GSE SYSTEMS INC
Form 10-K
March 16, 2009

Conformed

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2008

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

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Commission File Number 001-14785

GSE Systems, Inc.
(Exact name of registrant as specified in its charter)

Delaware	52-1868008
(State of incorporation)	(I.R.S. Employer Identification Number)
1332 Londontown Blvd, Suite 200, Sykesville MD	21784
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (410) 970-7800

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class	Name of each exchange on which registered
Common Stock, $.01 par value	American Stock Exchange

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 [X]

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No [ ]

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, 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 [X]	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 12(b)-2 of the Exchange Act). Yes [ ] No [X]

The aggregate market value of Common Stock held by non-affiliates of the Registrant was $134,757,843 on June 30, 2008, the last business day of the Registrant’s most recently completed second fiscal quarter, based on the closing price of such stock on that date of $8.91.

The number of shares outstanding of the registrant’s Common Stock as of March 13, 2009 was 15,978,122 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, are incorporated by reference into Part III.

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*to be incorporated by reference from the Proxy Statement for the registrant's 2009 Annual Meeting of Shareholders.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS.

This report and the documents incorporated by reference herein contain "forward-looking" statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that are based on management's assumptions, expectations and projections about us, and the industry within which we operate, that have been made pursuant to the Private Securities Litigation Reform Act of 1995 which reflect our expectations regarding our future growth, results of operations, performance and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "continue", "estimate", "intend", "may", "plan", "potential", "predict", "expect", "should", " expressions, or the negative of these terms or other comparable terminology, have been used to identify these forward-looking statements. These forward-looking statements may also use different phrases. These statements regarding our expectations reflect our current beliefs and are based on information currently available to us. Accordingly, these statements by their nature are subject to risks and uncertainties, including those listed under Item 1A Risk Factors, which could cause our actual growth, results, performance and business prospects and opportunities to differ from those expressed in, or implied by, these statements. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. Except as otherwise required by federal securities law, we are not obligated to update or revise these forward-looking statements to reflect new events or circumstances. We caution you that a variety of factors, including but not limited to the factors described below under Item 1A Risk Factors and the following, could cause our business conditions and results to differ materially from what is contained in forward-looking statements:

- changes in the rate of economic growth in the United States and other major international economies;
- changes in investment by the nuclear and fossil electric utility industry, the chemical and petrochemical industries and the U.S. military;
- changes in the financial condition of our customers;
- changes in regulatory environment;
- changes in project design or schedules;
- contract cancellations;
- changes in our estimates of costs to complete projects;
- changes in trade, monetary and fiscal policies worldwide;
- currency fluctuations;
- war and/or terrorist attacks on facilities either owned or where equipment or services are or may be provided;
- outcomes of future litigation;
- protection and validity of our trademarks and other intellectual property rights;
- increasing competition by foreign and domestic companies;
- compliance with our debt covenants;
- recoverability of claims against our customers and others; and
- changes in estimates used in our critical accounting policies.

Other factors and assumptions not identified above were also involved in the formation of these forward-looking statements and the failure of such other assumptions to be realized, as well as other factors, may also cause actual results to differ materially from those projected. Most of these factors are difficult to predict accurately and are generally beyond our control. You should consider the areas of risk described above in connection with any forward-looking statements that may be made by us. You should not place undue reliance on any forward-looking statements. New factors emerge from time to time, and it is not possible for us to predict which factors will arise.

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We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any additional disclosures we make in proxy statements, quarterly reports on Form 10-Q and current reports on Form 8-K filed with the SEC.

PART I

ITEM 1. BUSINESS.

GSE Systems, Inc. ("GSE Systems", "GSE", the "Company", "our", "we" or "us"), a Delaware corporation organized in M 1994, is a world leader in real-time, high fidelity simulation. The Company provides simulation and educational solutions and services to the nuclear and fossil electric utility industry and the chemical and petrochemical industries. In addition, the Company provides plant monitoring, signal analysis monitoring and optimization software primarily to the power industry. GSE is the parent company of GSE Power Systems, Inc., a Delaware corporation; GSE Power Systems, AB, a Swedish corporation; GSE Engineering Systems (Beijing) Co. Ltd., a Chinese limited liability company; GSE Systems Ltd., a British limited liability company; and has a 10% minority interest in Emirates Simulation Academy, LLC, a United Arab Emirates limited liability company.

The Company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act (15 U.S.C. 78m(a) or 78o(d) will be made available free of charge through the Investor Relations section of the Company's Internet website (http://www.gses.com) as soon as practicable after such material is electronically filed with, or furnished to, the SEC. In addition, the public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at http://www.sec.gov.

Recent Developments.

On March 28, 2008, the Company entered into two separate revolving line of credit agreements for two-year revolving lines of credit with Bank of America, N.A. ("BOA"), in an aggregate amount of up to $5.0 million. The Company and its subsidiary, GSE Power Systems, Inc., are jointly and severally liable as co-borrowers. The credit facilities are collateralized by substantially all of the Company's assets and enable the Company to borrow funds to support working capital needs and standby letters of credit. The first line of credit in the principal amount of up to $3.5 million enables the Company to borrow funds up to 90% of eligible foreign accounts receivable, plus 75% of eligible unbilled foreign receivables and 100% of the cash collateral pledged to BOA on outstanding warranty standby letters of credit. This line of credit is 90% guaranteed by the Export-Import Bank of the United States. The interest rate on this line of credit is based on the daily LIBOR rate plus 150 basis points, with interest only payments due monthly. The second line of credit in the principal amount of up to $1.5 million enables the Company to borrow funds up to 80% of domestic accounts receivable and 30% of domestic unbilled receivables. The interest rate on this line of credit is based on the daily LIBOR rate plus 225 basis points, with interest only payments due monthly. The credit facilities require the Company to comply with certain financial ratios and preclude the Company from making acquisitions beyond certain limits without the bank's consent. At December 31, 2008, the Company was in default on two of its financial covenants; however, it has received a written waiver from BOA. The Company's available borrowing base under the two lines of credit was $3.2 million at December 31, 2008, of which $105,000 had been utilized to collateralize a standby letter of credit.

The nuclear power industry has been largely dormant for the last thirty years with few opportunities to provide new full scope simulators. The Company's nuclear simulation business has concentrated mainly on providing services to the installed base of nuclear simulators worldwide. These services are primarily related to upgrading antiquated simulation software and hardware systems, providing new and improved plant and system simulation models, and modifying the simulator to reflect changes in the physical plant. However, over the last several years, the nuclear power industry has experienced a dramatic change, and most energy experts believe the industry is on the verge of a "renaissance", driven by the gap between the energy that the world is projected to need versus the current capacity, the instability in the cost of oil, and growing environmental concerns over the usage of fossil fuels. Government and industry sources and trade journals report that up to 240 new nuclear plants could be built worldwide over the next 20 years. In the U.S. alone, applications for accelerated construction and operating licenses have been or are expected to be submitted for 35 new nuclear plants. Each new plant will be required to have a full scope simulator ready for operator training and certification about two years prior to plant operation. Similar nuclear plant construction programs are underway or planned in China, Russia, Ukraine, Japan and Central Europe to meet growing energy demands. In addition, most U.S. nuclear electric utilities have applied for license extensions and/or power upgrades. These license extensions will lead to significant upgrades to the physical equipment and control room technology which will result in the need to modify or replace the existing plant control room simulators. The Company, having what it believes is the largest installed base of existing simulators, over 60% on a global basis, is well positioned to capture a large portion of this business, although no assurance can be given that it will be successful in doing so. The Company logged approximately $26.5 million, $21.5 million and $12.2 million in nuclear simulation orders in the years ended December 31, 2008, 2007 and 2006, respectively.

In 2005, the Company completed an agreement with Westinghouse Electric Company LLC ("Westinghouse") to become their preferred vendor for the development of simulators for their AP1000 reactor design. As a result of this agreement, GSE is working closely with Westinghouse to cooperate in the development of simulators for the AP1000 design and assist Westinghouse in the verification and validation of the AP1000 Human Machine Interface. The Company's simulation models have been used to help Westinghouse successfully complete several phases of Human Machine Interface testing with U.S. regulators. Westinghouse and its consortium partners received definitive multi-million dollar contracts to provide four AP1000 nuclear power plants in China. The four plants are to be constructed in pairs on China's eastern coast at Sanmen in Zhejiang province and Haiyang in Shandong province. In September 2007, GSE received an initial contract from Westinghouse to begin work on the Sanmen simulator project in China. In February 2008, the Company received the balance of its multi-million dollar order for the Sanmen project. In April 2008, GSE received a contract from Westinghouse to begin work on the Haiyang simulator project. The Company expects to receive the balance of the Haiyang contract from Westinghouse in 2009. The Westinghouse agreement is not exclusive and does not prevent the Company from working with other nuclear vendors anywhere in the world.

In November 2008, the Company was awarded a contract from NuScale Power, Inc. to develop simulation models for its novel, first-of-a-kind nuclear power plant. NuScale Power, Inc. through work performed at Oregon State University and the Department of Energy's Idaho National Engineering laboratory, has designed a small, scalable light water nuclear reactor design for multiple purposes from electricity generation to producing steam needed for industrial applications. GSE's simulation models will be used in NuScale's design certification process, including design analysis, and control system strategy and plant procedure development. Eventually the simulation models would form the basis for a full scope operator training system to license the operators of these new plants.

The Company's fossil fueled power simulation business has been growing rapidly over the past three years. The Company logged approximately $13.6 million, $11.2 million, and $4.8 million of fossil fueled simulation orders for the years ended December 31, 2008, 2007 and 2006, respectively. The transition from obsolete analog control systems to modern digital control systems and the new requirements for complex emission control systems are contributing to the growth the Company is experiencing in this business, coupled with the fact that GSE's high-fidelity simulation models can be used to validate control schemes and logics for new designs before the control systems are deployed to the field. GSE builds the plant models based upon design specifications supplied by its customers, and the models then drive the actual digital control systems in the factory. This testing can uncover numerous control system discrepancies. By correcting these problems at the factory versus in the field, GSE's customers can save millions in reduced down time and reduced commissioning time.

GSE's process industries simulation business customers include primarily oil and gas production facilities, oil refining plants, chemical plants and petro-chemical facilities. As in the power industry, there is increasing focus on regular, periodic and systematic training of plant operator personnel which may reduce the risk of operator errors and potentially catastrophic environment disasters and/or loss of life. The Company logged approximately $1.2 million, $3.4 million, and $1.5 million of process industry simulation orders for the years ended December 31, 2008, 2007 and 2006, respectively.

In 2008, the Company completed its $16.9 million order from the Emirates Simulation Academy in the UAE to supply five simulators and an integrated training program except for the final warranty coverage. The Academy had its formal opening on January 14, 2009. The Company continues to develop its concept of integrating simulation with broader training programs and educational initiatives giving customers a turnkey alternative to traditional on-site operator and maintenance training. In the fourth quarter 2008, the Company was awarded a nuclear power plant operator training program contract with one of the largest U.S. nuclear utilities. The scope of the award includes the development of course materials for a licensed operator preparation course which includes modules on nuclear plant fundamentals, introduction to nuclear plant systems, human performance principles and team building, and an introduction to integrated nuclear plant operations. The classroom training, which GSE personnel will conduct at a Georgia technical college, is scheduled to commence in mid 2009.

The global recession and financial credit crisis has not currently had a significant effect on the Company's business. Specifically, the Company has seen no delays or cancellations to the projects it is currently working on, and is unaware of any delays or cancellations to projects that the Company expects to secure in 2009.

Background.

GSE Systems was formed on March 30, 1994 to consolidate the simulation and related businesses of S3 Technologies, General Physics International Engineering & Simulation and EuroSim, each separately owned and operated by ManTech International Corporation, GP Strategies Corporation and Vattenfall AB, respectively.

In December 1997, the Company acquired 100% of the outstanding common stock of J.L. Ryan, Inc. ("Ryan"), a provider of engineering modifications and upgrade services to the power plant simulation market. The combination of the Company's pre-existing technology with the technical staff of the acquired Ryan business positioned the Company to be more competitive for modifications and upgrade service projects within the nuclear simulation market.

In October 2002, GSE purchased the stock of ManTech Automation Systems (Beijing) Company Ltd, from ManTech International Corp. The Chinese company, which has fourteen employees, was renamed GSE Systems Engineering (Beijing) Company Ltd. This acquisition gave the Company a base in China to pursue and implement simulation projects in that emerging market.

In 2007, the Company formed a subsidiary, GSE Systems Ltd., in the United Kingdom. The British subsidiary was established to provide training solutions to the nuclear power industry. The Company has an agreement with the University of Strathclyde to provide training services at the University using an on-site training simulator provided by GSE.

Simulation Business.

I. Nuclear and Fossil Fuel Power Simulation.

Industry History

The real-time simulation industry grew from the need to train people on complex and potentially dangerous operations, without placing life or capital assets at risk. Real-time simulation has been used for the training of plant operators for the power industry, including both nuclear power plants and conventional fossil fuel power plants (i.e., coal, oil, and natural gas), since the early 1970s. Real-time simulation usage has traditionally centered on initial training of operators and follow-on training of operators in emergency conditions that can best be achieved through simulation replicating actual plant operations.

In the nuclear power industry, use of a simulator that accurately reflects the current actual plant design is mandated by the U.S. Nuclear Regulatory Commission. This mandate resulted from the investigation of the accident at the Three Mile Island nuclear plant in 1979, which was attributed, at least in part, to operator error. The NRC requires nuclear plant operators to earn their licenses through simulator testing. Each nuclear plant simulator must pass a certification program to ensure that the initial plant design and all subsequent changes made to the actual plant control room or plant operations are accurately reflected in the simulator. Plant operating licenses are tied to simulator certification.

Full scope power plant simulators are a physical representation of the entire plant control room. For older plants, the control panels are connected to an input/output (I/O) system, which converts analog electrical signals to digital signals understood by the simulation computer. For newer plants, the control rooms consist mainly of digital control systems and a series of computer screens used by the operator to control the plant. The simulation computer houses the mathematical models, which simulate the physical performance of the power plant's systems such as the reactor core, steam boiler, cooling water, steam turbine, electrical generator, plant system controls and electrical distribution systems. Partial scope simulators can be viewed as a subset of a full scope simulator. Instead of simulating the entire performance of the power plant, a partial scope simulator might represent one or two critical systems such as the steam turbine and/or electrical generator operation.

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In the past, training simulators had to strike a delicate balance between providing an accurate engineering representation of the plant, while still operating in “real-time” in order to provide effective training. As computing power has increased, so too has the capacity of simulators to provide more accurate plant representations in real-time based upon simulation models developed from engineering design codes. The more sophisticated and accurate engineering codes allows customers to use the simulator to help validate plant design, control system strategies, control system displays, and develop plant operating procedures and training material.

Simulation also is used to validate proposed plant equipment changes and to confirm the results of such changes, prior to making the change in the plant, which can save time and money, as well as reduce the risk of unsafe designs, for the utility.

The importance of nuclear power to the U.S. energy supply is resulting in the extension of the useful lives of U.S. nuclear power plants. Any service life extension of a nuclear power plant is likely to require major upgrades to the plant's equipment and technology, including its simulator.

Fossil fuel plant simulators are not required by law or regulation, but are justified as a cost-effective approach to train operators on new digital control systems being implemented at many fossil fuel power plants. The size, complexity and price of a fossil plant simulator are much lower than for simulators used for nuclear plants. Fossil plant simulators have traditionally used lower fidelity (less sophisticated) mathematical models to provide an approximate representation of plant performance. The demand for highly accurate models did not exist in the early market for fossil simulators since the main use of the simulator was to train operators on the functionality of distributed control systems for plant start-up activities.

The deregulation of the power industry has forced utilities to view their assets differently. Power plants must now be profit centers, and gaining the maximum efficiency from the plant to become, or remain, competitive is a paramount issue. The mindset of the operator has shifted, as plant operators now must perform within narrower and narrower performance margins while still maintaining safe operations. GSE believes its fossil fuel plant customers are now recognizing the benefits of high fidelity simulation models that provide highly accurate representations of plant operations to help plant operators and management determine optimal performance conditions.

Beyond traditional operator training uses, the Company sees a significant shift in the use of its simulators to test plant automation systems before they are deployed in the actual plant. Control strategies and equipment set points are validated on the simulator prior to plant start up to ensure the control schemes work properly and the expected plant performance is achieved. Performing these tests on a high fidelity simulator saves days or weeks in the plant start up, thereby reducing cost and ensuring quicker revenue generation by the utility.

Industry Future

The Company sees a renaissance in nuclear power generation both domestically and internationally that will provide significant opportunities for expansion of the Company’s business. China has announced plans to build 40 new nuclear plants by the year 2020. Russia has also announced plans for 40 new plants by 2030. New plants are on the drawing board or under construction in Finland, Slovakia, and Bulgaria. Domestically, numerous utilities are preparing applications for Construction and Operating Licenses under the Department of Energy 2010 incentive program, a joint government/industry cost-shared effort to identify sites for new nuclear power plants, develop advanced nuclear plant technologies, and demonstrate new regulatory processes leading to a private sector decision to order new nuclear power plants for deployment in the United States in the 2010 timeframe. Beyond new construction, numerous U.S. utilities are extending the useful life of their current assets.

These license extension processes in the nuclear industry will result in significant changes in plant equipment and control room technology. Based upon U.S. Nuclear Regulatory Commission regulations, each training simulator is required to reflect all changes that are made in the actual plant, thus when changes in plant equipment and control room technology are made, the nuclear power plants must either upgrade existing simulators or purchase brand new simulators.

The second phenomena affecting the industry is the aging of the nuclear and fossil plant operator workforce which will result in the need for simulation to train the next generation of plant operators. The industry is faced with an aging workforce at the same time new capacity is needed, thereby placing significant pressure on the industry to find and train the next generation of operations and maintenance personnel. According to the Energy Central Research and Analysis Division white paper entitled The High Cost of Losing Intellectual Capital, the U.S. Bureau of Labor Statistics predicts that 30% or more of the existing workforce will be eligible for retirement in the next five years, and it is believed that by 2012 there will be nearly 10,000 more utility industry jobs then workers to fill them.

Therefore, the Company believes that these trends, if they come to fruition in whole or even in part, represent a market opportunity for its real-time simulation, plant optimization, asset management and condition monitoring products and services.

GSE's Solution

The Company's Power Simulation business is a leader in the development, marketing and support of high fidelity, real-time, dynamic simulation software for the electric utility industry. The Company has built or modified about 65 of the approximately 75 full-scope simulators serving about 103 operating nuclear power plants in the United States. Outside the United States, GSE has built or modified about 73 of the approximately 167 full-scope simulators serving approximately 329 operating nuclear power plants.

The Company has developed integrated training solutions which combine the power of the Company's simulation technology with training content to provide turn-key training for the power and process industries. These training centers will help industry bridge the gap between college and university level training and real world experience through simulation.

In addition to operator training, the Company's simulation products and services permit plant owners and operators to simulate the effects of changes in plant configuration and performance conditions to optimize plant operation. These features allow the Company's customers to understand the cost implications of replacing a piece of equipment, installing new technology or holding out-of-service assets. GSE has also developed a suite of tools based on sophisticated signal analysis and simulation techniques to help its customers manage their assets by determining equipment degradation before it severely impacts plant performance.

The Company has also focused on upgrading older technology used in power plants to new technology upgrades for plant process computers and safety parameter display systems. As nuclear plants in the U.S. continue to age, the Company will seek more business in this upgrade market.

GSE provides both turn-key solutions, including simulated hardware and proprietary software, to match a specific plant, and discrete simulation technology for specific uses throughout a plant. Its substantial investment in simulation technology has led to the development of proprietary software tools. These tools significantly reduce the cost and time to implement simulation solutions and support long-term maintenance. The Company's high fidelity, real-time simulation technology for power plant fluid, logic and control, electrical systems and associated real-time support software, JADE, is available for use primarily on UNIX, Linux and Windows computer platforms. The Company's Xtreme tools were designed for the Windows environment. Both technologies were specifically designed to provide user friendly graphic interfaces to the Company's high fidelity simulator.

In addition to the simulator market, the Company offers products aimed at improving performance of existing plants by reducing the number of unplanned outages due to equipment failure. Using advanced signal analysis techniques, the Company's tools can predict when certain plant equipment needs to be replaced. Replacement of critical equipment prior to failure permits effective planning and efficient use of maintenance time during scheduled off-line periods.

Products of the Power Simulation business include:

- Java Applications & Development Environment (JADE™), a Java-based application that provides a window into the simulation instructor station and takes advantage of the web capabilities of Java, allowing customers to access the simulator and run simulation scenarios from anywhere they have access to the web. JADE includes the following software modeling tools:
  - JFlow™, a modeling tool that generates dynamic models for flow and pressure networks.
  - JControl™, a modeling tool that generates control logic models from logic diagrams.
  - JLogic™, a modeling tool that generates control logic models from schematic diagrams.
  - JElectric™, a modeling tool that generates electric system models from schematic and one-line diagrams.
  - JTopmeret™, a modeling tool that generates two phase network dynamic models.
  - JDesigner™, a JADE based intuitive graphic editor for all JADE tools.
  - JStation™, a JADE based web-enabled Instructor Station.

- Xtreme Tools™, a suite of software modeling tools developled under the Microsoft Windows environment. It includes:

- Xtreme Flow™, a modeling tool that generates dynamic models for flow and pressure networks.
- Xtreme Control™, a modeling tool that generates control logic models from logic diagrams.
- Xtreme Logic™, a modeling tool that generates control logic models from schematic diagrams.
- Xtreme Electric™, a modeling tool that generates electric system models from schematic and one-line diagrams.

- RELAP5 R/T HD™, a real-time version of the safety analysis code RELAP5 developed by the Idaho National Laboratory. The Company's HD (High Definition) version of RELAP5 R/T enables the engineers to understand and control all of the internal functions of RELAP5, making this solution unique in the market.

- SimExec® and OpenSim®, real-time simulation executive systems that control all real-time simulation activities and allow for an off-line software development environment in parallel with the training environment. OpenSim is targeted for users of Microsoft Windows operating systems, while SimExec is targeted for users of Microsoft Windows, UNIX and Linux operating systems.

- SmartTutor®, complementary software for instructor stations. It provides new capabilities to help improve training methodologies and productivity. Using Microsoft Smart Tag technology, SmartTutor allows the control of the simulator software directly from Microsoft Office products. The user can run training scenarios directly from a Microsoft Word document, or he can plot and show transients live within a Microsoft PowerPoint slide.

- Xtreme I/S™, a Microsoft Windows based Instructor Station that allows the use of Microsoft Word and PowerPoint to control the real-time simulation environment. Xtreme I/S is a user-friendly tool for classroom training and electronic report generation. It provides real-time plant performance directly from the simulator during classroom training, which drastically increases learning efficiency.

- Pegasus Surveillance and Diagnosis System™, a software package for semi-automatic plant surveillance and diagnostics, incorporates sophisticated signal processing and simulation techniques to help operators evaluate the condition and performance of plant components. Pegasus permits plant management to identify degraded performance and replace components before they fail.

- SIMON™, a computer workstation system used for monitoring stability of boiling water reactor plants. SIMON assists the operator in determining potential instability events, enabling corrective action to be taken to prevent unnecessary plant shutdowns.

The Simulation business also provides consulting and engineering services to help users plan, design, implement, and manage/support simulation and control systems. Services include application engineering, project management, training, site services, maintenance contracts and repair.

Strategy

The goal of the Power Simulation business is to expand its business on three fronts:

- Continue serving its traditional customer base.
- Combine its simulation capability with training content to provide totally integrated training solutions.
- Expand the use of high fidelity simulatoin beyond trining to help validate plant design.

Traditional Simulation Market. Nuclear power currently accounts for about 20% of the electrical power grid capacity in the United States and this percentage will likely remain the same even as total capacity increases. Any new nuclear power plants will likely be of the advanced reactor designs created by Westinghouse, General Electric and Areva. These new designs require new simulators and training programs, as they are different from the nuclear power plant designs currently in operation. In addition to new power plants, existing nuclear power plants will likely be required to remain on-line for a longer period than originally expected. In order to stay in operation, many plants will require life extension modifications. Since all existing U.S. nuclear power plants went on-line before 1979, their designs and technology can also benefit from the substantial advances in plant design and technology developed over the past 30 years. For example, several of the Company's U.S. utility customers are considering replacing their existing hard panel control rooms with modern distributed control systems (DCS) as are common in fossil fuel plants, and which have been implemented in Europe for several years. Significant changes to control room instrumentation and overall control strategy from hard panel to DCS generally require modification or replacement of the plant simulator. With the largest installed base of nuclear plant simulators in the world, the Company believes it is uniquely positioned to serve this market segment with new simulation products and services. GSE has received several projects in the last few years for implementing digital turbine control systems in U.S. plants.

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As plants extend their useful life, many plan to “up-rate” the existing capacity to increase electrical yield. By changing the capacity of certain equipment in a plant, the utility can gain upwards of a 10%-15% increase in output. Again, any such changes must be reflected in the control room simulator, and operators must be trained on the new equipment before implementation.

In addition to the United States markets, several emerging regions of the world are expanding their electrical capacity with both nuclear and fossil fuel power plants. This is particularly the case in China and the Gulf Region of the Middle East. In 2006, the Company received its first contract for a fully integrated training academy in the United Arab Emirates. The Emirates Simulation Academy, LLC is using five simulators developed by the Company for gas turbine plants, combined cycle power plants, oil refineries, oil platforms and desalination plants. In addition, the Company has provided the training content for both classroom and simulator training. The Company sees other opportunities for similar academies in other regions of the world.

Classroom Simulation. In recent years the Company has upgraded numerous training simulators to utilize standard PC technology. As an extension of the PC-based simulator technology, the Company has developed tools which will allow the training simulator to be used in a classroom setting, replacing the actual control room panels with “soft-panel” graphics.

Increased training requirements and demands for performance improvement have resulted in simulator training time becoming scarce. By providing the actual training simulator models in a classroom setting, the value of the simulator is increased by allowing more personnel the training advantages of interactive, dynamic real-time simulation.

The Company pioneered the technology to run a simulator on a PC several years ago. However, the technology remains complex, which prevented wide deployment of the simulator in classrooms. The Company has developed unique software which allows simulator-based training lessons to be easily developed and deployed in a classroom setting.

Simulation Beyond Training. In addition to operator training, the Company’s simulation products can meet this increased need for efficiency by assisting plant operators in understanding the cost implications of replacing equipment, installing new technology and maintaining out-of-service assets. In order to exploit this potential, the Company has increased the fidelity of its simulation products and is marketing its services to increase the fidelity of simulators that are already in operation.

As computing power and networking technologies improve, several of the Company’s customers have started to migrate simulation technology from the training organization to the engineering organization. The same full scope simulation software that drives the simulated control room panels in a simulator can be used with graphical representations of the panels so engineers can test design changes and see how the balance of the plant will react to such changes. GSE has developed a Java-based application to allow customers easier access to, and use of, the simulation capabilities across the organization through network communication.

Optimize Existing Engineering Resources. GSE's Power domestic service organization focuses on simulator upgrades and retrofits. In addition to domestic resources, GSE has developed a network of trained engineers in Russia, Ukraine, Czech Republic, Bulgaria, and China. These foreign resources provide low cost engineering and software development capabilities and are readily available to supplement the United States engineering staff as necessary.

Strategic Alliances

Power's strategic alliances have enabled the Company to penetrate regions outside the United States by combining the Company's technological expertise with the regional presence and knowledge of local market participants. These strategic alliances have also permitted the reduction of research and development and marketing costs by sharing such costs with other companies.

In recent years, a significant amount of the Company's international business has come from contracts in Eastern Europe, including the republics of the former Soviet Union, and the Pacific Rim. In order to acquire and perform these contracts, the Company entered into strategic alliances with various entities including All Russian Research Institute for Nuclear Power Plant Operation (Russia); Kurchatov Institute (Russia); Risk Engineering Ltd. (Bulgaria); Samsung Electronics (Korea); Sinopec Ningbo Engineering Company (China); Toyo Engineering Corporation (Japan); and Westinghouse Electric Company LLC (U.S.). In March 2006, GSE completed a strategic alliance with the University of Strathclyde in Glasgow, UK to develop a simulation training and plant diagnostics center to serve the UK.

Competition

The Power Simulation business encounters intense competition. In the nuclear simulation market, GSE competes directly with larger firms primarily from Canada and Germany, such as MAPPS Inc., a subsidiary of L-3 Communications, and Rheinmetal Defense Electronics (RDE). The fossil simulation market is represented by smaller companies in the U.S. and overseas. Several of the Company's competitors have greater capital and other resources than it has, including, among other advantages, more personnel and greater marketing, financial, technical and research and development capabilities. Customer purchasing decisions are generally based upon price, the quality of the technology, experience in related projects, and the financial stability of the supplier.

Customers

The Power Simulation business has provided approximately 200 simulation systems to an installed base of over 75 customers worldwide. In 2008, approximately 63% of the Company's revenue was generated from end users outside the United States. Customers include, among others, ABB Inc., American Electric Power, Bernische Kraftwerke AG (Switzerland), British Energy Generation Ltd. (UK), Comission Federal De Electricidad (Mexico), Emerson Process Management, Emirates Simulation Academy, LLC (UAE), Kapar Energy Ventures SDN BHD (Malaysia), Karnkraftsakerhet och Utbildning AB (Sweden), Kraftwerks Simulator Gesellschaft mbH (Germany), Battelle's Pacific Northwest National Laboratory, Nuclear Engineering Ltd. (Japan), Pebble Bed Modular Reactor (Pty) Ltd. (South Africa), PSEG Nuclear, Inc., and Rosenergoatom Federal State Owned Enterprise (Russia).

For the year ended December 31, 2008, Emerson Process Management provided 16% of the Company's consolidated revenue (8% in 2007 and 10% in 2006) and American Electric Power provided 11% of the Company's consolidated revenue (0% in 2007 and 1% in 2006).

Sales and Marketing

The Company markets its Power Simulation products and services through a network of direct sales staff, agents and representatives, systems integrators and strategic alliance partners. Market-oriented business and customer development teams define and implement specific campaigns to pursue opportunities in the power marketplace.

The Company's ability to support its multi-facility, international and/or multinational Power Simulation clients is facilitated by its network of offices and strategic partners in the U.S. and overseas. Power Simulation offices are maintained in Maryland and Georgia, and outside the U.S., in Sweden and China. In addition to the offices located overseas, the Company's ability to conduct international business is enhanced by its multilingual and multicultural work force. GSE has strategic relationships with systems integrators and agents representing its interests in the Czech Republic, Bulgaria, Germany, Japan, Mexico, People's Republic of China, South Africa, Spain, South Korea, Taiwan, Ukraine and the United Kingdom.

II. Process Industries Simulation.

Industry

Throughout the process industries there is continuing competitive pressure, reduction of technical resources, and an aging workforce which is forcing process manufacturers to turn to advanced technologies for real-time optimization, training, and advanced process control. Operational efficiency is vital for companies to remain competitive where many of the manufacturing industries operate on very thin margins. There are only one or two advanced technology companies that offer services fully across this spectrum, and GSE offers dynamic real-time simulation capabilities for operator training and plant design validation and verification into this segment.

GSE's Solution

The SimSuite Pro™ product was developed by GSE specifically for dynamic real-time simulation for operator training and validating the plant design logic and control. The GSE culture and expertise is one of customized project execution and delivery. This marketplace places a high value on experience, both company-wide and for the individuals on the project teams, so GSE promotes its long history in training simulators, while also seeking new applications. The SimSuite Pro package continues to be enhanced with features applicable not just to the execution of professional training techniques and design validation, but also to the recording and validating of process operator performance for potential certification.

Strategy

GSE is uniquely positioned in the process simulation market to provide total training solutions which combine the development of the plant simulator with the training infrastructure and course material to enable the customer to truly benefit from the simulator investment. The core concepts of process simulation make the technology a basis for other potential process improvement activities, such as Advanced Process Control and Process Optimization, which is where some of the major GSE competition has more business focus than for operator training. GSE will continue to emphasize its operator training focus and strengths, as well as the application of the process simulator for change management, where changes in the process, control strategy, or operating procedures can be evaluated in real time before they are applied to the actual process units. On-stream time is an important economic factor, and there is recognizable value in avoiding the risk of unplanned process disturbances from invalidated changes.

An emerging energy market is developing for Integrated Gasification Combined Cycle ("IGCC") power plants. These new plants produce electricity more efficiently than traditional power plants by first converting existing refinery waste materials into synthetic gas that is used to power a gas turbine. The gas is then burned to create steam to turn a steam turbine. The unique nature of these plants requires expertise both in chemical process simulation and power simulation. GSE is one of the few simulator companies in the world with expertise in both areas.

In 2007, GSE was awarded a contract from Sinopec Ningbo Engineering Company ("SNEC") to build an IGCC simulation platform for design verification and validation of the Fujian IGCC plant in China. GSE also formed a strategic alliance with SNEC to build simulators for the SNEC designed refineries and IGCC plants throughout China.

Customers

Hydrocarbon and chemical process customers include numerous large oil refineries and chemical plants such as Statoil ASA of Norway, Bayernoil of Germany, Saudi Basic Industries Corporation of Saudi Arabia, Sinopec Ningbo Engineering Company of China, and Savannah River Nuclear Solutions, LLC of the U.S.

Competition

GSE's process simulation competitors are a varied group. There are major corporations offering a wide range of products and services that include operator training simulators. There are also companies focused on Process Technology and manufacturing enhancement, such as Invensys and Honeywell who are Distributed Control System ("DCS") distributors to the refining industry and provide operator simulation as part of their DCS offering. There is a collection of companies with specific industry niches that enables them to compete in operator training simulation, such as Invensys and RSI Simcon. There are also the smaller training companies that compete at the lower cost levels of Computer Based Training ("CBT") or simple simulations close to CBT.

The GSE focus on dynamic simulation for training and design validation is a business strength, and its vendor independence, with the ability to integrate to different vendor's process control systems, is also a value which is appreciated by customers. GSE can be seen as a best-of-breed type of supplier because it is not tied to a major control system, nor is it providing simulation software for engineering and business management with high annual license fees.

Sales and Marketing

The Company will market its Process Simulation technologies through a combination of techniques including its existing direct sales channel, sales agents, and strategic alliance partners.

Competitive Advantages.

The Company believes that it is in a strong position to compete in the Simulation markets based upon the following strengths:

- Technical and Applications Expertise. GSE is a leading innovator and developer of real-time software with more than 30 years of experience producing high fidelity real-time simulators. As a result, the Company has acquired substantial applications expertise in the energy and industrial process industries. The Company employs a highly educated and experienced multinational workforce of 178 employees, including approximately 130 engineers and scientists. Approximately 48% these engineers and scientists have advanced science and technical degrees in fields such as chemical, mechanical and electrical engineering, applied mathematics and computer sciences.

- Proprietary Software Tools. GSE has developed a library of proprietary software tools including auto-code generators and system models that substantially facilitate and expedite the design, production and integration, testing and modification of software and systems. These tools are used to automatically generate the computer code and systems models required for specific functions commonly used in simulation applications, thereby enabling it or its customers to develop high fidelity real-time software quickly, accurately and at lower costs.

- Open System Architecture. GSE's software products and tools are executed on standard operating systems with third-party off-the-shelf hardware. The hardware and operating system independence of its software enhances the value of its products by permitting customers to acquire less expensive hardware and operating systems. The Company's products work in the increasingly popular Microsoft operating environment, allowing full utilization and integration of numerous off-the-shelf products for improved performance.

- Training Curricula. The Company has developed detailed course material in engineering fundamentals and specific industrial applications.

- International Strengths. Approximately 63% of the Company's 2008 revenue was derived from international sales of its products and services. GSE has a multinational sales force with offices located in Beijing, China, and Nyköping, Sweden and agents, representatives and partners in 20 other countries. To capitalize on international opportunities and penetrate foreign markets, the Company has established strategic alliances and partnerships with several foreign entities and universities.

Intellectual Property.

The Company depends upon its intellectual property rights in its proprietary technology and information. GSE maintains a portfolio of trademarks (both registered and unregistered), copyrights (both registered and unregistered), and licenses. While such trademarks, copyrights and licenses as a group are of material importance to the Company, it does not consider any one trademark, copyright, or license to be of such importance that the loss or expiration thereof would materially affect the Company. The Company relies upon a combination of trade secrets, copyright, and trademark law, contractual arrangements and technical means to protect its intellectual property rights. GSE distributes its software products under software license agreements that grant customers nonexclusive licenses for the use of its products, which are nontransferable. Use of the licensed software is restricted to designated computers at specified sites, unless the customer obtains a site license of its use of the software. Software and hardware security measures are also employed to prevent unauthorized use of the Company's software, and the licensed software is subject to terms and conditions prohibiting unauthorized reproduction of the software.

The Company does not own any patents. The Company believes that all of the Company's trademarks (especially those that use the phrase "GSE Systems") are valid and will have an unlimited duration as long as they are adequately protected and sufficiently used. The Company's licenses are perpetual in nature and will have an unlimited duration as long as they are adequately protected and the parties adhere to the material terms and conditions.

GSE has eleven registered U.S. trademarks: RETACT®, GSE Systems®, THOR®, OpenSim®, SmartTutor®, SimSuite Pro®, ESmart®, GAARDS®, Openexec®, REMITS-Real-Time Emergency Management Interactive Training System® and SimExec® Some of these trademarks have also been registered in foreign countries. The Company also claims trademark rights to GFLOW+™, GLOGIC+™, GCONTROL+™, GPower+™, SimSuite Power™, Xtr I/S™, RACS™, PEGASUS Plant Surveillance and Diagnosis System™, SIMON™, BRUS™, Sens Base™, Vista PIN™, Application and Development Enviroment (JADE)™.

In addition, the Company maintains federal statutory copyright protection with respect to its software programs and products, has registered copyrights for some of the documentation and manuals related to these programs, and maintains trade secret protection on its software products.

Despite these protections, the Company cannot be sure that it has protected or will be able to protect its intellectual property adequately, that the unauthorized disclosure or use of its intellectual property will be prevented, that others have not or will not develop similar technology independently, or, to the extent it owns any patents in the future, that others have not or will not be able to design around those patents. Furthermore, the laws of certain countries in which the Company's products are sold do not protect its products and intellectual property rights to the same extent as the laws of the United States.

Industries Served.

The following chart illustrates the approximate percentage of the Company's 2008, 2007, and 2006 consolidated revenue by industries served:

	2008	2007	2006
Nuclear power industry	54%	45%	60%
Fossil fuel power industry	31%	20%	18%
Training and education industry	6%	31%	21%
Other	9%	4%	1%
Total	100%	100%	100%

Contract Backlog.

The Company does not reflect an order in backlog until it has received a contract that specifies the terms and milestone delivery dates. As of December 31, 2008, the Company's aggregate contract backlog totaled approximately $38.1 million of which approximately $20.1 million or 53% is expected to be converted to revenue by December 31, 2009. As of December 31, 2007, the Company's aggregate contract backlog totaled approximately $24.6 million.

Employees.

As of December 31, 2008, the Company had 178 employees as compared to 153 employees at December 31, 2007.

ITEM 1A. RISK FACTORS.

The following discussion of risk factors contains "forward-looking statements," as discussed on pages 3 and 4 of this Annual Report on Form 10-K. These risk factors may be important to understanding any statement in this Annual Report on Form 10-K or elsewhere. The Company believes that the following risk factors may cause the market price for its common stock to fluctuate, perhaps significantly. In addition, in recent years the stock market in general, and the shares of technology companies in particular, have experienced extreme price fluctuations. The Company's common stock has also experienced a relatively low trading volume, making it further susceptible to extreme price fluctuations. The following information should be read in conjunction with Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements and related notes under Item 8, Financial Statements and Supplementary Data.

We routinely encounter and address risks, some of which may cause our future results to be different, sometimes materially, than we presently anticipate. Discussion about important operational risks that we encounter can be found in Item 1, Business and Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations. We have described certain important strategic risks below. Our reactions as well as our competitors' reactions to material future developments may affect our future results.

The Company's global growth is subject to a number of economic and political risks.

The Company conducts its operations in North America, Europe, Asia and the Middle East. Global economic developments affect businesses such as GSE, and the Company's operations are subject to the effects of global competition. The Company's global business is affected by local economic environments, including inflation, recession and currency volatility. Political changes, some of which may be disruptive, can interfere with the Company's supply chain, its customers and all of its activities in a particular location. While some of these risks can be hedged using derivatives or other financial instruments and some are insurable, such attempts to mitigate these risks are costly and not always successful. The current global recession has not yet had a material impact on the Company's business. The Company's backlog as of December 31, 2008 totaled $38.1 million, a 54.9% increase over the Company's backlog at December 31, 2007. The Company has seen no significant delays or cancellations to the projects it is currently working on and is unaware of any significant delays or cancellations to projects that the Company expects to secure in 2009. However, as the recession continues, we may see a significant impact on the Company's operations.

The Company's expense levels are based upon its expectations as to future revenue, so it may be unable to adjust spending to compensate for a revenue shortfall. Accordingly, any revenue shortfall would likely have a disproportionate effect on the Company's operating results.

The Company's revenue was $29.0 million, $31.9 million, and $27.5 million for the years ended December 31, 2008, 2007 and 2006, respectively. The Company's operating income (loss) was $(12,000), $2.2 million and $2.1 million for the years ended December 31, 2008, 2007, and 2006, respectively. The Company's operating results have fluctuated in the past and may fluctuate significantly in the future as a result of a variety of factors, including purchasing patterns, timing of new products and enhancements by the Company and its competitors, and fluctuating global economic conditions. Since the Company's expense levels are based in part on its expectations as to future revenue and includes certain fixed costs, the Company may be unable to adjust spending in a timely manner to compensate for any revenue shortfall and such revenue shortfalls would likely have a disproportionate adverse effect on operating results.

Risk of International Sales and Operations.

Sales of products and services to end users outside the United States accounted for approximately 63% of the Company's consolidated revenue in 2008, 71% of consolidated revenue in 2007, and 74% of consolidated revenue in 2006. The Company anticipates that international sales and services will continue to account for a significant portion of its revenue in the foreseeable future. As a result, the Company may be subject to certain risks, including risks associated with the application and imposition of protective legislation and regulations relating to import or export (including export of high technology products) or otherwise resulting from trade or foreign policy and risks associated with exchange rate fluctuations. Additional risks include potentially adverse tax consequences, tariffs, quotas and other barriers, potential difficulties involving the Company's strategic alliances and managing foreign sales agents or representatives and potential difficulties in accounts receivable collection. The Company currently sells products and provides services to customers in emerging market economies. The following emerging markets have provided more than 10% of the Company's revenue for the indicated period:

	Year Ended December 31,		
	2008	2007	2006
Peoples' Republic of China	15%	4%	0%
Russian Federation	4%	9%	12%
United Arab Emirates	4%	31%	12%

The Company has taken steps designed to reduce the additional risks associated with doing business in these countries, but the Company believes that such risks may still exist and include, among others, general political and economic instability, lack of currency convertibility, as well as uncertainty with respect to the efficacy of applicable legal systems. There can be no assurance that these and other factors will not have a material adverse effect on the Company's business, financial condition or results of operations.

The Company's business is largely dependent on sales to the nuclear power industry. Any disruption in this industry would have a material adverse effect upon the Company's revenue.

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In 2008, 54% of GSE's revenue was from customers in the nuclear power industry (45% in 2007 and 60% in 2006). The Company expects to derive a significant portion of its revenue from customers in the nuclear power industry for the foreseeable future. The Company's ability to supply nuclear power plant simulators and related products and services is dependent on the continued operation of nuclear power plants and, to a lesser extent, on the construction of new nuclear power plants. A wide range of factors affect the continued operation and construction of nuclear power plants, including the political and regulatory environment, the availability and cost of alternative means of power generation, the occurrence of future nuclear incidents, and general economic conditions.

The Company's line of credit agreement imposes operating and financial restrictions on the Company which may prevent it from capitalizing on business opportunities.

GSE's line of credit agreement with Bank of America (BOA) imposes operating and financial restrictions. These restrictions affect, and in certain cases limit, among other things, the Company's ability to:

- incur additional indebtedness and liens;
- make investments and acquisitions;
- consolidate, merge or sell all or substantially all of its assets.

There can be no assurance that these restrictions will not adversely affect the Company's ability to finance its future operations or capital needs or to engage in other business activities that may be in the interest of stockholders. At December 31, 2008, the Company was in default on two of its financial covenants; however, it has received a written waiver from BOA. The Company's available borrowing base under the two lines of credit was $3.2 million at December 31, 2008, of which $105,000 had been utilized to collateralize a standby letter of credit.

The Company is dependent on product innovation and research and development, which costs are incurred prior to revenue for new products and improvements.

The Company believes that its success will depend in large part on its ability to maintain and enhance its current product line, develop new products, maintain technological competitiveness and meet an expanding range of customer needs. The Company's product development activities are aimed at the development and expansion of its library of software modeling tools, the improvement of its display systems and workstation technologies, and the advancement and upgrading of its simulation technology. The life cycles for software modeling tools, graphical user interfaces, and simulation technology are variable and largely determined by competitive pressures. Consequently, the Company will need to continue to make significant investments in research and development to enhance and expand its capabilities in these areas and to maintain its competitive advantage.

The Company relies upon its intellectual property rights for the success of its business; however, the steps it has taken to protect its intellectual property may be inadequate.

Although the Company believes that factors such as the technological and creative skills of its personnel, new product developments, frequent product enhancements and reliable product maintenance are important to establishing and maintaining a technological leadership position, the Company's business depends, in part, on its intellectual property rights in its proprietary technology and information. The Company relies upon a combination of trade secret, copyright, and trademark law, contractual arrangements and technical means to protect its intellectual property rights. The Company enters into confidentiality agreements with its employees, consultants, joint venture and alliance partners, customers and other third parties that are granted access to its proprietary information, and limits access to and distribution of its proprietary information. There can be no assurance, however, that the Company has protected or will be able to protect its proprietary technology and information adequately, that the unauthorized disclosure or use of the Company's proprietary information will be prevented, that others have not or will not develop similar technology or information independently, or, to the extent the Company owns any patents in the future, that others

have not or will not be able to design around those future patents. Furthermore, the laws of certain countries in which the Company's products are sold do not protect the Company's products and intellectual property rights to the same extent as the laws of the United States.

The industries in which GSE operates are highly competitive. This competition may prevent the Company from raising prices at the same pace as its costs increase.

The Company's businesses operate in highly competitive environments with both domestic and foreign competitors, many of whom have substantially greater financial, marketing and other resources than the Company. The principal factors affecting competition include price, technological proficiency, ease of system configuration, product reliability, applications expertise, engineering support, local presence and financial stability. The Company believes that competition in the simulation fields may further intensify in the future as a result of advances in technology, consolidations and/or strategic alliances among competitors, increased costs required to develop new technology and the increasing importance of software content in systems and products. As the Company’s business has a significant international component, changes in the value of the dollar could adversely affect the Company's ability to compete internationally.

GSE may pursue new acquisitions and joint ventures, and any of these transactions could adversely affect its operating results or result in increased costs or related issues.

The Company intends to pursue new acquisitions and joint ventures, a pursuit which could consume substantial time and resources. Identifying appropriate acquisition candidates and negotiating and consummating acquisitions can be a lengthy and costly process. The Company may also encounter substantial unanticipated costs or other related issues such as compliance with new regulations and regulatory schemes, additional oversight, elimination of redundancy, and increased employee benefit costs associated with the acquired businesses. The risks inherent in this strategy could have an adverse impact on the Company’s results of operation or financial condition.

The nuclear power industry, the Company’s largest customer group, is associated with a number of hazards which could create significant liabilities for the Company.

The Company’s business could expose it to third party claims with respect to product, environmental and other similar liabilities. Although the Company has sought to protect itself from these potential liabilities through a variety of legal and contractual provisions as well as through liability insurance, the effectiveness of such protections has not been fully tested. Certain of the Company’s products and services are used by the nuclear power industry primarily in operator training. Although the Company’s contracts for such products and services typically contain provisions designed to protect the Company from potential liabilities associated with such use, there can be no assurance that the Company would not be materially adversely affected by claims or actions which may potentially arise.

The use of derivative instruments by the Company in the normal course of business could result in financial losses that negatively impact the Company’s net income.

GSE periodically enters into forward foreign exchange contracts to manage market risks associated with the fluctuations in foreign currency exchange rates on foreign-denominated trade receivables. The Company could recognize financial losses as a result of volatility in the market values of these contracts or if a counterparty fails to perform. The Company minimizes credit exposure by limiting counterparties to internationally recognized financial institutions.

The Company, as a 10% owner of ESA, has provided a partial guarantee totaling $1.2 million for the credit facility that Union National Bank has extended to ESA. ESA is a start-up entity; if it is unable to generate sufficient cash flow from operations and defaults on its credit facility, GSE may have to provide up to $1.2 million to Union National Bank to cover ESA's obligations.

In May 2007, the Company deposited $1.2 million into a restricted, interest-bearing account at Union National Bank ("UNB") in the United Arab Emirates as a partial guarantee for the $11.8 million credit facility that UNB has extended to ESA. The guarantee will be in place until the expiration of the ESA credit facility on December 31, 2014 or earlier if ESA pays down and terminates the facility. Both of the other two owners of ESA, Al Qudra Holding PJSC and the Centre of Excellence for Applied Research and Training, both located in the United Arab Emirates, have each provided to UNB a bank guarantee for 100% of the $11.8 million ESA credit facility. In the event that ESA should default upon their UNB loan, UNB can utilize all or a portion of the guarantees that the three owners have provided to cover ESA's outstanding borrowings against the credit facility and accrued interest payable. Thus, if such a default were to occur, GSE may incur a loss of up to $1.2 million.

In January 2006, the Company received a $15.1 million contract from ESA to supply five simulators and an integrated training program. The Company received change orders totaling $1.8 million from ESA which increased the total order value to $16.9 million. Under the terms of the contract, the Company provided a $2.1 million performance bond to ESA that will remain outstanding until September 30, 2009, the end of the contract warranty period.

The Company has provided a cash-collateralized standby letter of credit to ESA which can be drawn upon by ESA in the event the Company fails to cure a material breach of the contract within 30 days of receiving written notice from ESA regarding the nature of the breach. The project is currently in the one-year warranty period which ends on September 30, 2009, and the Company expects no such material breach, however, if ESA were to draw upon the standby letter of credit, GSE would incur a loss of up to $2.1 million.

The Company accounts for its investment in ESA using the equity method. Accordingly, the Company will record 10% of ESA's net income (loss) as an adjustment of its investment.

As ESA is a start-up entity (it had its formal opening on January 14, 2009), it is likely that it will incur net losses for some period of time. Under the equity method, the Company is required to record 10% of such losses as a charge to other income (expense) and as a reduction of its investment in ESA; in 2008 and 2007 the Company recorded an equity loss of $213,000 and $54,000, respectively. At December 31, 2008 and 2007, the Company's investment in ESA totaled $718,000 and $445,000. Depending on ESA's future performance, the Company may be required to impair a portion or all of this investment.

The Company is subject to a wide variety of laws and regulations.

The Company's businesses are subject to regulation by U.S. federal and state laws and foreign laws, regulations and policies. Changes to laws or regulations may require the Company to modify its business objectives if existing practices become more restricted, subject to escalating costs or prohibited outright. Particular risks include regulatory risks arising from federal laws, such as laws regarding export of sensitive technologies or technical information. The Company's business and the industries in which it operates are also at times being reviewed or investigated by regulators, which could lead to enforcement actions, fines and penalties or the assertion of private litigation claims and damages.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

The Company is headquartered in a facility in Eldersburg, Maryland (approximately 36,000 square feet). The lease for this facility expires on June 30, 2018.

In addition, the Company leases office space domestically in St. Marys and Atlanta, Georgia and Tarrytown, New York and internationally in Beijing, China and Nyköping, Sweden. The Company leases these facilities for terms ending between 2009 and 2011.

ITEM 3. LEGAL PROCEEDINGS.

The Company and its subsidiaries are from time to time involved in ordinary routine litigation incidental to the conduct of its business. The Company and its subsidiaries are not a party to, and its property is not the subject of, any material pending legal proceedings that, in the opinion of management, are likely to have a material adverse effect on the Company's business, financial condition or results of operations.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

No matter was submitted to a vote of security holders during the quarter ended December 31, 2008.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDERMATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES.

The Company's common stock is listed on the American Stock Exchange, where it trades under the symbol "GVP". The following table sets forth, for the periods indicated, the high and low sale prices for the Company's common stock reported by the American Stock Exchange for each full quarterly period within the two most recent fiscal years:

2008

Quarter	High	Low
First	$ 10.75	$ 7.66
Second	$ 9.22	$ 7.08
Third	$ 9.20	$ 6.90
Fourth	$ 6.99	$ 4.71

2007

Quarter	High	Low
First	$ 8.42	$ 5.82
Second	$ 7.55	$ 6.17
Third	$ 7.41	$ 6.15
Fourth	$ 12.00	$ 6.75

The following table sets forth the equity compensation plan information for the year ended December 31, 2008:

Plan category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a) (c)
Equity compensation plans approved by security holders	1,705,967	$4.25	604,888
Equity compensation plans not approved by security holders	--	$ --	--
Total	1,705,967	$4.25	604,888

There were approximately 79 holders of record of the common stock as of December 31, 2008. The Company has never declared or paid a cash dividend on its common stock. The Company currently intends to retain future earnings to finance the growth and development of its business and, therefore, does not anticipate paying any cash dividends in the foreseeable future on its common stock.

At a special shareholder's meeting on December 13, 2007, the Company's shareholders approved an amendment to the Certificate of Incorporation increasing GSE's authorized common stock by 12 million shares to a total of 30 million shares.

The Company believes factors such as quarterly fluctuations in results of operations and announcements of new products by the Company or by its competitors may cause the market price of the common stock to fluctuate, perhaps significantly. In addition, in recent years the stock market in general, and the shares of technology companies in particular, have experienced extreme price fluctuations. The Company's common stock has also experienced a relatively low trading volume, making it further susceptible to extreme price fluctuations. These factors may adversely affect the market price of the Company's common stock.

On February 28, 2006, the Company raised $3.9 million, net of associated fees of $395,000, through the sale of 42,500 shares of Series A Cumulative Convertible Preferred Stock and Warrants by means of a private placement to "accredited investors", as that term is used in rules and regulations of the Securities and Exchange Commission. The Convertible Preferred Stockholders were entitled to an 8% cumulative dividend, payable on a semiannual basis every June 30 and December 30. In 2006, the Company paid dividends totaling $279,000 to the preferred stockholders; in 2007 the Company paid dividends totaling $49,000. At any time after March 1, 2007, the Company had the right to

convert the Preferred Stock into shares of GSE common stock when the average of the current stock price during the twenty trading days immediately prior to the date of such conversion exceeded 200% of the Series A Conversion Price. On March 7, 2007, the Company sent notice to the holders of the remaining 20,000 outstanding shares of its Preferred Stock that the average current stock price for the prior twenty trading days had exceeded 200% of the Conversion Price, and that the Company was converting the outstanding Preferred Stock into common stock. The 20,000 shares of Preferred Stock converted to 1,129,946 shares of GSE common stock. Prior to March 7, 2007, the holders of 22,500 shares of Preferred Stock had already elected to convert their Preferred Stock into a total of 1,271,187 shares of Common Stock; 8,580 shares of Preferred Stock were converted in 2006, and 13,920 shares of Preferred Stock were converted in 2007.

On June 22, 2007, the Company raised $9.2 million, net of associated fees of $768,000, through the sale of 1,666,667 shares (the "Shares") of its common stock, $.01 par value per share, by means of a private placement to selected institutional investors. Each investor received a five-year warrant to purchase GSE common stock (the "Warrant Shares") equal to 10% of the shares of common stock that each investor purchased at an exercise price of $6.00 per share (the "Warrants"). In aggregate, the Company issued Warrants to purchase a total of 166,667 shares of GSE common stock.

The Company filed its registration statement on Form S-3 with the Securities and Exchange Commission (the "Commission") on July 16, 2007 covering the offer and sale, from time to time, of the Shares, the Warrant Shares and shares of common stock issuable upon exercise of warrants that may be issued as liquidated damages under the terms of a certain registration rights agreement entered into between the Company and the investors (the "Registration Rights Agreement") in connection with the private placement. The Registration Statement became effective on August 8, 2007 and, pursuant to the provisions of the Registration Rights Agreement, the Company is obligated to use commercially reasonable efforts to, after the date on which the Registration Statement becomes effective, cause the Registration Statement to remain continuously effective as to all Shares and Warrant Shares, other than for an aggregate of more than 30 consecutive trading days or for more than an aggregate of 60 trading days in any 12-month period. In the event of a default of the foregoing obligation, the Company will be required to issue to the investors, as liquidated damages, on the date the foregoing default occurs and each monthly anniversary thereafter, a number of warrants (on the same terms as the Warrants) equal to 2% of the number of Shares then held by such investor, not to exceed 10% of the total number of Shares then held by such investor, and thereafter cash, in an amount equal to 2% of the aggregate purchase price paid by the investors, not to exceed 30% of the aggregate purchase price paid by the investors.

At the date of issuance, the fair value of the Warrants was $510,000 and the fair value of the Shares was $9.5 million. The fair value of the Warrants and the Shares was determined by the use of the relative fair value method, in which the $10.0 million gross proceeds was allocated based upon the fair values of the Warrants, as determined by using the Black-Scholes Model, and the Shares, as determined by the closing price of the common stock on the American Stock Exchange on the date the transaction was closed.

The Company paid the placement agent for the Shares and Warrants 6% of the gross proceeds received by the Company from the offering ($600,000). In addition to the placement agent fee, the Company paid $168,000 of other transaction fees related to the offering.

The proceeds were used to pay down the Company's line of credit and for other working capital purposes.

The following graph compares the Company's cumulative total shareholder return since January 1, 2003 through December 31, 2008 with that of the American Stock Exchange- US & Foreign Index and a peer group index. The Peer Group consists of companies selected on a line-of-business basis and includes Aspen Technology, Inc., L-3 Communications Holdings and Honeywell International. In previous years, GenSym Corporation was included in the Peer Group, however, it was acquired by privately held Versata Enterprises, Inc. on August 10, 2007. Accordingly, we have replaced GenSym Corporation with L-3 Communications Holdings. The graph assumes an initial investment of $100 on January 1, 2004 in the Company's common stock and each index. There were no dividends declared or paid by the Company during the five year period. The Company has never paid a dividend on its common stock. The indices are re-weighted daily, using the market capitalization on the previous tracking day. The comparisons shown in the graph below are based upon historical data. The stock price performance shown in the graph below is not necessarily indicative of, or intended to forecast, the potential future performance of the Company's common stock. The graph was prepared for the Company by Morningstar, Inc.

	12/31/2003	12/31/2004	12/30/2005	12/29/2006	12/31/2007	12/31/2008
GSE Systems, Inc.	100.00	150.00	68.89	369.50	568.89	327.78
Peer Group Index	100.00	112.77	120.28	146.67	201.63	115.62
Amex Market Index	100.00	114.51	126.29	141.39	158.74	94.93

Sales of Unregistered Securities

The Company's sales of unregistered securities during the past three years are described in Item 5 above.

ITEM 6. SELECTED FINANCIAL DATA.

Historical consolidated results of operations and balance sheet data presented below have been derived from the historical financial statements of the Company. This information should be read in connection with the Company's consolidated financial statements.

(in thousands, except per share data)	Years ended December 31,				
	2008	2007	2006	2005	2004
Consolidated Statements of Operations:					
Contract revenue	$ 29,004	$ 31,900	$ 27,502	$ 21,950	$ 29,514
Cost of revenue	21,187	22,217	19,602	18,603	22,715
Gross profit	7,817	9,683	7,900	3,347	6,799
Operating expenses:					
Selling, general and administrative	7,383	7,214	4,929	6,958	5,543
Administrative charges from GP Strategies	-	-	685	685	974
Depreciation	446	258	186	431	280
Total operating expenses	7,829	7,472	5,800	8,074	6,797
Operating income (loss)	(12)	2,211	2,100	(4,727)	2
Interest income (expense), net	130	(433)	(764)	(416)	(176)
Loss on extinguishment of debt	-	-	(1,428)	-	-
Gain (loss) on derivative instruments	(453)	(11)	(24)	(170)	203
Other income (expense), net	(226)	(555)	(81)	667	113
Income (loss) from continuing operations before income taxes	(561)	1,212	(197)	(4,646)	142
Provision for income taxes	129	43	149	149	60
Income (loss) from continuing operations	(690)	1,169	(346)	(4,795)	82
Income on sale of discontinued operations, net of income taxes	-	-	-	-	36
Net income (loss)	$ (690)	$ 1,169	$ (346)	$ (4,795)	$ 118
Basic income (loss) per common share (1)	$ (0.04)	$ 0.09	$ (0.07)	$ (0.53)	$ 0.01
	$ (0.04)	$ 0.08	$ (0.07)	$ (0.53)	$ 0.01

Diluted income (loss) per common share (1)					
Weighted average common shares outstanding:					
-Basic	15,747	12,927	9,539	8,999	8,950
-Diluted	15,747	14,818	9,539	8,999	9,055

	As of December 31,				
	2008	2007	2006	2005	2004
Balance Sheet data:					
Working capital (deficit)	$ 13,888	$ 14,711	$ 1,463	$ (925)	$ 2,175
Total assets	31,015	28,364	18,448	11,982	14,228
Long-term liabilities	906	695	251	1,567	19
Stockholders' equity	20,700	20,365	7,361	897	5,945

(1) In 2006, $279,000 preferred stock dividends were added to net loss to arrive at net loss attributed to common shareholders.
In 2007, $49,000 preferred stock dividends were deducted from net income to arrive at net income attributed to common shareholders.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

On June 21, 2005, the Board of Directors of GP Strategies Corporation ("GP Strategies") approved plans to spin-off its 57% interest in GSE through a special dividend to the GP Strategies' stockholders. On September 30, 2005, the GP Strategies' stockholders received 0.283075 share of GSE common stock for each share of GP Strategies common stock or Class B stock held on the record date of September 19, 2005. Following the spin-off, GP Strategies ceased to have any ownership interest in GSE. GP Strategies continued to provide corporate support services to GSE, including accounting, finance, human resources, legal, network support and tax pursuant to a Management Services Agreement which expired on December 31, 2006.

On March 28, 2008, the Company entered into two separate revolving line of credit agreements for two-year revolving lines of credit with Bank of America, N.A. ("BOA"), in an aggregate amount of up to $5.0 million. The Company and its subsidiary, GSE Power Systems, Inc., are jointly and severally liable as co-borrowers. The credit facilities are collateralized by substantially all of the Company's assets and enable the Company to borrow funds to support working capital needs and standby letters of credit. The first line of credit in the principal amount of up to $3.5 million enables the Company to borrow funds up to 90% of eligible foreign accounts receivable, plus 75% of eligible unbilled foreign receivables and 100% of the cash collateral pledged to BOA on outstanding warranty standby letters of credit. This line of credit is 90% guaranteed by the Export-Import Bank of the United States. The interest rate on this line of credit is based on the daily LIBOR rate plus 150 basis points, with interest only payments due monthly. The second line of credit in the principal amount of up to $1.5 million enables the Company to borrow funds up to 80% of domestic accounts receivable and 30% of domestic unbilled receivables. The interest rate on this line of credit is based on the daily LIBOR rate plus 225 basis points, with interest only payments due monthly. The credit facilities require the Company to comply with certain financial ratios and preclude the Company from making acquisitions beyond certain limits without the bank's consent. At December 31, 2008, the Company was in default on two of its financial covenants; however, it has received a written waiver from BOA. The Company's available borrowing base under the two lines of credit was $3.2 million at December 31, 2008, of which $105,000 had been utilized as collateral for a standby letter of credit.

Critical Accounting Policies and Estimates.

As further discussed in Note 2 to the consolidated financial statements, in preparing the Company's financial statements, management makes several estimates and assumptions that affect the Company's reported amounts of assets, liabilities, revenues and expenses. Those accounting estimates that have the most significant impact on the Company's operating results and place the most significant demands on management's judgment are discussed below. For all of these policies, management cautions that future events rarely develop exactly as forecast, and the best estimates may require adjustment.

Revenue Recognition on Long-Term Contracts. The majority of the Company's revenue is derived through the sale of uniquely designed systems containing hardware, software and other materials under fixed-price contracts. In accordance with Statement of Position 81-1, Accounting for Performance of Construction-Type and Certain Production-Type Contracts, the revenue under these fixed-price contracts is accounted for on the percentage-of-completion method. This methodology recognizes revenue and earnings as work progresses on the contract and is based on an estimate of the revenue and earnings earned to date, less amounts recognized in prior periods. The Company bases its estimate of the degree of completion of the contract by reviewing the relationship of costs incurred to date to the expected total costs that will be incurred on the project. Estimated contract earnings are reviewed and revised periodically as the work progresses, and the cumulative effect of any change in estimate is recognized in the period in which the change is identified. Estimated losses are charged against earnings in the period such losses are identified. The Company recognizes revenue arising from contract claims either as income or as an offset against a potential loss only when the amount of the claim can be estimated reliably and realization is probable and there is a legal basis of the claim. There were no claims outstanding as of December 31, 2008.

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Uncertainties inherent in the performance of contracts include labor availability and productivity, material costs, change order scope and pricing, software modification and customer acceptance issues. The reliability of these cost estimates is critical to the Company's revenue recognition as a significant change in the estimates can cause the Company's revenue and related margins to change significantly from the amounts estimated in the early stages of the project.

As the Company recognizes revenue under the percentage-of-completion method, it provides an accrual for estimated future warranty costs based on historical and projected claims experience. The Company's long-term contracts generally provide for a one-year warranty on parts, labor and any bug fixes as it relates to software embedded in the systems.

The Company's system design contracts do not normally provide for "post customer support service" (PCS) in terms of software upgrades, software enhancements or telephone support. In order to obtain PCS, the customers normally must purchase a separate contract. Such PCS arrangements are generally for a one-year period renewable annually and include customer support, unspecified software upgrades, and maintenance releases. The Company recognizes revenue from these contracts ratably over the life of the agreements in accordance with Statement of Position 97-2, Software Revenue Recognition.

Revenue from the sale of software licenses which do not require significant modifications or customization for the Company's modeling tools are recognized when the license agreement is signed, the license fee is fixed and determinable, delivery has occurred, and collection is considered probable.

Revenue for contracts with multiple elements is recognized in accordance with Emerging Issues Task Force Issue 00-21, Accounting for Revenue Arrangements with Multiple Deliverables.

Revenue from certain consulting or training contracts is recognized on a time-and-material basis. For time-and-material type contracts, revenue is recognized based on hours incurred at a contracted labor rate plus expenses.

Capitalization of Computer Software Development Costs. In accordance with Statement of Financial Accounting Standards (SFAS) No. 86, Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed, the Company capitalizes computer software development costs incurred after technological feasibility has been established, but prior to the release of the software product for sale to customers. Once the product is available to be sold, the Company amortizes the costs, on a straight line method, over the estimated useful life of the product, which normally ranges from three to five years. As of December 31, 2008, the Company has net capitalized software development costs of $1.5 million. On an annual basis, and more frequently as conditions indicate, the Company assesses the recovery of the unamortized software computer costs by estimating the net undiscounted cash flows expected to be generated by the sale of the product. If the undiscounted cash flows are not sufficient to recover the unamortized software costs the Company will write-down the investment to its estimated fair value based on future discounted cash flows. The excess of any unamortized computer software costs over the related net realizable value is written down and charged to operations. Significant changes in the sales projections could result in an impairment with respect to the capitalized software that is reported on the Company's consolidated balance sheet.

Deferred Income Tax Valuation Allowance. Deferred income taxes arise from temporary differences between the tax bases of assets and liabilities and their reported amounts in the financial statements. As required by SFAS No. 109, Accounting for Income Taxes, management makes a regular assessment of the realizability of the Company's deferred tax assets. In making this assessment, management considers whether it is more likely than not that some or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities and projected future taxable income of the Company in making this assessment. A valuation allowance is recorded to reduce the total deferred income tax asset to its realizable value. As of December 31, 2008, the Company's largest deferred tax asset related to a U.S. net operating loss carryforward of $17.9 million which expires in various amounts between 2017 and 2028. The amount of U.S. loss carryforward which can be used by the Company each year is limited due to changes in the Company's ownership which occurred in 2003. Thus, a portion of the Company's loss carryforward may expire unutilized. We believe that the Company will achieve profitable operations in future years that will enable the Company to recover the benefit of its net deferred tax assets. However, other than a portion of the net deferred tax assets that are related to the Company's Swedish subsidiary, the recovery of the net deferred tax asset could not be substantiated by currently available objective evidence. Accordingly, the Company has established an $8.3 million valuation allowance for its net deferred tax assets.

Results of Operations.

The following table sets forth the results of operations for the periods presented expressed in thousands of dollars and as a percentage of contract revenue.

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($ in thousands)	Years ended December 31,					
	2008	%	2007	%	2006	%
Contract revenue	$ 29,004	100.0%	$ 31,900	100.0%	$ 27,502	100.0%
Cost of revenue	21,187	73.1%	22,217	69.6%	19,602	71.3%
Gross profit	7,817	26.9%	9,683	30.4%	7,900	28.7%
Operating expenses:						
Selling, general and administrative	7,383	25.4%	7,214	22.6%	4,929	17.9%
Administrative charges from GP Strategies	-	0.0%	-	0.0%	685	2.5%
Depreciation	446	1.5%	258	0.8%	186	0.7%
Total operating expenses	7,829	26.9%	7,472	23.4%	5,800	21.1%
Operating income (loss)	(12)	(0.0)%	2,211	7.0%	2,100	7.6%
Interest income (expense), net	130	0.4%	(433)	(1.4)%	(764)	(2.8)%
Loss on extinguishment of debt	-	0.0%	-	0.0%	(1,428)	(5.2)%
Loss on derivative instruments	(453)	(1.6)%	(11)	0.0%	(24)	(0.1)%
Other expense, net	(226)	(0.8)%	(555)	(1.8)%	(81)	(0.2)%
Income (loss) before income taxes	(561)	(2.0)%	1,212	3.8%	(197)	(0.7)%
Provision for income taxes	129	0.4%	43	0.1%	149	0.6%
Net income (loss)	$ (690)	(2.4)%	$ 1,169	3.7%	$ (346)	(1.3)%