employees of Clarix, which was acquired by the Company in September 2008. These awards were made as "inducement" awards within the definitions of the NASDAQ rulings. The Company determined that these awards were not part of the purchase price of the acquisition as the awards vest over three or four year periods based on future service. As such, the Company is accounting for these awards under SFAS No. 123(R) and will record stock-based compensation expense for these awards based on the fair value as of the date of grant.

(in thousands, except share and per share amounts)

Stock Option Activity

A summary of stock option activity under the 1997 Plan, the 2004 Plan and the 2003 NED Plan as of December 31, 2008, and changes during the year ended December 31, 2008, is as follows:

	Number of Shares	Exercise Price per Share	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value(2)
Outstanding at December 31, 2007	2,473,717	$0.20 - 10.29	$4.99	5.76	
Granted	—	—	—		
Exercised	(275,081)	0.20 - 8.90	6.09		$ 1,769
Cancelled	(11,513)	3.00 - 8.90	7.10		
Outstanding at December 31, 2008	2,187,123	$0.20 - 10.29	4.84	4.77	$16,805
Exercisable at December 31, 2008	2,027,234	$0.20 - 10.29	4.65	4.64	$15,947
Vested or expected to vest at December 31, 2008(1)	2,178,225		$4.83	4.76	$16,751

(1) The vested or expected to vest options at December 31, 2008 include both the vested options and the number of options expected to vest calculated after applying an estimated forfeiture rate to the unvested options.

(2) The aggregate intrinsic value is calculated based on the positive difference between the fair value per share of the Company's common stock on December 31, 2008 or the date of exercise, as appropriate, and the exercise price of the underlying options.

A summary of the status of the Company's unvested stock options as of December 31, 2008, and changes during the year ended December 31, 2008, is as follows:

Unvested Shares	Shares	Weighted Average Exercise Price Per Share
Unvested at December 31, 2007	546,224	6.97
Granted	—	—
Vested	(374,822)	6.88
Forfeited	(11,513)	7.10
Unvested at December 31, 2008	159,889	$7.15

(in thousands, except share and per share amounts)

Restricted Stock Awards and Unit Activity

A summary of activity related to unvested restricted common stock awards and unit awards for the year ended December 31, 2008, is as follows:

	Number of Shares	Market Price per Share	Weighted Average Grant Date Fair Value Per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value(2)
Unvested at December 31, 2007	1,569,469	$12.12 - 23.20	$16.52		
Granted	988,307	10.85 - 21.13			
Vested	(331,537)	12.12 - 23.20			
Forfeited	(86,275)	12.12 - 23.03			
Unvested at December 31, 2008	2,139,964	10.85 - 23.20	15.66	2.69	$33,512
Expected to be free of restrictions(1)	1,646,892	$10.85 - 23.20	$12.52	2.73	$20,619

(1) The expected to be free of restrictions at December 31, 2008 was calculated by applying an estimated forfeiture rate to the unvested shares.

(2) The aggregate intrinsic value is calculated based on the fair value per share of the Company's common stock on December 31, 2008 of $12.52.

Employee Stock Purchase Plan

In 2004, the Board of Directors and stockholders approved the 2004 ESPP, which became effective after the completion of the Company's initial public offering on July 20, 2004. The Company has reserved for issuance under this plan an aggregate of 320,000 shares of common stock. The 2004 ESPP allows eligible employees the opportunity to purchase shares of the Company's common stock through payroll deductions of up to 10% of a participant's annual compensation with a maximum of 5,000 shares available per participant during each payment period, subject to statutory limitations. The first payment period began on September 2, 2004 and ended on November 30, 2004. All subsequent payment periods consist of six-month periods commencing on December 1 and June 1 and ending on the last day of May and November.

Prior to December 1, 2005, the price per share under the 2004 ESPP for each payment period was the lesser of (1) 85% of the last reported sale price of the Company's common stock on the first business day of the payment period and (2) 85% of the last reported sale price of the common stock on the last business day of the payment period. Effective December 1, 2005, the Company amended the price provision of the 2004 ESPP such that the option price is now set at 95% of the last reported sale price of the common stock on the last business day of the payment period. Accordingly, the 2004 ESPP is considered a non-compensatory plan under SFAS No. 123(R).

12. Forward Foreign Exchange Contracts

The Company enters into transactions in currencies other than the U.S. dollar and holds cash in foreign currencies which expose the Company to transaction gains and losses as foreign currency exchange rates fluctuate against the U.S. dollar. The Company from time to time enters into forward foreign exchange contracts to hedge the foreign currency exposure of non-U.S. dollar denominated

(in thousands, except share and per share amounts)

third-party and intercompany receivables and cash balances. The contracts which relate to the British pound, euro, and the Japanese yen, generally have terms of one month. These hedges are deemed fair value hedges and have not been designated for hedge accounting. The gains or losses on the forward foreign exchange contracts along with the associated losses and gains on the revaluation and settlement of the short-term intercompany balances, accounts receivable and cash balances are recorded in current operations in other income (expense).

The following table summarizes the outstanding forward foreign exchange contracts held by the Company at December 31, 2007 and 2008:

		As of December 31,			
		2007		2008	
Currency	Hedge Type	Local Currency Amount	Approximate U.S. Dollar Equivalent	Local Currency Amount	Approximate U.S. Dollar Equivalent
British pound	Sale	7,500	$14,861	—	$ —
British pound	Buy	—	—	1,200	1,765
Euro	Sale	3,400	$ 4,965	7,500	10,454
Japanese yen	Sale	—	—	45,000	477
			$19,826		$12,696

The forward foreign exchange contracts are short-term and generally mature within one month of origination.

Realized and unrealized foreign currency gains (losses), net of hedging are accounted for in other income (expense). Foreign currency losses, net of hedging, were $15, $42 and $554 for the years ended December 31, 2006, 2007 and 2008, respectively. The Company settles forward foreign exchange contracts in cash. As of December 31, 2008, the Company recorded $1,059 of foreign exchange losses in other income (expense) and accrued expenses related to the outstanding forward foreign exchange contracts at December 31, 2008.

13. Fair Value Measurements

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements*, which defines fair value, establishes a framework for measuring fair value in accordance with generally accepted accounting principles and expands disclosures about fair value measurements. SFAS No. 157 does not require any new fair value measurements, but its provisions apply to all other accounting pronouncements that require or permit fair value measurement. SFAS No. 157 was effective for the Company's fiscal year beginning January 1, 2008 and for interim periods within that year. In February 2008, the FASB issued FASB Staff Position (FSP) No. 157-2, *Effective Date of FASB Statement No. 157*, which delayed for one year the effective date of SFAS No. 157 for nonfinancial assets and nonfinancial liabilities, except for items that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). As required, the Company adopted SFAS No. 157 for its financial assets on January 1, 2008. Adoption did not have a material impact on the Company's financial position or results of operations. The Company has not yet determined the impact on its financial statements of the January 1, 2009 adoption of SFAS No. 157 as it pertains to non-financial assets and liabilities.

SFAS No. 157 clarifies that fair value is an exit price, representing the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants based on the highest and best use of the asset or liability. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. SFAS No. 157 requires the Company to use valuation techniques to measure fair value that maximize the use of observable inputs and minimize the use of unobservable inputs. These inputs are prioritized as follows:

- *Level 1:* Observable inputs such as quoted prices for identical assets or liabilities in active markets;
- *Level 2:* Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly such as quoted prices for similar assets or liabilities or market-corroborated inputs; and
- *Level 3:* Unobservable inputs for which there is little or no market data, which require the reporting entity to develop its own assumptions about how market participants would price the assets or liabilities.

The valuation techniques that may be used to measure fair value are as follows:

A. *Market approach*—Uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities

B. *Income approach*—Uses valuation techniques to convert future amounts to a single present amount based on current market expectations about those future amounts, including present value techniques, option-pricing models and excess earnings method

C. *Cost approach*—Based on the amount that currently would be required to replace the service capacity of an asset (replacement cost)

(in thousands, except share and per share amounts)

The following table sets forth the Company's financial instruments carried at fair value within the SFAS No. 157 hierarchy and using the lowest level of input as of December 31, 2008:

	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets:				
Money market funds	$109,063	$ —	$ —	$109,063
Restricted cash	1,462	—	—	1,462
Total cash equivalents and restricted cash	$110,525	$ —	$ —	$110,525
U.S. agency notes	$ —	$ 2,000	$ —	$ 2,000
Municipal bonds	—	1,000	—	1,000
Corporate bonds	—	24,884	—	24,884
Total short-term investments	$ —	$27,884	$ —	$ 27,884
Auction rate securities(1)	$ —	$ —	$18,022	$ 18,022
Securities settlement agreement	—	—	5,322	5,322
Total long-term investments	$ —	$ $—	$23,344	$ 23,344
Total assets	$110,525	$27,884	$23,344	$161,753

(1) The Company's investments in ARS and the securities settlement agreement with UBS are classified within Level 3 because there are currently no active markets for ARS and the Company is unable to obtain independent valuations from market sources. Therefore, the ARS were primarily valued based on an income approach using an estimate of future cash flows. For additional information regarding ARS, see Note 2.

The following table sets forth a summary of changes in the fair value of the Company's Level 3 financial assets for the twelve months ended December 31, 2008:

	Level 3 Financial Assets
Balance, beginning of period	$ —
Transfers in (out) of Level 3	29,372
Sales	—
Realized gains (losses)	—
Unrealized gains (losses) on securities held at period end	(6,028)
Balance, end of period	$23,344

Realized gains and losses from sales of the Company's investments are included in "Other income (expense)" and unrealized gains and losses are included as a separate component of equity, net of tax, unless the loss is determined to be other-than-temporary.

The Company also adopted the provisions of SFAS No. 159 in the first quarter of 2008. SFAS No. 159 allows companies to choose to measure eligible assets and liabilities at fair value with changes in value recognized in earnings. Fair value treatment may be elected either upon initial recognition of

(in thousands, except share and per share amounts)

an eligible asset or liability or, for an existing asset or liability, if an event triggers a new basis of accounting. The Company did not elect to re-measure any of its existing financial assets or liabilities under the provisions of this Statement, and did not elect the fair value option for any financial assets and liabilities transacted in fiscal 2008 the year-ended December 31, 2008, except for the put option related to the Company's ARS that was recorded in conjunction with a settlement agreement with UBS as more fully described in Note 2.

14. Business Segments and Geographic Information

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, establishes standards for reporting information regarding operating segments in annual financial statements and requires selected information of those segments to be presented in interim financial reports issued to stockholders. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker, or decision-making group, in making decisions on how to allocate resources and assess performance. The Company's chief decision maker, as defined under SFAS No. 131, is the chief executive officer. The Company views its operations and manages its business as one operating segment.

Geographic Data

Financial information by geographic area for the years ended December 31, 2006, 2007 and 2008 were as follows:

The following table summarizes revenues recorded in each of the Company's principal sales office locations:

	Year Ended December 31,		
	2006	2007	2008
Revenues:			
United States	$ 54,490	$ 68,283	$ 94,555
United Kingdom	35,195	46,575	51,417
France	10,300	11,901	15,099
Asia Pacific	6,628	7,530	9,113
	$106,613	$134,289	$170,184

The following table summarizes property and equipment, net by location within and outside the U.S.:

	As of December 31,	
	2007	2008
Property and equipment, net:		
United States	$15,004	$35,829
United Kingdom	637	407
Other	326	379
	$15,967	$36,615

(in thousands, except share and per share amounts)

15. Employee Benefit Plan

On January 1, 1998, the Company adopted the Phase Forward Incorporated 401(k) Plan (the "401(k) Plan"). The 401(k) Plan allows employees to make pretax contributions up to the maximum allowable amount set by the Internal Revenue Service. Under the 401(k) Plan, the Company may match a portion of the employee contribution up to a defined maximum. The Company may, but is not obligated to, provide profit sharing to employees. The Company has made no contributions to date to the 401(k) Plan.

16. Quarterly Financial Data (unaudited)

The following table presents a summary of quarterly results of operations for 2007 and 2008:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Year ended December 31, 2007:				
Total revenues	$30,084	$31,534	$34,876	$37,795
Gross margin	17,952	18,646	20,763	21,469
Net income applicable to common stockholders	3,481	4,328	5,718	15,674
Net income per share applicable to common stockholders:				
Basic	$ 0.10	$ 0.12	$ 0.14	$ 0.38
Diluted	$ 0.10	$ 0.11	$ 0.13	$ 0.36
Year ended December 31, 2008:				
Total revenues	$38,020	$40,851	$42,991	$48,322
Gross margin	21,837	23,034	24,467	27,906
Net income applicable to common stockholders	4,002	3,694	3,441	2,708
Net income per share applicable to common stockholders:				
Basic	$ 0.10	$ 0.09	$ 0.08	$ 0.06
Diluted	$ 0.09	$ 0.08	$ 0.08	$ 0.06

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PHASE•FORWARD™

Stockholder Reference Information

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Investor Relations

Investor information may be found at www.phaseforward.com under the "Investors" link.

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New York, NY 10038
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Common Stock

Phase Forward's common stock is traded on the Nasdaq Global Select Market under the symbol "PFWD".

Annual Meeting of Stockholders

Phase Forward's annual meeting of stockholders will be held on May 8, 2009 at its corporate headquarters.

Availability of Proxy Statement and Form 10-K

Phase Forward's Proxy Statement and Form 10-K are available on the Internet at www.phaseforward.com under the "Investors" link. A copy of the Proxy Statement and/or Form 10-K may be obtained by contacting the Investor Relations department as listed above.

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