GSE SYSTEMS INC
Form 10-K
March 14, 2011

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, 2010

OR

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

Commission File 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	NYSE Amex 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 whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). 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 $75,316,707 on June 30, 2010, 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 $4.06.

The number of shares outstanding of the registrant’s Common Stock as of March 11, 2011 was 19,224,031 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2011 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 2011 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. As of December 31, 2010, GSE was 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 Scottish limited liability company; and
- TAS Engineering Consultants Ltd, an English limited liability company.

The Company has a 49% minority interest in GSE-UNIS Simulation Technology Co., Ltd. a Chinese limited liability company and has a 10% minority interest in Emirates Simulation Academy, LLC, a United Arab Emirates limited liability company. The Company has only one reportable segment.

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.

GSE Systems, Inc. is a world leader in simulation technology and services for the energy industry. We have a dominant 60% world-wide market share in the nuclear simulation industry, and we have leveraged our nuclear-grade simulation capabilities in the non-nuclear energy fields of fossil power generation, oil & gas refining, and chemical/petrochemical processing.

The recent dramatic increase in global energy demand is well documented and, we believe, will continue to grow for decades to come. This growing need for energy is pushing the nuclear power industry towards a nuclear "renaissance" driven by the gap between the energy that the world is projected to need versus the current capacity, the rising cost of oil, and growing environmental concerns caused by fossil fuels. Government and industry sources and trade journals report that up to 252 new nuclear plants could be built worldwide over the next 20 years. Currently, there are over 60 plants under construction in 14 countries. In the U.S. some 16 companies and consortia are considering building 30 nuclear power plants. The U.S. Nuclear Regulatory Commission is actively reviewing 13 combined construction and operating license applications from 12 companies and consortia for 22 nuclear power reactors. 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. In February 2010, President Obama announced that the federal government would provide $8.33 billion in loan guarantees for a pair of nuclear reactors to be built in Georgia at the Alvin W. Vogtle Electric Generating Plant by Georgia Power, a subsidiary of Southern Company, and three other partners. Georgia Power received an early site permit from the U.S. Nuclear Regulatory Commission for the two additional units in 2009 and preliminary site work has begun. These are the first nuclear reactors to be built in the U.S in over 30 years. Westinghouse Electric Company LLC ("Westinghouse") and its consortium team member, The Shaw Group, are under contract to provide two Westinghouse AP1000™ nuclear power plants at the Vogtle site. The Company entered into an agreement with Westinghouse in 2005 in which GSE became Westinghouse's preferred vendor for the development of simulators for their AP1000 reactor design. In July 2010, the Company received a contract from Westinghouse for the Vogtle Units 3 and 4 plant training simulator, and in August 2010, received a second contract from Westinghouse for the training simulator for the two new nuclear units being built by South Carolina Electric & Gas Company, a subsidiary of SCANA Corporation, and Santee Cooper, a state-owned electric and water utility in South Carolina, at its V.C. Summer Nuclear Station in South Carolina.

As China is expected to build the most nuclear power plants in the next 20 years, the Chinese market is one that the Company must be well-positioned to participate in. Accordingly, in July 2010, GSE partnered with Beijing UNIS Investment Co., Ltd ("UNIS") to form a Chinese joint venture, GSE-UNIS Simulation Technology Co., Ltd, ("GSE-UNIS") creating the largest simulation company in China with the ability to simulate both fossil and nuclear power plants. GSE-UNIS is 51% owned by UNIS and 49% owned by GSE. The largest shareholder of UNIS is Tsinghua University, a prestigious technology university in China. Established in 1988, UNIS has been acting as an incubator company transferring new technologies from the University's research laboratory to the commercial sector. The origin of its simulation platform can be traced back to 1984, a national award-winning technology developed by Tsinghua University. Over the past 20 years, hundreds of simulators have been built based upon this technology for approximately 200 customers in the fossil fueled electric power industry, accounting for about 50% of the total Chinese fossil fueled power market. Its solid customer base and strong relationships with the academic and government sector will help GSE-UNIS service contracts in both the fossil fueled as well as nuclear power markets in the Chinese market.

In addition to China, GSE is executing nuclear simulation projects in the U.S., England, Japan, Korea, Taiwan, Slovakia, Bulgaria, Sweden, Germany, Mexico, Russia and the Ukraine. As many as 65 countries with no current nuclear power capability have announced considerations to add nuclear energy to their power generation capabilities (21 in Asia-Pacific, 21 in Africa, 12 in Europe, and 11 in Latin America). With our leading market share, excellent reputation, and world-class technology, GSE is poised to capitalize on the ever growing world-wide nuclear renaissance.

In order to meet the world's needs, all forms of energy will play a part, not just nuclear power. As of 2008, only 14% of the world's power was nuclear, while thermal energy (solids, liquids, gases, biomass and waste) accounted for 67%, hydro energy was approximately 18%, and renewable energy was less than 2%. For more than three decades, GSE has leveraged the simulation capability that we developed for nuclear power for non-nuclear projects. Globally we have delivered 121 fossil power plant simulators and 96 process industry simulators.

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Recognizing the importance of non-nuclear energy, GSE acquired TAS Holdings Limited, which has since been renamed TAS Engineering Consultants Ltd., located in Stockton-on-Tees in the UK. TAS is an engineering consulting company specializing in electrical system design, instrumentation and controls engineering, automation engineering and safety consultancy. They also provide computer modeling services for major electrical generation and distribution systems including traditional and renewable power. The majority of TAS's customers reside in the petroleum refining, oil and gas, chemical, petrochemical, process and power industries. The acquisition of TAS was strategically important for the Company for the following reasons. First, TAS's expertise in electrical distribution system modeling with variable sources of power, such as renewable energy generation, will help GSE extend its capability into the modeling and simulation of electrical distribution and grid systems. Secondly, TAS routinely encounters training opportunities that coincide with their engineering and consulting projects thereby creating cross selling opportunities for GSE's growing training organization. Third, the acquisition expands GSE's presence in the UK through access to existing TAS clients such as British Petroleum and ConocoPhillips. Lastly, the acquisition of TAS, coupled with GSE's ongoing training activities at the University of Strathclyde, will enhance the Company's ability to support the UK's planned construction of eight new nuclear plants in the coming years through both our nuclear simulation and training businesses which are pursuing opportunities in those areas.

According to the U.S. Energy Information Administration, world energy consumption will increase by 49% from 495 quadrillion BTU in 2007 to 739 in 2035. New consumption means new production, which means new plants, new workers, and an enormous amount of training to provide a skilled workforce. GSE recgonized this growing need for energy industry training several years ago and began developing various training solutions leveraging the use of our simulation technology. GSE created a 163 course, five-simulator training course that was sold to the Emirates Simulation Academy LLC, in the UAE, a training academy that was created by GSE and two other partners in 2007. The Company worked with the University of Strathclyde in Glasgow, Scotland to incorporate GSE's simulation into the University's degreed and industrial education programs. GSE developed a 20-week "Nuclear Operator Jump Start Training Program" for Southern Nuclear Company in Augusta, GA, utilizing the Company's VPanelTM interactive visual training simulator. The advantage of the VPanel simulator is its scalability and ease of configuration for both team and individual training, plant specific or cross training. The VPanel allows customers to utilize their existing simulator load while bringing many full scope simulator capabilities directly into the classroom for a fraction of the cost. The Company's "Operator Jump Start" training program, which utilizes the VPanel simulator, helps customers screen and train new operator candidates. This training program is designed to provide essential knowledge and skills to potential nuclear plant operators and to determine if candidates have the ability to successfully complete the customer's own control operator training programs. The program includes instruction on fundamental sciences (including GFES), plant systems and operations.

In order to expand its simulation-based training programs, on January 4, 2011, GSE acquired EnVision Systems, Inc., subsequently renamed GSE-EnVision Inc., which provides interactive multi-media tutorials and simulation models, primarily to the petrochemical and oil & gas refining industries. EnVision's products provide a foundation in process fundamentals, as well as plant operations and interaction.

A compounding problem is facing the energy industry. While experiencing rapid growth requiring new plant and new workers, the incumbent industry workforce is aging and facing dramatic turnover. The average nuclear plant worker is 50 years old, and 42% of the current workforce is expected to be replaced over the next five years due to attrition and retirement. While the data is readily available in the nuclear industry because it is so heavily regulated, similar demographics exist in the fossil, oil & gas, chemical and petrochemical industries. While this issue has been looming for some time, the impact has been somewhat delayed due to the recent global economic downturn. Some employees that were planning on retiring in the near future saw their savings significantly reduced and were forced to postpone their retirements. Accordingly, the Company anticipates that in the near future, a larger number of employees are likely to retire within a shorter time span and the need to find qualified employees to replace them will become an acute issue.

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Except for some insightful early adopters, many companies tend to put off spending on training until they absolutely have to or they are in trouble. Often training is viewed as a cost rather than an investment, and aside from travel, it is one of the first things to be cut during economic downturns. However, the statistics associated with new plant builds and the aging workforce are undeniable and training will be required to supply the skilled employees that will be needed to staff the new plants and replace the retirees. Therefore, when the energy industry recognizes the need to train, they will want training that is faster and better than what is traditionally available. Additionally, they will have to consider the nature of the next generation workforce who has grown up with a computer and vast amounts of interactive multimedia. Standard classroom training will not provide the efficacy that will be needed nor satisfy the interest level of the new workforce.

In fact, according to the NTL Institute's statistics on learner retention, only 5% of information is retained from lecture, and only 10% from reading. However, 75% retention is accomplished when learners practice by doing. These statistics support GSE's success with the Nuclear Operator Jump Start Training Program at SNC, as our design combines traditional instructor-led classroom training with structured simulator exercises supporting the concepts learned. This model is transportable globally to anywhere a new energy workforce is needed.

Case studies demonstrate that the inclusion of serious gaming technology such as immersive 3D environments can reduce training time and improve learning significantly. In fact, the Royal Canadian Army was able to reduce the cost of training and increase the pass rate of students by incorporating gaming into the curriculum. Due to the advancement of computer processing power and graphics technology, immersive 3D game engines are readily available off-the-shelf at commercially-viable prices. Additionally, this style of learning also lends itself to the next generation workforce, and as such GSE is investing significantly in 3D visualization. This investment comes in the form of strategic hires, R&D, and investment in technology. Through R&D efforts already undertaken, GSE's engineers have discovered how to link our industry-leading, high fidelity models to COTS game engines. This enables us to make the invisible visible, for example seeing the inside of an operating reactor, steam generator, or turbine generator. Blending the learning strategy by incorporating 3D visualization will allow GSE to provide the energy industry with better, faster, less costly training ideally suited for the next generation workforce.

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 fifteen 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.

On April 26, 2010, the Company completed the acquisition of TAS Holdings Ltd ("TAS"), acquiring 100% ownership in TAS for a purchase price of approximately $2.3 million in cash, GSE Systems, Inc. common stock and contingent consideration. TAS, located in Stockton-on-Tees in the United Kingdom, provides engineering consulting, specializing in electrical system design, instrumentation and controls engineering and automation engineering. TAS also engages in the computer modeling of major electrical distribution systems containing variable sources of electric generation operating at different utilization voltages. The majority of TAS's customers reside in the petroleum refining, oil and gas, chemical and petrochemical industries. The acquisition of TAS was strategically important for the Company for the following reasons. First, TAS's expertise in electrical distribution system modeling with variable sources of power, such as renewable energy generation, will help GSE extend its capability into the modeling and simulation of electrical distribution and grid systems. Secondly, TAS routinely encounters training opportunities that coincide with their engineering and consulting projects thereby creating cross selling opportunities for GSE's growing training organization. Third, the acquisition expands GSE's presence in the UK through access to existing TAS clients such as British Petroleum and ConocoPhillips. Lastly, the acquisition of TAS, coupled with GSE's ongoing training activities at the University of Strathclyde, will enhance the Company's ability to support the UK's planned construction of eight new nuclear plants in the coming years through both our nuclear simulation and training businesses which are pursuing opportunities in those areas.

On July 28, 2010, the Company received a formal business license from the Chinese government for the Chinese joint venture, GSE-UNIS Simulation Technology Co., Ltd. ("GSE-UNIS"), a limited liability company. As of December 31, 2010, the joint-venture has yet to commence commercial operations although it has incurred administrative expenses. GSE-UNIS is 51% owned by Beijing UNIS Investment Co., Ltd. ("UNIS") and 49% owned by GSE. On October 1, 2010, the Company contributed $587,000 in cash, as its initial investment to GSE-UNIS. In September 2010, UNIS contributed approximately $600,000 in cash as its initial investment to GSE-UNIS. The largest shareholder of UNIS is Tsinghua University, a prestigious technology university in China. Established in 1988, UNIS has been acting as an incubator company transferring new technologies from the University's research laboratory to the commercial sector. The origin of its simulation platform can be traced back to 1984, a national award-winning technology developed by Tsinghua University. Over the past 20 years, hundreds of simulators have been built based upon this technology for approximately 200 customers in the fossil fueled electric power industry, accounting for about 50% of the total Chinese fossil fueled power market. Its solid customer base and strong relationships with the academic and government sector will help GSE-UNIS service contracts in both the fossil fueled as well as nuclear power markets in the Chinese market.

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 ("NRC"). 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.

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 allow 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 changes 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 are 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 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. In 2002, the U.S Department of Energy initiated the Nuclear Power 2010 (“NP 2010”) program, a government-industry, 50-50 cost-shared initiative that had two main goals: removing the technical, regulatory and institutional barriers to building new nuclear power plants in the U.S. and securing industry decisions to construct and operate those plants. Per the DOE’s office of Nuclear Energy, NP 2010 program has worked to 1) demonstrate untested regulatory processes, 2) identify sites for new nuclear power plants, 3) develop and bring to market advanced, standardized nuclear plant technologies, and 4) evaluate the business case for building new nuclear power plants. In February 2010, President Obama announced that the Department of Energy will provide $8.33 billion in loan guarantees for a pair of nuclear reactors to be built in Georgia at the Alvin W. Vogtle Electric Generating Plant by Georgia Power, a subsidiary of Southern Company. Georgia Power received an early site permit from the U.S. NRC for the two additional units in 2009 and preliminary site work has

begun. Westinghouse Electric Company LLC ("Westinghouse") and its consortium team member, The Shaw Group, are under contract to provide two Westinghouse AP1000™ nuclear power plants at the Vogtle site. The new units are expected to begin commercial operation in 2016 and 2017. In addition to the Vogtle plant, the Westinghouse consortium has signed Engineering, Procurement and Construction contracts with Progress Energy Florida, a subsidiary of Progress Energy, to provide two AP1000 nuclear power units at Progress's Levy County, Florida site and with South Carolina Electric & Gas Company, principal subsidiary of SCANA Corporation, and Santee Cooper to provide two AP1000 nuclear power units at the V.C. Summer Nuclear Station in Jenkinsville, S.C.

Internationally, there are currently over 60 nuclear reactors under construction in 14 countries. Per the World Nuclear Association ("WNA"), China has 13 nuclear power reactors in commercial operation, 27 under construction. China's aim is to have a sixfold or more increase in nuclear capacity by 2020. In Russia, eight large reactors are under active construction, seven further reactors are then planned to replace some existing plants, and by 2016 ten new reactors should be operating. Further reactors are planned to add new capacity by 2020. New plants are on the drawing board or under construction in Argentina, Canada, Brazil, Bulgaria, Finland, France, Japan, India, Pakistan, Romania, Slovakia, South Korea, Taiwan, and Ukraine.

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. NRC 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. Per the U.S. Bureau of Labor Statistics' Current Population Survey, 2008, 53% of the utilities industry workforce was age 45 or older in 2008; 18.1% was over age 55. Thus, 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. In their employment outlook for the utilities industry, the Bureau of Labor Statistics states "Because on-the-job training is very intensive in many utilities industry occupations, preparing a new workforce will be one of the industry's highest priorities during the next decade".

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 developed 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-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.

- VPanel™, an interactive visual training solution. For customers that already have a full scope ANS 3.5 Certified simulator, the VPanel provides a second hardware platform that will run the ASN 3.5 Simulator software model at a fraction of the cost of building a second full scope simulator. The VPanel Simulator provides the same fidelity of operation as their existing simulator but the VPanel offers portability and versatility at a very affordable price. All of the features and functions of the full scope ANS 3.5 Simulator are duplicated in the VPanel simulator but the VPanel can be used in a classroom setting or as a second simulator to alleviate many of the time pressures our customers are experiencing with their current simulators. For nations considering entry into the nuclear power industry the VPanel is the ideal tool to help build a base of experienced nuclear workers either at a university or industrial training facility. Since the VPanel uses a software load from an ANS 3.5 Certified simulator it will accurately reflect the operations and response of an operating nuclear power plant. The VPanel provides nations entering the nuclear power industry with realistic hands on experience of the operation of a nuclear facility long before they begin construction on their facilities.

The Power 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 simulation beyond training to help validate plant design.

Traditional Simulation Market. Nuclear power currently accounts for about 20% of the total electrical output in the United States and this percentage will likely remain the same even as total capacity increases. Any new nuclear power plants with electric output greater than 1,000 megawatts 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. Additionally, the market for Small Modular Reactors, for plants producing 45 megawatts – 200 megawatts will require new simulators and training programs for the same reasons. 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 have been 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.

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 India.

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); Toyo Engineering Corporation (Japan); UNIS (China) and Westinghouse Electric Company LLC (U.S.).

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, CORYS T.E.S.S and Western Services Corp. 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 2010, approximately 71% 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), Comisión Federal de Electricidad (Mexico), Concern Titan-2 (Russia), Emerson Process Management, Georgia Power, Kärnkraftsäkerhet och Utbildning AB (Sweden), Kraftwerks–Simulator-Gesellschaft mbH (Germany), Nuclear Engineering Ltd. (Japan), PSEG Nuclear, Inc., Slovenské elektrárne, a.s. (Slovakia), and Westinghouse Electric Co.

The following Power Simulation customers have provided more than 10% of the Company's consolidated revenue for the indicated periods:

	Years ended December 31,		
	2010	2009	2008
Slovenské elektrárne, a.s.	22.0%	13.5%	0.0%
Emerson Process Management	11.1%	12.1%	16.2%
Titan-2 Concern	5.0%	10.7%	0.0%
American Electric Power	0.9%	6.8%	10.5%

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, Japan, Mexico, People's Republic of China, South Africa, Spain, South Korea, Taiwan, Ukraine and the United Kingdom.

II. Process Industries.

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. In addition, the process industries are facing increasing safety standards via legislation and national and international standards and codes of practice. The Gulf of Mexico oil spill disaster in 2010 raised the public's awareness of the financial, environmental and safety issues associated with human operating errors and this has added pressure to the process industries to ensure that their operators are fully trained and that safety issues are addressed.

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GSE's Solution

GSE offers interactive multimedia tutorials and simulation models for teaching the fundamentals of various refinery and petrochemical plant operations, dynamic real-time simulation capabilities for process operator training and plant design validation and verification, and consultancy services for engineering design and safety regulations compliance.

With the acquisition of EnVision Systems Inc. on January 4, 2011 (subsequently renamed GSE EnVision Inc.), GSE now offers a full range of training products for the oil & gas, refining, petrochemical and specialty chemicals industry. The EnVision suite of products provides Computer Based Tutorials and Process Specific Simulation Models to provide a sound fundamental knowledge of key processes and equipment. These products support both self-paced and instructor led learning environments. Each product fits a specific purpose and phase of the training cycle.

In 2010 GSE introduced JPro™ simulation software for the process industries, an upgraded version of SimSuitePro™. JPro consists of an integrated software suite which can build, test and run simulation models, dynamically and in real time. These models are used for process and control system design, process scale up and evaluation, engineering study, advanced process control and operator training. The models can be used alone or connected to virtually any control system. JPro provides an easier to use interface to the same highly sophisticated model building environment of SimSuite Pro. JPro uses the same interface as GSE's JADE tool suite, thereby making it easier for customers of integrated gasification and combined cycle and other plants that require a combination of chemical plant and power plant modeling capabilities.

TAS Engineering Consultants Ltd. is a leading supplier in the UK of engineering consultancy services which satisfy many of the needs of high availability, high hazard industries typified by a requirement to register under Control of Major Hazard Accident (COMAH) legislation in the United Kingdom. TAS's key engineering consultancy offerings include:

- Arc flash hazard studies,
- Electrical safety management,
- Functional safety (IEC 61508) support,
- Potentially explosive atmosphere support,
- Alarm management, and
- Preventative maintenance procedures incorporating human factors.

Building on client relationships developed in the provision of specialist consultancy, TAS seeks to develop long term relationships based on support in electrical, instrumentation, control and automation projects, electrical switchgear replacement and new automation systems. In 2010, with the support of GSE, TAS was also able to pursue global opportunities more aggressively. In late 2010, TAS received a $600,000 contract for arc flash hazard studies to be conducted at at various sites in the UK from a global supplier of tooling, engineered components and advanced materials. The Company expects that this contract will be extended to an additional 31 sites throughout Europe, the Middle East, Africa and Asia in 2011.

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.

Strategy

GSE is uniquely positioned in the process simulation market to provide total training solutions which combine computer base learning, generic and plant specific simulators 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.

TAS is well positioned to meet the increasing demand for specialist support, as recognition of Arc Flash hazards develop in the United Kingdom and Europe. Through cooperation with GSE, TAS is poised to expand into new markets such as Europe and the Middle East. Additionally, the opportunity for the closer integration of sales and support activities between GSE and TAS will allow for cross selling between GSE and TAS clients. As an example of this, TAS is now supporting the GSE Sweden office and have supported GSE Inc. bids in the process industry.

Customers

Hydrocarbon and chemical process customers include numerous large oil refineries and chemical plants such as BP (Germany), Statoil ASA (Norway), Bayernoil (Germany), Chevron, Emerson Process Management, Saudi Basic Industries Corporation (Saudi Arabia), Shell Oil, Savannah River Nuclear Solutions, LLC, Total (Belgium)

Upstream and downstream oil and gas, chemical manufacturing, power generation and pharmaceutical companies represent the majority of TAS's current clients; however, the strength of the engineering consultancy portfolio attracts diverse clients such as libraries, museums and auto repair material manufacturers.

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. Relationships developed with typical power plant DCS companies are now expanding to process plant applications as the DCS companies scramble to increase market share. In addition, the acquisition of EnVision Systems provides access to a large installed base of computer based learning customers that may require more plant specific simulator solutions.

Competitive Advantages.

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

- Reputation for Customer Satisfaction. As part of its ISO-9000 Quality Program Certification, GSE measures customer satisfaction across numerous factors such as On-Time Delivery, Problem Solving, and Customer Communication. In each category measured we routinely exceed customer expectations.

- Technical and Applications Expertise. GSE is a leading innovator and developer of real-time software with more than 38 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 248 employees, including approximately 187 engineers and scientists. Of the 187 engineers, approximately 50% of these engineers and scientists have advanced science and technical degrees in fields such as chemical, mechanical and electrical engineering, applied mathematics and computer sciences, while an additional 30% have master degrees, and another 10% have doctorate degrees in the aforementioned fields.

- 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. GSE EnVision Systems, Inc. has added a substantial library of Process Specific Simulation models and Computer Based Learning Modules aimed at the oil and gas, refining and specialty chemicals market.

- 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 nuclear power plant fundamental sciences and specific industrial applications.

- International Strengths. Approximately 71% of the Company's 2010 revenue was derived from international sales of its products and services. GSE has a multinational sales force with offices located in Beijing, China, Nyköping, Sweden, Stockton-on-Tees, UK 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 thirteen registered U.S. trademarks: GSE Systems®, ESmart®, GAARDS®, JTOPMERET®, Openexec®, OpenSim®, RELAP5-HD®, REMITS-Real-Time Emergency Management Interactive Training System®, RETACT®, SimExec®, SimSuite Pro®, SmartTutor® and THOR®. Some of these trademarks have also been registered in foreign countries. The Company also claims trademark rights to BRUS™, GCONTROL+™, GFLOW+™, GLOGIC+™, GPower+™, Java Application and Development Enviroment (JADE)™, PEGASUS Plant Surveillance and Diagnosis System™, RACS™, Sens Base™, SIMON™, SimSuite Power™, VPanel ™, Vista PIN™, and Xtreme I/S™.

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 2010, 2009, and 2008 consolidated revenue by industries served:

	2010	2009	2008
Nuclear power industry	72%	73%	54%
Fossil fuel power industry	18%	21%	31%
Process industry	8%	4%	9%
Training and education industry	2%	2%	6%
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 or other payment terms. As of December 31, 2010, the Company's aggregate contract backlog totaled approximately $55.9 million of which approximately $37.7 million or 67.5% is expected to be converted to revenue by December 31, 2011. As of December 31, 2009, the Company's aggregate contract backlog totaled approximately $53.9 million.

Employees.

As of December 31, 2010, the Company had 248 employees as compared to 201 employees at December 31, 2009.

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 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.

In 2010, 72% of GSE's revenue was from customers in the nuclear power industry (73% in 2009 and 54% in 2008). 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.

On Thursday, March 10, 2011, Japan was hit by a significant earthquake and resulting tsunami that has caused extensive damage to the country's northeastern coast. The Fukushima Daiichi nuclear plant has been damaged, and the plant's nuclear reactors are being flooded with sea water to cool the fuel rods. At December 31, 2010, the Company's $55.9 million backlog included $9.2 million that was related to contracts for significant upgrades to two nuclear plants for the Japan Atomic Power Company. The Company is unaware of any damage to these nuclear plants. Of this backlog, $5.4 million is expected to be converted to revenue in 2011. It is too early to determine if the recent events in Japan will have a material adverse effect on the Company's operations.

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, 2010 totaled $55.9 million, a 3.7% increase over the Company's backlog at December 31, 2009. 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 2011. However, we may see an impact on the Company's operations due to uncertainties and fluctuations as the economy recovers.

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 $47.2 million, $40.1 million, and $29.0 million for the years ended December 31, 2010, 2009, and 2008, respectively. The Company's operating income (loss) was $(1.2) million, $563,000, and $(12,000) for the years ended December 31, 2010, 2009 and 2008, 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 71% of the Company's consolidated revenue in 2010, 65% of consolidated revenue in 2009, and 63% of consolidated revenue in 2008. 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,		
	2010	2009	2008
Slovak Republic	22%	14%	0%
Russian Federation	6%	12%	4%
People's Republic of China	4%	8%	15%

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 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 agreements with Bank of America ("BOA") impose 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.

In addition, the line of credit agreements contained financial covenants with respect to the Company's minimum tangible net worth, debt service coverage ratio, and funded debt to EBITDA ratio. At December 31, 2010 and throughout all of 2010, the Company had not paid any interest or principal payments related to any borrowings for over one year. As such the debt service coverage ratio is not applicable at December 31, 2010. The financial covenant calculations at December 31, 2010 are shown below:

	Covenant	As of Dec. 31, 2010
Tangible net worth	Must Exceed $15.0 million	$31.8 million
Funded debt to EBITDA ratio	Not to Exceed 2.50 : 1.00	(30.90) : 1.00

Due to the Company's net loss of $2.2 million for the year ended December 31, 2010, the Company was in default on its funded debt to EBITDA ratio at December 31, 2010.

Due to the Company's financial covenant default, BOA has made the following amendments to the Company's revolving credit agreements effective March 14, 2011:

- A written waiver has been granted for the funded debt to EBITDA ratio default.
- The $5.0 million principal line of credit has been terminated.
- The financial covenants for the $2.5 million principal line of credit have been deleted.
- The Company is required to cash collateralize all outstanding standby letters of credit, which totals $3.4 million.
- All future letters of credit issued by BOA must be cash collateralized.
- Borrowings under the line of credit must be cash collateralized. Currently the Company has in place a $600,000 certificate of deposit as collateral for the line of credit.

At December 31, 2010, the Company had cash and cash equivalents of $26.6 million and has $600,000 available under its $2.5 million line of credit. Of this amount $3.4 million will be restricted as cash collateral for the Company's outstanding standby letters of credit in accordance with the March 14, 2011 amendment to the Company's revolving credit agreement. The Company has entered into 2011 with $55.9 million of backlog; $37.7 million of which is expected to convert to revenue in 2011. The Company anticipates that its normal operations will generate all of the funds necessary to fund its consolidated operations during the next twelve months. The Company believes that it will have sufficient liquidity and working capital without additional financing. However, notwithstanding the foregoing, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

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 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 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 issuance of performance bonds and bid bonds by the Company in the normal course of business could result in financial losses that negatively impact the Company's net income.

The Company is often required to issue performance bonds to its customers as a normal part of its business activities. The Company's customers may have the ability to draw upon these performance bonds in the event the Company fails to cure a material breach of the contract within 30 days of receiving notice from the customer regarding the nature of the breach. As of December 31, 2010, the Company has issued performance bonds on eight contracts totaling $4.7 million; the largest of these performance bonds was for $2.5 million. Although the Company expects no material breaches to occur on these contracts, if such a breach were to occur and the Company failed to cure such breach, the Company could incur a loss of up to $4.7 million.

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 Sykesville, Maryland (approximately 40,000 square feet). The lease for this facility expires on June 30, 2018.

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In addition, the Company leases office space domestically in St. Marys and Augusta, Georgia and Tarrytown, New York and internationally in Beijing, China, Nyköping, Sweden and Stockton-on-Tees, England. The Company leases these facilities for terms ending between 2011 and 2013.

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. REMOVED AND RESERVED.

PART II

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

The Company's common stock is listed on the NYSE Amex 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 NYSE Amex Stock Exchange for each full quarterly period within the two most recent fiscal years:

2010

Quarter	High	Low
First	$ 5.98	$ 4.76
Second	$ 5.73	$ 4.06
Third	$ 4.13	$ 3.35
Fourth	$ 3.71	$ 3.21

2009

Quarter	High	Low
First	$ 6.88	$ 4.67
Second	$ 6.75	$ 4.96
Third	$ 8.09	$ 5.85
Fourth	$ 6.28	$ 4.35

The following table sets forth the equity compensation plan information for the year ended December 31, 2010:

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	2,016,617	$4.39	148,888
Equity compensation plans not approved by security holders	--	$ --	--
Total	2,016,617	$4.39	148,888

There were approximately 1,051 holders of record of the common stock as of December 31, 2010. 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.

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 September 4, 2009, the Company raised $15.0 million through the sale of 2.5 million shares of its common stock, $.01 par value per share. The shares were sold under a shelf registration statement which was declared effective by the Securities and Exchange Commission on August 21, 2009. On September 23, 2009, the Company raised an additional $2,250,000 when the Company's underwriter, exercised an over-allotment option in full to purchase an additional 375,000 shares of the Company's common stock at the public offering price of $6.00 per share. The aggregate net proceeds received by the Company from the two transactions were approximately $15.9 million. The Company paid the underwriter a fee in the amount of 6% of the gross proceeds received by the Company from the offering ($1,035,000) and paid $339,000 in other transaction fees.

Effective April 26, 2010, GSE Systems Inc., through its wholly owned subsidiary GSE Systems, Ltd. (GSE UK), completed the acquisition of TAS Holdings Ltd. ("TAS"), a provider of engineering consulting, specializing in electrical system design, instrumentation and controls engineering and automation engineering. GSE UK acquired 100% of the outstanding common stock of TAS. The purchase price for the common stock of TAS was equal to (i) the consolidated net asset value of TAS as of April 26, 2010, approximately $600,000, and (ii) four times the adjusted consolidated pre-tax income of TAS for the year ended September 30, 2009, approximately $1.7 million (the "Adjusted Profit Consideration"), for a total of approximately $2.3 million in cash, GSE Systems, Inc. common stock and contingent consideration.

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Approximately $500,000 of the consolidated net asset value was paid on the closing date and the remaining $100,000 of the consolidated net asset value was paid during the third quarter 2010. On the closing date, the TAS Shareholders were entitled to receive approximately $683,000 (40% of the Adjusted Profit Consideration) payable in GSE common stock. Based upon the formula agreed to by the parties, the TAS Shareholders received 122,617 shares of GSE common stock.

The following graph compares the Company's cumulative total shareholder return since December 31, 2005 through December 31, 2010 with that of the NYSE Amex Composite 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. The graph assumes an initial investment of $100 on December 31, 2005 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 Research Data Group, Inc.

	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010
GSE Systems, Inc.	100.00	536.37	825.81	475.81	441.94	291.94
NYSE Amex Composite	100.00	119.54	144.62	87.02	118.50	152.13
Peer Group	100.00	121.40	166.43	96.43	118.51	148.39

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,				
	2010	2009	2008	2007	2006
Consolidated Statements of Operations:					
Contract revenue	$ 47,213	$ 40,060	$ 29,004	$ 31,900	$ 27,502
Cost of revenue	36,081	29,736	21,187	22,217	19,602
Gross profit	11,132	10,324	7,817	9,683	7,900
Operating expenses:					
Selling, general and administrative	11,683	7,749	7,383	7,214	4,929
ESA related charges	-	1,508	-	-	-
Administrative charges from GP Strategies	-	-	-	-	685
Depreciation	579	504	446	258	186
Amortization of definite-lived intangible assets	102	-	-	-	-
Total operating expenses	12,364	9,761	7,829	7,472	5,800
Operating income (loss)	(1,232)	563	(12)	2,211	2,100
Interest income (expense), net	19	56	130	(433)	(764)
ESA related charges	-	(865)	-	-	-
Loss on extinguishment of debt	-	-	-	-	(1,428)
Gain (loss) on derivative instruments	(913)	763	(453)	(11)	(24)
Other income (expense), net	83	(397)	(226)	(555)	(81)
Income (loss) before income taxes	(2,043)	120	(561)	1,212	(197)
Provision for income taxes	206	917	129	43	149
Net income (loss)	$ (2,249)	$ (797)	$ (690)	$ 1,169	$ (346)
Basic income (loss) per common share (1)	$ (0.12)	$ (0.05)	$ (0.04)	$ 0.09	$ (0.07)
Diluted income (loss) per common share (1)	$ (0.12)	$ (0.05)	$ (0.04)	$ 0.08	$ (0.07)
Weighted average common shares outstanding:					
-Basic	18,975	16,938	15,747	12,927	9,539
-Diluted	18,975	16,938	15,747	14,818	9,539

	As of December 31,				
	2010	2009	2008	2007	2006
Balance Sheet data:					

Working capital	$ 30,040	$ 31,469	$ 13,888	$ 14,711	$ 1,463
Total assets	53,614	49,520	31,015	28,364	18,448
Long-term liabilities	799	206	906	695	251
Stockholders' equity	36,906	37,143	20,700	20,365	7,361

(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.

At December 31, 2010, the Company had two separate revolving credit agreements for revolving lines of credit with BOA which were to expire on May 31, 2012. The Company and its subsidiary, GSE Power Systems, Inc., were jointly and severally liable as co-borrowers. The credit facilities enabled the Company to borrow funds to support working capital needs and standby letters of credit. The first line of credit which was in the principal amount of up to $3.5 million was amended on March 29, 2010 to increase the principal amount to $5.0 million. This revolving line of credit enabled the Company to borrow funds up to 90% of eligible foreign accounts receivable, plus 75% of eligible unbilled foreign receivables and 100% of cash collateral pledged to BOA on outstanding warranty standby letters of credit. This line of credit was 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 was in the principal amount of up to $2.5 million. This line of credit enabled the Company to borrow funds up to 80% of domestic accounts receivable, 30% of domestic unbilled receivables and 100% of the principal balance of a $600,000 certificate of deposit issued by BOA. The interest rate on this line of credit was based on the daily LIBOR rate plus 225 basis points, with interest only payments due monthly. The credit agreements contained certain restrictive covenants regarding future acquisitions, incurrence of debt and the payment of dividends. In addition, both credit agreements contained financial covenants with respect to the Company's minimum tangible net worth, debt service coverage ratio, and funded debt to EBITDA ratio. At December 31, 2010 and throughout all of 2010, the Company had not paid any interest or principal payments related to any borrowings for over one year. As such the debt service coverage ratio is not applicable at December 31, 2010. The financial covenant calculations at December 31, 2010 are shown below:

	Covenant	As of Dec. 31, 2010
Tangible net worth	Must Exceed $15.0 million	$31.8 million
Funded debt to EBITDA ratio	Not to Exceed 2.50 : 1.00	(30.90) : 1.00

For the funded debt to EBITDA ratio calculation, the amount of outstanding standby letters of credit and surety bonds that are not cash collateralized are included as funded debt. At December 31, 2010, the Company had outstanding standby letters of credit and surety bonds that were not cash collateralized of $4.5million. Due to the Company's net loss of $2.2 million for the year ended December 31, 2010, the Company is in default on its funded debt to EBITDA ratio at December 31, 2010.

Due to the Company's financial covenant default, BOA has made the following amendments to the Company's revolving credit agreements effective March 14, 2011:

- A written waiver has been granted for the funded debt to EBITDA ratio default.
- The $5.0 million principal line of credit has been terminated.
- The financial covenants for the $2.5 million principal line of credit have been deleted.
- The Company is required to cash collateralize all outstanding standby letters of credit, which totals $3.4 million.
- All future letters of credit issued by BOA must be cash collateralized.
- Borrowings under the line of credit must be cash collateralized. Currently the Company has in place a $600,000 certificate of deposit as collateral for the line of credit.

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At December 31, 2010, the Company had cash and cash equivalents of $26.6 million and has $600,000 available under its $2.5 million line of credit. Of this amount $3.4 million will be restricted as cash collateral for the Company's outstanding standby letters of credit in accordance with the March 14, 2011 amendment to the Company's revolving credit agreement. The Company has entered into 2011 with $55.9 million of backlog; $37.7 million of which is expected to convert to revenue in 2011. The Company anticipates that its normal operations will generate all of the funds necessary to fund its consolidated operations during the next twelve months. The Company believes that it will have sufficient liquidity and working capital without additional financing. However, notwithstanding the foregoing, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

On April 26, 2010, the Company completed the acquisition of TAS Holdings Ltd ("TAS"), acquiring 100% ownership in TAS for a purchase price of approximately $2.3 million in cash, GSE Systems, Inc. common stock and contingent consideration. TAS has been renamed TAS Engineering Consultants, Ltd. TAS, located in Stockton-on-Tees in the United Kingdom, provides engineering consulting, specializing in electrical system design, instrumentation and controls engineering and automation engineering. TAS also engages in the computer modeling of major electrical distribution systems containing variable sources of electric generation operating at different utilization voltages. The majority of TAS's customers reside in the petroleum refining, oil and gas, chemical and petrochemical industries. The acquisition of TAS was strategically important for the Company for the following reasons. First, TAS's expertise in electrical distribution system modeling with variable sources of power, such as renewable energy generation, will help GSE extend its capability into the modeling and simulation of electrical distribution and grid systems. Secondly, TAS routinely encounters training opportunities that coincide with their engineering and consulting projects thereby creating cross selling opportunities for GSE's growing training organization. Third, the acquisition expands GSE's presence in the UK through access to existing TAS clients such as British Petroleum and ConocoPhillips. Lastly, the acquisition of TAS, coupled with GSE's ongoing training activities at the University of Strathclyde, will enhance the Company's ability to support the UK's planned construction of eight new nuclear plants in the coming years through both our nuclear simulation and training businesses which are pursuing opportunities in those areas.

On July 28, 2010, GSE-UNIS Simulation Technology Co., Ltd. ("GSE-UNIS"), a limited liability company, received a formal business license from the Chinese government. GSE-UNIS is 51% owned by Beijing UNIS Investment Co., Ltd. ("UNIS") and 49% owned by GSE. As of December 31, 2010, the joint-venture had yet to commence commercial operations although it had incurred minimal administrative expenses. On October 1, 2010, the Company contributed $587,000 in cash, as its initial investment to GSE-UNIS. In September 2010, UNIS contributed approximately $600,000 in cash as its initial investment to GSE-UNIS. UNIS and GSE will make additional contributions to GSE-UNIS of approximately $900,000 and $800,000, respectively, over the next fifteen months. The largest shareholder of UNIS is Tsinghua University, a prestigious technology university in China. Established in 1988, UNIS has been acting as an incubator company transferring new technologies from the University's research laboratory to the commercial sector. The origin of its simulation platform can be traced back to 1984, a national award-winning technology developed by Tsinghua University. Over the past 20 years, hundreds of simulators have been built based upon this technology for approximately 200 customers in the fossil fueled electric power industry, accounting for about 50% of the total Chinese fossil fueled power market. Its solid customer base and strong relationships with the academic and government sector will help GSE-UNIS service contracts in both the fossil fueled as well as nuclear power markets in the Chinese market.

On January 4, 2011, the Company completed the acquisition of EnVision Systems, Inc. ("EnVision"), acquiring 100% ownership in EnVision for a purchase price of approximately $4.3 million in cash and contingent consideration. EnVision, which has been renamed GSE EnVision Inc., provides interactive multi-media tutorials and simulation models, primarily to the petrochemical and oil & gas refining industries. EnVision is headquartered in Madison, NJ, has an office in Chennai, India, and was founded in 1991. EnVision's tutorials and simulation models serve the rapidly growing entry-level training market for the oil & gas refining and specialty chemicals industries.

EnVision’s products provide a foundation in process fundamentals and plant operations and interaction. EnVision has completed more than 750 installations in over 28 countries and its approximately 130 clients include Shell Oil Company, BP, Total and Chevron.

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 U.S. generally accepted accounting principles, 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.

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.

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 ASC 605-25 Revenue Recognition-Multiple Element Arrangements.

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 U.S. generally accepted accounting principles, 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 three year estimated useful life of the product. As of December 31, 2010, the Company has net capitalized software development costs of $1.8 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. 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, 2010, the Company's largest deferred tax asset related to a U.S. net operating loss carryforward of $15.9 million which expires in various amounts between 2017 and 2030. 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 and English subsidiaries, the recovery of the net deferred tax assets could not be substantiated by currently available objective evidence. Accordingly, the Company has established an $8.7 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.

($ in thousands)	Years ended December 31,								
	2010	%		2009	%		2008	%	
Contract revenue	$47,213	100.0	%	$40,060	100.0	%	$29,004	100.0	%
Cost of revenue	36,081	76.4	%	29,736	74.2	%	21,187	73.1	%
Gross profit	11,132	23.6	%	10,324	25.8	%	7,817	26.9	%
Operating expenses:									
Selling, general and administrative	11,683	24.7	%	7,749	19.3	%	7,383	25.4	%
ESA related charges	-	0.0	%	1,508	3.8	%	-	0.0	%
Depreciation	579	1.2	%	504	1.3	%	446	1.5	%
Amortization of definite-lived intangible assets	102	0.2	%	-	0.0	%	-		
Total operating expenses	12,364	26.1	%	9,761	24.4	%	7,829	26.9	%
Operating income (loss)	(1,232)	(2.6)	%	563	1.4	%	(12)	(0.0)	%
Interest income, net	19	0.0	%	56	0.1	%	130	0.4	%
ESA related charges	-	0.0	%	(865)	(2.2)	%	-	0.0	%
Gain (loss) on derivative instruments	(913)	(1.9)	%	763	1.9	%	(453)	(1.6)	%
Other income (expense), net	83	0.3	%	(397)	(0.9)	%	(226)	(0.8)	%
Income (loss) before income taxes	(2,043)	(4.3)	%	120	0.3	%	(561)	(2.0)	%
Provision for income taxes	206	0.4	%	917	2.3	%	129	0.4	%
Net loss	$(2,249)	(4.8)	%	$(797)	(2.0)	%	$(690)	(2.4)	%

Comparison of the Years Ended December 31, 2010 to December 31, 2009.

Contract Revenue. Contract revenue for the year ended December 31, 2010 totaled $47.2 million, which was 17.9% higher than the $40.1 million total revenue for the year ended December 31, 2009. The Company recorded total orders of $47.4 million in the year ended December 31, 2010 versus $54.4 million in the year ended December 31, 2009. Included in the 2009 orders was an $18.4 million contract to build a new nuclear power plant simulator for a two unit reactor plant in Slovakia. The contract included approximately $12.0 million for hardware, the largest portion being a distributed control system from Siemens that the customer requested be a part of the contract in addition to approximately $6.0 million related specifically to the simulator. In 2010, the Company received three change orders totaling $5.4 million for this contract which included approximately $4.4 million for revisions to the Siemens digital control system. Due to the significant hardware portion of the project, the overall margin on the project is lower than the Company's normal gross margin. In the years ended December 31, 2010 and 2009, the Company recognized $10.4 million and $5.4 million of contract revenue, respectively, on this project using the percentage-of-completion method, which accounted for 22.0% and 13.5% of the Company's consolidated revenue, respectively. In 2010, the Company's newly acquired subsidiary, TAS Engineering Consulting Ltd, had total revenue of $2.4 million. At December 31, 2010, the Company's backlog was $55.9 million, of which $7.9 million related to the Slovakia contract. The Company's backlog increased 3.7% from December 31, 2009 when the Company's backlog totaled $53.9 million.

Gross Profit. Gross profit totaled $11.1 million for the year ended December 31, 2010 versus $10.3 million for the year ended December 31, 2009. As a percentage of revenue, gross profit decreased from 25.8% for the twelve months ended December 31, 2009 to 23.6% for the twelve months ended December, 31 2010. The decrease in gross margin reflects the following items:

- The Company has a $4.7 million contract to provide a full scope AGR replacement simulator with a British utility. In 2010, disagreements arose with the customer over the extent and composition of the simulator testing procedures, the scope of certain plant systems being included in the simulator and the project schedule. These issues were resolved with the customer in early 2011, however, the resolution has significantly increased the Company's costs to complete the contract. Although the Company is currently in negotiations with the customer for additional funding, the Company revised its estimates to complete the project in the fourth quarter 2010 and recorded a $1.2 million loss.

- The lower-margined $23.8 million full scope simulator and digital control system order received in 2009 from a Slovak utility made up 22.0% of the Company's total revenue in 2010 versus only 13.5% of revenue in 2009.

Selling, General and Administrative Expenses. Selling, general and administrative ("SG&A") expenses totaled $11.7 million and $7.7 million for the years ended December 31, 2010 and 2009, respectively. Fluctuations in the components of SG&A spending were as follows:

- Business development and marketing costs increased from $3.2 million for the year ended December 31, 2009 to $4.2 million in the year ended December 31, 2010. Bidding and proposal cost, which are the costs of operations personnel assisting with the preparation of contract proposals totaled $1.4 million for the year ended December 31, 2010, a $432,000 increase from the prior year. TAS, which was acquired on April 26, 2010, incurred $216,000 of business development expenses for the period commencing on the date of acquisition and ending on December 31, 2010. During 2010, the Company hired both a business development manager in the United Kingdom and hired a business development manager in the United States for its 3D visualization program. During 2009, the Company hired business development managers for both its process simulation business and its education and training business and a marketing specialist for the nuclear simulation business. Additionally, the Company incurred costs of approximately $200,000 for hosting the Company's September 2010 Simworld user's conference in Stockholm, Sweden. The Company did not host a Simworld conference in 2009.

- The Company's general and administrative expenses increased from $4.2 million for the year ended December 31, 2009 to $6.9 million in the year ended December 31, 2010. The increase of $2.7 million is primarily attributable to the following:

- TAS, which was acquired on April 26, 2010, incurred $549,000 of G&A expenses for the period commencing on the closing date of the acquisition and ending on December 31, 2010.
- The change in the fair value of contingent consideration (accretion expense) related to the TAS acquisition was $147,000 for the year ended December 31, 2010.
- The Company incurred approximately $710,000 of expenses related to its acquisition efforts for the year ended December 31, 2010. These acquisition costs were composed of legal, travel, due diligence, valuation and audit expenses. The Company incurred no acquisition related costs in 2009.
- The Company recognized approximately $297,000 of foreign currency losses for the year ended December 31, 2010. The losses were mainly related to the Company's BOA Euro denominated operating account, intercompany receivable/payable accounts, and a euro-denominated value added tax receivable. For the year ended December 31, 2009, the Company had recognized foreign currency gains of $130,000.
    - The Company incurred bad debt expense of approximately $249,000 in 2010 versus none in 2009.
    - The Company incurred approximately $197,000 of costs related to changes in the Company's executive management in 2010. Mr. Jim Eberle started with the Company on June 1, 2010 as Chief Operating Officer and was promoted to Chief Executive Officer on November 1, 2010 upon the retirement of Mr. John Moran as Chief Executive Officer.

- Gross spending on software product development ("development") totaled $1.6 million in the year ended December 31, 2010 as compared to $1.3 million in 2009. For the year ended December 31, 2010, the Company expensed $663,000 and capitalized $903,000 of its development spending. For the year ended December 31, 2009, the Company expensed $425,000 and capitalized $861,000. The Company's capitalized development expenditures in 2010 were mainly related to the customization of RELAP5-HD software (which simulates transient fluid dynamics, neutronics and heat transfer in nuclear power plants) to run on the Company's real-time executive software; the replacement of the current Graphic User Interface of SimSuite Pro with JADE Designer; and feature enhancements to Jtopmeret, a modeling tool that generates two phase network dynamic models.. The Company anticipates that its total gross development spending in 2011 will approximate $1.5 million.

ESA Related Charges. GSE is a 10% owner of the Emirates Simulation Academy, LLC in the United Arab Emirates.

Based upon various events which occurred in late 2009, the Company determined that its remaining investment in ESA had been impaired and established reserves for the trade receivable due from ESA at December 31, 2009 and the cash that GSE had on deposit with Union National Bank as a partial guarantee for ESA's credit facility. Partially offsetting these charges was the reversal of the remaining deferred profit related to the Company's sale of five simulators to ESA in prior years and the remaining agent fee that was due upon payment of the final outstanding receivable. The charges recorded and in the presentation in the statement of operations for the year ended December 31, 2009 were as follows:

(in thousands)	Year ended December 31, 2009
Trade receivable	$ 1,604
Accrued agent fee	(96)
Operating expense	1,508
Restricted cash- bank guarantee and accrued interest income	1,291
Investment in ESA	117
Deferred profit	(543)
Other expense, net	865
Total	$ 2,373

In 2010, Union National Bank withdrew a total of $294,000 from the cash GSE had on deposit with them as a partial guarantee against ESA's line of credit.

Depreciation. Depreciation expense totaled $579,000 and $504,000 for the years ended December 31, 2010 and 2009, respectively. The higher 2010 depreciation expense is primarily the result of the Company's capital purchases of new computers for new hires and upgraded servers.

Amortization of definite-lived intangible assets. Amortization expense related to definite-lived intangible assets totaled $102,000 and $0 for the years ended December 31, 2010 and 2009, respectively. As part of the Company's acquisition of TAS in 2010, the Company recorded intangible assets totaling approximately $740,000 with estimated lives of one to ten years.

Operating Income (Loss). The Company had an operating loss of $1.2 million (2.6% of revenue) in the year ended December 31, 2010, as compared with operating income of $563,000 (1.4% of revenue) for the year ended December 31, 2009. The variances were due to the factors outlined above.

Interest Income, Net. The Company's interest income, net totaled $19,000 and $56,000 for the years ended December 31, 2010 and 2009, respectively.

At December 31, 2010, the Company had two separate revolving credit agreements for revolving lines of credit with BOA which were scheduled to expire on May 31, 2012. The first line of credit was in the principal amount of up to $5.0 million and was guaranteed by the U.S. Export-Import Bank. The second line of credit was in the principal amount of up to $2.5 million. The Company did not borrow any funds against either BOA line of credit, although the lines had been utilized to collateralize letters of credit which had been issued as performance bonds.

The deferred financing costs incurred when the BOA lines of credit were first established in 2008 were amortized over the original two-year term of the lines of credit. Amortization began in April 2008 and ended March 31, 2010. The deferred financing costs incurred in conjunction with the extension of the BOA lines of credit until May 31, 2012 were being amortized over the 25 month period of the lines of credit beginning as of April 1, 2010. However, in conjunction with the revisions to the Company's revolving credit agreements discussed below in the liquidity section, we expensed the remaining balance as of December 31, 2010. Amortization totaled $92,000 and $46,000 for the

twelve months ended December 31, 2010 and 2009, respectively.

At December 31, 2010 and 2009, the Company had approximately $179,000 and $336,000, respectively, of cash in Certificates of Deposit with BOA that were being used as collateral for various performance bonds. The Company recorded interest income of $18,000 and $61,000 from the Certificates of Deposit in for the twelve months ended December 31, 2010 and 2009, respectively.

The Company had $17.0 million and $150,000 deposited in a money market account with BOA on December 31, 2010, and 2009, respectively. Interest income earned on the BOA money market account totaled $84,000 and $0 for the years ended 2010 and 2009, respectively.

In May 2007, the Company deposited $1.2 million into a restricted, interest-bearing account at the Union National Bank in the United Arab Emirates as a partial guarantee for the $11.8 million credit facility that UNB has extended to ESA. GSE recorded approximately $0 and $26,000 interest income in the years ended December 31, 2010 and 2009, respectively. In 2009, the Company determined that its investment in ESA was impaired. As such, the Company established a full reserve for the amount in restricted cash amount as of December 31, 2009. Any interest income earned from this account in 2010 was not recorded in interest income but was credited to the reserve balance. In 2010, Union National Bank withdrew a total of $294,000 from the cash GSE had on deposit with them as a partial guarantee against ESA's line of credit; at December 31, 2010 the Company had $1.0 million remaining in the UNB account.

The Company had other interest income in the year ended December 31, 2010 of $9,000 and $11,000 in the year ended December 31, 2009.

Gain (Loss) on Derivative Instruments. The Company 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. As of December 31, 2010, the Company had foreign exchange contracts outstanding of approximately 1.6 million Pounds Sterling, 10.6 million Euro, and 865.2 million Japanese Yen at fixed rates. The contracts expire on various dates through February 2014. The Company had not designated the contracts as hedges and has recognized a loss on the change in the estimated fair value of the contracts of $745,000 for the twelve months ended December 31, 2010.

At December 31, 2009, the Company had foreign exchange contracts outstanding of approximately 2 million Pounds Sterling, 3 million Euro, and 759 million Japanese Yen at fixed rates. The contracts expire on various dates through February 2014. The Company had not designated the contracts as hedges and had recognized a gain on the change in the estimated fair value of the contracts of $851,000 for the twelve months ended December 31, 2009.

The estimated fair values of the contracts at December 31, 2010 and 2009 were a net asset of $81,000 and $812,000, respectively, and were recorded on the balance sheets as follows:

(in thousands)	December 31, 2010	2009
Asset derivatives		
Prepaid expenses and other current assets	$ 208	$ 515
Other assets	117	396
	325	911
Liability derivatives		
Other current liabilities	(204)	(34)
Other liabilities	(40)	(65)
	(244)	(99)
Net fair value	$ 81	$ 812

The foreign currency denominated trade receivables and unbilled receivables that are related to the outstanding foreign exchange contracts at December 31, 2010 are remeasured at the end of each period into the functional currency using the current exchange rate at the end of the period. For the years ended December 31, 2010 and 2009, the Company incurred a $168,000 loss and $88,000 loss, respectively, from the remeasurement of such trade and unbilled receivables.

Other Income (Expense), Net. The Company recognized $83,000 of other income, net for the year ended December 31, 2010. In contrast, the Company recognized $397,000 of other expense, net for the same period in 2009. The major components of other income (expense), net include the following items:

The Company accounted for its investment in ESA using the equity method. In accordance with the equity method, the Company eliminated 10% of the profit from this contract as the training simulators are assets that have been recorded on the books of ESA, and the Company was thus required to eliminate its proportionate share of the profit included in the asset value. ESA began to amortize the training simulators effective January 1, 2009 over a four year life; accordingly, GSE began to amortize the deferred profit in January 2009 and recognized income of $181,000 for the year ended December 31, 2009. However, in conjunction with the Company's determination that its investment in ESA was impaired as of December 31, 2009, GSE wrote off the balance of the deferred profit, recognizing additional income of $543,000. See the discussion above in ESA related charges.

For the year ended December 31, 2009, the Company recognized a $615,000 equity loss on its investment in ESA. However, in conjunction with the Company's determination that its investment in ESA was impaired as of December 31, 2009, it wrote off the balance of its investment in ESA, recognizing an additional equity loss of $117,000. See the discussion above in ESA related charges.

The Company had other miscellaneous income in the years ended December 31, 2010 and 2009 of $83,000 and of $37,000, respectively.

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Provision for Income Taxes.

The Company files in the United States federal jurisdiction and in several state and foreign jurisdictions. Because of the net operating loss carryforwards, the Company is subject to U.S. federal and state income tax examinations from years 1997 and forward and is subject to foreign tax examinations by tax authorities for years 2005 and forward. Open tax years related to state and foreign jurisdictions remain subject to examination but are not considered material to our financial position, results of operations or cash flows.

As of December 31, 2010, there have been no material changes to the liability for uncertain tax positions. Furthermore, the Company is not aware of any tax positions for which it is reasonably possible that the total amounts of unrecognized tax benefits would significantly decrease or increase within the next twelve months.

The Company's tax provision in 2010 was $206,000 and consisted of $9,000 state income taxes, $382,000 foreign income taxes incurred by the Company's foreign subsidiaries, and a $185,000 net credit for foreign income tax withholding on several non-U.S. contracts. In the first quarter 2010, the Company reversed a $400,000 accrual for foreign income tax withholding on a contract that it completed in China. Partially offsetting this credit were withholding taxes totaling approximately $215,000 on various contracts completed in Mexico, South Korea and Canada.

The Company's tax provision in 2009 was $917,000 and consisted of $29,000 U.S. federal income taxes, $80,000 state income taxes, $569,000 foreign income taxes incurred by the Company's foreign subsidiaries, and $239,000 foreign income tax withholding on several non-U.S. contracts.

The Company has a full valuation allowance on its U.S. and Scottish net deferred tax assets at December 31, 2010.

Comparison of the Years Ended December 31, 2009 to December 31, 2008.

Contract Revenue. Contract revenue for the year ended December 31, 2009 totaled $40.1 million, which was 38.1% higher than the $29.0 million total revenue for the year ended December 31, 2008. The Company recorded total orders of $54.4 million in the year ended December 31, 2009 versus $44.0 million in the year ended December 31, 2008. Included in the 2009 orders was an $18.4 million contract to build a new nuclear power plant simulator for a two unit reactor plant in Slovakia. The contract included approximately $12.0 million for hardware, the largest portion being a distributed control system from Siemens that the customer requested be a part of the contract in addition to approximately $6.0 million related specifically to the simulator. Due to the significant hardware portion of the project, the overall margin on the project was lower than the Company's normal gross margin. In the year ended December 31, 2009, the Company recognized $5.4 million of contract revenue on this project using the percentage-of-completion method, which accounted for 13.5% of the Company's consolidated revenue. At December 31, 2009, the Company's backlog was $53.9 million, of which $13.0 million related to this contract. The Company's backlog increased 41.5% from December 31, 2008 when the Company's backlog totaled $38.1 million.

Gross Profit. Gross profit totaled $10.3 million for the year ended December 31, 2009 versus $7.8 million for the year ended December 31, 2008. As a percentage of revenue, gross profit decreased from 26.9% for the twelve months ended December 31, 2008 to 25.8% for the twelve months ended December, 31 2009. The decrease in gross margin mainly reflected the impact of the lower margin on the $18.4 million full scope simulator and digital control system order received in the first quarter 2009 from a Slovak utility.

Selling, General and Administrative Expenses. Selling, general and administrative ("SG&A") expenses totaled $7.7 million and $7.4 million for the years ended December 31, 2009 and 2008, respectively. Fluctuations in the components of SG&A spending were as follows:

- Business development and marketing costs increased from $2.9 million for the year ended December 31, 2008 to $3.1 million in the year ended December 31, 2009. The spending increase mainly reflects a $352,000 increase of bidding and proposal costs, which are the costs of operations personnel in assisting with the preparation of contract proposals and a $104,000 increase in business development labor and benefit costs. In 2009 the Company hired business development managers for both its process simulation business and its education and training business. These increases were partially offset by a $137,000 decrease in business development travel expenses. In addition, the Company did not have a Simworld user's conference in 2009, but spent approximately $75,000 in 2008 for its bi-annual Simworld conference in Beijing, China.

- The Company's general and administrative expenses were virtually unchanged at $4.2 million for the year ended December 31, 2009 and $4.2 million for the year ended December 31, 2008.

- Gross spending on software product development ("development") totaled $1.3 million in the year ended December 31, 2009 as compared to $907,000 for the same period in 2008. For the year ended December 31, 2009, the Company expensed $425,000 and capitalized $861,000 of its development spending and expensed $316,000 and capitalized $591,000 of its development spending in the year ended December 31, 2008. The Company's capitalized development expenditures in 2009 were mainly related to the customization of RELAP5-RT software (which simulates transient fluid dynamics, neutronics and heat transfer in nuclear power plants) to run on the Company's real-time executive software; the replacement of the current Graphic User Interface of SimSuite Pro with JADE Designer; the development of generic simulation models for three oil and gas refining processes: continuous catalytic reformer, hydrotreater, and amine treatment; and a generic combined cycle gas turbine simulator.

ESA related charges. GSE is a 10% owner of the Emirates Simulation Academy, LLC in the United Arab Emirates. Although ESA was formed in late 2005, it had its grand opening on January 14, 2009 and signed its first customer training contract on the same day. Despite ESA's promotional efforts, 2009 revenue totaled only AED 209,000 ($57,000), and they incurred a net loss of AED 22.6 million ($6.1 million). Per ESA's latest financial projections, ESA would not become profitable until 2016 and would not become cash positive until 2017.

At December 31, 2009, ESA had borrowed a total of AED 36.4 million ($9.9 million) from its credit facility with Union National Bank, including accrued interest payable. ESA was delinquent in paying both principal and interest (a total of AED 5.3 million or $1.5 million) and in January 2010, UNB drew upon the guarantees of the three partners to pay off the delinquency, withdrawing $145,000 from GSE's restricted cash account. In February 2010, GSE was notified that ESA had missed another loan payment and that 10% of the amount due ($24,000) would be withdrawn from the Company's restricted cash account.

At a meeting of ESA's three shareholders held at ESA on February 17, 2010, the shareholders reached agreement to significantly reduce costs and begin to explore options up to and including the selling of ESA.

Accordingly, based upon these events, the Company determined that its remaining investment in ESA had been impaired and established reserves for the trade receivable due from ESA at December 31, 2009 and the cash that GSE has on deposit with UNB as a partial guarantee for ESA's credit facility. Partially offsetting these charges was the reversal of the remaining deferred profit related to the Company's sale of five simulators to ESA in prior years and the remaining agent fee that was due upon payment of the final outstanding receivable. The charges recorded and the presentation in the statement of operations for the year ended December 31, 2009 were as follows:

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(in thousands)	Year ended December 31, 2009
Trade receivable	$ 1,604
Accrued agent fee	(96)
Operating expense	1,508
Restricted cash- bank guarantee and accrued interest income	1,291
Investment in ESA	117
Deferred profit	(543)
Other expense, net	865
Total	$ 2,373

Depreciation. Depreciation expense totaled $504,000 and $446,000 for the years ended December 31, 2009 and 2008, respectively. The higher 2009 depreciation expense was a result of the Company's 2008 capital purchases related to the Company's move to its Sykesville, Maryland headquarters in 2008 and the purchase of new computers for new hires.

Operating Income (Loss). The Company had operating income of $563,000 (1.4% of revenue) in the year ended December 31, 2009, as compared with operating loss of $12,000 (0.0% of revenue) for the year ended December 31, 2008. The variances were due to the factors outlined above.

Interest Income (Expense), Net. The Company's interest income, net totaled $56,000 and $130,000 for the years ended December 31, 2009 and 2008, respectively.

On March 28, 2008, the Company entered into two separate revolving line of credit agreements for two-year revolving lines of credit with BOA, replacing the Company's credit facility with Laurus Master Fund. One line of credit is in the principal amount of up to $3.5 million and is guaranteed by the U.S. Export-Import Bank. The second line of credit was originally in the principal amount of up to $1.5 million, however, on May 5, 2009, the credit agreement was amended to increase the principal amount to $2.5 million. The Company had not borrowed any funds against either BOA line of credit. However, at December 31, 2009, $2.4 million of the credit facility was utilized as collateral for three standby letters of credit.

The deferred financing costs incurred in conjunction with the Laurus Master Fund line of credit were amortized over the two-year period of the line of credit, with the final amortization expense recorded in February 2008. Amortization expense totaled $89,000 in the year ended December 31, 2008. The deferred financing costs incurred in conjunction with the BOA lines of credit were being amortized over the two-year period of the lines of credit. Amortization began in April 2008 and totaled $46,000 and $53,000 for the years ended December 31, 2009 and 2008, respectively.

Interest income earned on short-term investments of the Company's operating cash totaled $4,000 for the year ended December 31, 2009 versus $67,000 in the year ended December 31, 2008. The lower interest income in 2009 mainly reflected the termination of the Company's commercial automated investment account with BOA in the second quarter of 2009.

At December 31, 2009 and 2008, the Company had approximately $336,000 and $2.9 million, respectively, of cash in Certificates of Deposit with BOA that were being used as collateral for various performance bonds. At December 31, 2009, the Company also had a $600,000 Certificate of Deposit which was issued as additional collateral for one of the BOA lines of credit. The Company earned approximately $61,000 and $132,000 in interest income on the Certificates of Deposit in the years ended December 31, 2009 and 2008, respectively.

In May 2007, the Company deposited $1.2 million into a restricted, interest-bearing account at the Union National Bank in the United Arab Emirates as a partial guarantee for the $11.8 million credit facility that UNB has extended to ESA. GSE recorded approximately $26,000 and $48,000 interest income in the years ended December 31, 2009 and 2008, respectively. The reduction in interest income reflected the lower interest rates in 2009.

The Company had other interest income in the year ended December 31, 2009 of $11,000 and $25,000 in the year ended December 31, 2008.

Gain (Loss) on Derivative Instruments. The Company 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. As of December 31, 2009, the Company had foreign exchange contracts outstanding of approximately 2 million Pounds Sterling, 3 million Euro, and 759 million Japanese Yen at fixed rates. The contracts expire on various dates through February 2014. The Company had not designated the contracts as hedges and has recognized a gain on the change in the estimated fair value of the contracts of $851,000 for the twelve months ended December 31, 2009.

At December 31, 2008, the Company had foreign exchange contracts outstanding of approximately 2 million Pounds Sterling, 4 million Euro, and 68 million Japanese Yen at fixed rates. The contracts expire on various dates through February 2014. The Company had not designated the contracts as hedges and had recognized a loss on the change in the estimated fair value of the contracts of $174,000 for the twelve months ended December 31, 2008.

The estimated fair value of the contracts at December 31, 2009 and 2008 was a net asset of $812,000 and a net liability of $58,000, respectively, and were recorded on the balance sheets as follows:

(in thousands)	December 31, 2009	2008
Asset derivatives		
Prepaid expenses and other current assets	$ 515	$ 14
Other assets	396	537
	911	551
Liability derivatives		
Other current liabilities	(34)	(426)
Other liabilities	(65)	(183)
	(99)	(609)
Net fair value	$ 812	$ (58)

The foreign currency denominated trade receivables and unbilled receivables that are related to the outstanding foreign exchange contracts at December 31, 2010 are remeasured at the end of each period into the functional currency using the current exchange rate at the end of the period. For the years ended December 31, 2010 and 2009, the Company incurred a $168,000 loss and $88,000 loss, respectively, from the remeasurement of such trade and unbilled receivables.

Other Income (Expense), Net. The Company recognized $83,000 of other income, net for the year ended December 31, 2010. In contrast, the Company recognized $397,000 of other expense, net for the same period in 2009. The major components of other income (expense), net include the following items:

- The Company accounted for its investment in ESA using the equity method. In accordance with the equity method, the Company eliminated 10% of the profit from this contract as the training simulators are assets that have been recorded on the books of ESA, and the Company was thus required to eliminate its proportionate share of the profit included in the asset value. ESA began to amortize the training simulators effective January 1, 2009 over a four year life; accordingly, GSE began to amortize the deferred profit in January 2009 and recognized income of $181,000 for the year ended December 31, 2009. However, in conjunction with the Company's determination that its investment in ESA was impaired as of December 31, 2009, GSE wrote off the balance of the deferred profit, recognizing additional income of $543,000. See the discussion above in ESA related charges.

- For the year ended December 31, 2009, the Company recognized a $615,000 equity loss, respectively, on its investment in ESA. However, in conjunction with the Company's determination that its investment in ESA was impaired as of December 31, 2009, it wrote off the balance of its investment in ESA, recognizing an additional equity loss of $117,000. See the discussion above in ESA related charges.

- The Company had other miscellaneous income in the years ended December 31, 2010 and 2009 of $83,000 and of $37,000, respectively.

Provision for Income Taxes.

The Company files in the United States federal jurisdiction and in several state and foreign jurisdictions. Because of the net operating loss carryforwards, the Company is subject to U.S. federal and state income tax examinations from years 1997 and forward and is subject to foreign tax examinations by tax authorities for years 2005 and forward. Open tax years related to state and foreign jurisdictions remain subject to examination but are not considered material to our financial position, results of operations or cash flows.

As of December 31, 2009, there had been no material changes to the liability for uncertain tax positions. Furthermore, the Company was not aware of any tax positions for which it was reasonably possible that the total amounts of unrecognized tax benefits would significantly decrease or increase within the next twelve months.

The Company's tax provision in 2009 was $917,000 and consisted of $29,000 U.S. federal income taxes, $80,000 state income taxes, $569,000 foreign income taxes incurred by the Company's foreign subsidiaries, and $239,000 foreign income tax withholding on several non-U.S. contracts.

The Company's tax provision in 2008 was $129,000 and consisted of $10,000 state income taxes, $226,000 foreign income tax withholding on several non-U.S. contracts, and $19,000 foreign income taxes incurred by the Company's foreign subsidiaries. The income tax expense was partially offset by a $126,000 credit from the reduction of the valuation allowance against the net deferred tax assets of the Company's Swedish subsidiary.

The Company had a full valuation allowance on its U.S. net deferred tax assets at December 31, 2009.

Liquidity and Capital Resources.

As of December 31, 2010, GSE had cash and cash equivalents of $26.6 million versus $25.3 million at December 31, 2009.

Cash From Operating Activities. For the year ended December 31, 2010, net cash provided by operating activities totaled $2.4 million which was an increase of $2.1 million as compared to the year ended December 31, 2009.

Significant changes in the Company's assets and liabilities in the year ended December 31, 2010 included:

- A $903,000 increase in the Company's contracts receivable. The Company's trade receivables, net of the allowance for doubtful accounts, decreased from $6.4 million at December 31, 2009 to $5.7 million at December 31, 2010. The Company's unbilled receivables increased by $2.0 million to $11.5 million at December 31, 2010. The increase in the unbilled receivables is due to the timing of contracted billing milestones of the Company's current projects. In January and February 2011, the Company invoiced $2.9 million of the unbilled amounts; the balance of the unbilled amounts is expected to be invoiced and collected within one year. At December 31, 2010, trade receivables outstanding for more than 90 days totaled $318,000 versus $1.4 million at December 31, 2009, excluding the $1.6 million due from ESA which had been fully reserved at both dates. In January 2011, the Company received a stop work order from NuScale Power ("NuScale"). NuScale's primary investor is a defendant in a lawsuit brought by the Securities and Exchange Commission and has ceased funding NuScale's current operations. As such, the Company increased its bad debt reserve approximately $400,000 as of December 31, 2010.
- A $922,000 increase in prepaid expenses and other assets. The Company's Value Added Tax ("VAT") receivable increased $250,000 at December 31, 2010 as compared to the prior year. VAT is included in payments the Company makes to Siemens for the DCS system being provided to a Slovak utility. GSE has filed for a refund of the VAT paid. In addition, prepaid foreign income taxes and employee advances have increased a combined $400,000 from 2009.

- A $932,000 increase in accounts payable, accrued compensation and accrued expenses. The Company's accounts payable and accrued liabilities have increased $358,000 due to the costs accrued related to the Company's acquisition efforts as of December 31, 2010. Additionally, accrued compensation increased $305,000 primarily due to an increase in the Company's headcount from December 31, 2009 to December 31, 2010.
- A $1.7 million increase in billings in excess of revenue earned. The increase is due to the timing of contracted billing milestones of the Company's current projects.

For the year ended December 31, 2009, net cash provided by operating activities totaled $326,000 and increased $1.9 million as compared to 2008. Significant changes in the Company's assets and liabilities in 2009 included:

- A $5.1 million increase in the Company's contracts receivable. The Company's trade receivables increased from $7.3 million (including $1.6 million due from ESA) at December 31, 2008 to $8.2 million at December 31, 2009 (including the same $1.6 million due from ESA). The Company's unbilled receivables increased by $5.5 million to $9.5 million at December 31, 2009. The increase in the unbilled receivables is due to the timing of contracted billing milestones of the Company's current projects. In January and February 2010, the Company invoiced $1.3 million of the unbilled amounts. At December 31, 2009, trade receivables outstanding for more than 90 days totaled $3.0 million versus $2.3 million at December 31, 2008; $1.6 million of the overdue amount was due from ESA at both dates. Approximately $300,000 of the over 90 day balance at December 31, 2009 has been received as of the end of February 2010. At a meeting of the three ESA shareholders held at ESA on February 17, 2010, the shareholders reached agreement to significantly reduce costs and begin to explore options up to and including the selling of ESA. Accordingly, the Company increased its bad debt reserve from $2,000 at December 31, 2008 to $1.7 million at December 31, 2009 mainly to reserve the overdue receivable from ESA.
- A $4.1 million increase in accounts payable, accrued compensation and accrued expenses. The Company's accounts payable and accrued liabilities had increased due to material purchases and the utilization of subcontractors on several of the Company's current projects.
- A $1.4 million decrease in billings in excess of revenue earned. The decrease was due to the timing of contracted billing milestones of the Company's current projects.

Net cash provided by operating activities was $2.3 million for the year ended December 31, 2008. The most significant change in the Company's assets and liabilities in 2008 was a $1.8 million increase in the Company's billings in excess of revenue earned. The increase was due to the timing of contracted billing milestones of the Company's current projects.

Cash Provided by (Used in) Investing Activities. For the year ended December 31, 2010, net cash used in investing activities was $1.3 million.

The Company made capital expenditures of $519,000 and capitalized software development costs of $903,000. Cash used as collateral for standby letters of credit, bank guarantees and foreign currency contracts decreased by $841,000.

Effective April 26, 2010, GSE Systems Inc., through its wholly owned subsidiary GSE Systems, Ltd. (GSE UK), completed the acquisition of TAS Holdings Ltd. The purchase price totaled approximately $2.3 million with approximately $500,000 paid in cash at closing, $683,000 paid post-closing in GSE common stock, approximately $100,000 was paid during September 2010, and the balance deferred until the first and second anniversary of the closing date. TAS had approximately $68,000 cash on their balance sheet as of the acquisition date.

On the closing date, TAS entered into a sale and leaseback agreement with the former TAS shareholders. Under the terms of the agreement, the TAS shareholders purchased the building occupied by TAS for approximately $377,000 in cash and TAS entered into a five-year lease for approximately $31,000 per year, payable in equal monthly installments. TAS may terminate the lease after April 26, 2013 upon six months written notice.

On July 28, 2010, GSE-UNIS Simulation Technology Co., Ltd. (“GSE-UNIS”), a limited liability company, received a formal business license from the Chinese government. GSE-UNIS is 51% owned by Beijing UNIS Investment Co., Ltd. (“UNIS”) and 49% owned by GSE. On October 1, 2010, the Company contributed $587,000 in cash, as its initial investment to GSE-UNIS. In September 2010, UNIS contributed approximately $600,000 in cash as its initial investment to GSE-UNIS. UNIS and GSE will make additional contributions to GSE-UNIS of approximately $900,000 and $800,000, respectively, over the next fifteen months.

For the year ended December 31, 2009, net cash provided by investing activities was $1.2 million. The Company made capital expenditures of $361,000, increased its investment in ESA by $14,000, and capitalized software development costs of $861,000. $2.5 million of cash used as collateral for letters of credit, bank guarantees and foreign currency contracts was released in 2009, $2.1 million of which related to a performance bond for ESA which expired in October 2009.

Net cash used in investing activities was $2.6 million for the year ended December 31, 2008. The Company made capital expenditures of $705,000, increased its investment in ESA by $486,000 and capitalized software development costs of $591,000. The Company also restricted an additional $836,000 of cash as collateral for performance bonds issued by the Company and backed by standby letters of credit.

Cash Provided by Financing Activities. For the year ended December 31, 2010, net cash provided by financing activities totaled $94,000.

The Company received $176,000 from the issuance of common stock from the exercise of warrants and employee stock options and spent $82,000 on deferred financing costs in conjunction with the Bank of America lines of credit.

For the year ended December 31, 2009, net cash provided by financing activities totaled $15.4 million. On September 4, 2009, the Company raised $15.0 million through the sale of 2.5 million shares of its common stock, $.01 par value per share. The shares were sold under a shelf registration statement which was declared effective by the Securities and Exchange Commission on August 21, 2009. On September 23, 2009, the Company raised an additional $2,250,000 when the Company’s underwriter exercised an over-allotment option in full to purchase an additional 375,000 shares of the Company’s common stock at the public offering price of $6.00 per share. The aggregate net proceeds received by the Company from the two transactions was approximately $15.9 million. The Company received $121,000 from the issuance of common stock for employee stock options and warrants exercised during the year ended December 31, 2009. In accordance with the amendment to the Company’s $2.5 million BOA line of credit effective May 5, 2009, the Company placed $600,000 in a restricted certificate of deposit. This certificate of deposit is included in the borrowing base calculation to determine the amount of funds that the Company can utilize under its $2.5 million line of credit. In the year ended December 31, 2009, the Company spent $20,000 on deferred financing costs in conjunction with the Bank of America lines of credit.

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The Company generated $483,000 from financing activities in the year ended December 31, 2008. The Company received $571,000 from the issuance of common stock from the exercise of warrants and employee stock options and spent $88,000 on deferred financing costs in conjunction with the new Bank of America lines of credit.

Credit Facilities

At December 31, 2010, the Company had two separate revolving credit agreements for revolving lines of credit with BOA which were to expire on May 31, 2012. The Company and its subsidiary, GSE Power Systems, Inc., were jointly and severally liable as co-borrowers. The credit facilities enabled the Company to borrow funds to support working capital needs and standby letters of credit. This revolving line of credit enabled the Company to borrow funds up to 90% of eligible foreign accounts receivable, plus 75% of eligible unbilled foreign receivables and 100% of cash collateral pledged to BOA on outstanding warranty standby letters of credit. This line of credit was 90% guaranteed by the Export-Import Bank of the United States. The second line of credit was in the principal amount of up to $2.5 million. This line of credit enabled the Company to borrow funds up to 80% of domestic accounts receivable, 30% of domestic unbilled receivables and 100% of the principal balance of a $600,000 certificate of deposit issued by BOA. The interest rate on this line of credit was based on the daily LIBOR rate plus 225 basis points, with interest only payments due monthly. The credit agreements contained certain restrictive covenants regarding future acquisitions, incurrence of debt and the payment of dividends. In addition, both credit agreements contained financial covenants with respect to the Company's minimum tangible net worth, debt service coverage ratio, and funded debt to EBITDA ratio. At December 31, 2010 and throughout all of 2010, the Company had not paid any interest or principal payments related to any borrowings for over one year. As such the debt service coverage ratio is not applicable at December 31, 2010. The financial covenant calculations at December 31, 2010 are shown below:

	Covenant	As of Dec. 31, 2010
Tangible net worth	Must Exceed $15.0 million	$31.8 million
Funded debt to EBITDA ratio	Not to Exceed 2.50 : 1.00	(30.90) : 1.00

For the funded debt to EBITDA ratio calculation, the amount of outstanding standby letters of credit and surety bonds that are not cash collateralized are included as funded debt. At December 31, 2010, the Company had outstanding standby letters of credit and surety bonds that were not cash collateralized of $4.5 million. Due to the Company's net loss of $2.2 million for the year ended December 31, 2010, the Company was in default on its funded debt to EBITDA ratio at December 31, 2010.

Due to the Company's financial covenant default, BOA has made the following amendments to the Company's revolving credit agreements effective March 14, 2011:

- A written waiver has been granted for the funded debt to EBITDA ratio default.
- The $5.0 million principal line of credit has been terminated.
- The financial covenants for the $2.5 million principal line of credit have been deleted.
- The Company is required to cash collateralize all outstanding standby letters of credit, which totals $3.4 million.

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- All future letters of credit issued by BOA must be cash collateralized.
- Borrowings under the line of credit must be cash collateralized. Currently the Company has in place a $600,000 certificate of deposit as collateral for the line of credit.

Common Stock Offering

On September 4, 2009, the Company raised $15.0 million through the sale of 2.5 million shares of its common stock, $.01 par value per share. The shares were sold under a shelf registration statement which was declared effective by the Securities and Exchange Commission on August 21, 2009. On September 23, 2009, the Company raised an additional $2,250,000 when the Company's underwriter, exercised an over-allotment option in full to purchase an additional 375,000 shares of the Company's common stock at the public offering price of $6.00 per share. The aggregate net proceeds received by the Company from the two transactions was approximately $15.9 million. The Company paid the underwriter a fee in the amount of 6% of the gross proceeds received by the Company from the offering ($1,035,000) and paid 339,000 in other transaction fees.

Contractual Cash Commitments

The following summarizes the Company's contractual cash obligations as of December 31, 2010, and the effect these obligations are expected to have on its liquidity and cash flow in future periods:

Payments Due by Period
(in thousands)

Contractual Cash Obligations	Total	Less than 1 year	1-3 Years	4-5 Years	After 5 Years
Long Term Debt	$ -	$ -	$ -	$ -	$ -
Subcontract and Purchase Commitments	$ 10,682	$ 8,096	$ 2,586	$ -	$ -
Net Future Minimum Lease Payments	$ 3,921	$ 715	$ 1,559	$ 443	$ 1,204
Total	$ 14,603	$ 8,881	$ 4,145	$ 443	$ 1,204

As of December 31, 2010, the Company was contingently liable for five standby letters of credit and three surety bonds totaling $4.7 million which represent performance bonds on eight contracts. The Company has deposited the full value of one standby letter of credit ($179,000) in a certificate of deposit, which has been restricted in that the Company does not have access to these funds until the related letter of credit has expired. The cash has been recorded on the Company's balance sheet at December 31, 2010 as restricted cash.

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At December 31, 2010, the Company has $1.0 million in a restricted, interest-bearing account at the 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 Company established a full reserve against the restricted cash account as of December 31, 2009. Any interest income earned from this account in 2010 was not recorded in interest income but was credited to the reserve balance. In 2010, Union National Bank withdrew a total of $294,000 from the account.

2011 Liquidity Outlook

At December 31, 2010, the Company had cash and cash equivalents of $26.6 million and has $600,000 available under its $2.5 million line of credit. Of this amount $3.4 million will be restricted as cash collateral for the Company’s outstanding standby letters of credit in accordance with the March 14, 2011 amendment to the Company’s revolving credit agreement. The Company has entered into 2011 with $55.9 million of backlog; $37.7 million of which is expected to convert to revenue in 2011. The Company anticipates that its normal operations will generate all of the funds necessary to fund its consolidated operations during the next twelve months. The Company believes that it will have sufficient liquidity and working capital without additional financing. However, notwithstanding the foregoing, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

Foreign Exchange.

A portion of the Company's international sales revenue has been and may be received in a currency other than the currency in which the expenses relating to such revenue are paid. Accordingly, the Company periodically enters into forward foreign exchange contracts to manage the market risks associated with the fluctuations in foreign currency exchange rates.

Off-balance Sheet Obligations.

The Company has no off-balance sheet obligations as of December 31, 2010, except for its operating lease commitments and outstanding letters of credit and surety bonds. See Contractual Cash Commitments above.

New Accounting Standards.

In October 2009, the FASB issued Accounting Standards Update (“ASU”) 2009-13, Revenue Recognition (Topic 605), Multiple-Deliverable Arrangements. ASU 2009-13 amends the guidance that in the absence of vendor-specific objective and third-party evidence for deliverables in multiple-deliverable arrangements, companies will be required to develop a best estimate of the selling price to separate deliverables and allocate arrangements consideration using the relative selling price method. ASU 2009-13 expands the disclosure requirements for multiple-deliverable revenue arrangements. The guidance will be effective for financial statements issued for fiscal years beginning after June 15, 2010. Early adoption is permitted. The Company does not anticipate the adoption of ASU 2009-13 to have a material impact on its financial statements.

In October 2009, the FASB issued ASU 2009-14, Software (Topic 985), Certain Revenue Arrangements that Include Software Elements. ASU 2009-14 amends the guidance to exclude for the scope of software revenue accounting requirements tangible products if the product contains both software and non-software components that function together to deliver a product's essential functionality and factors to consider in determining whether a product is within the scope of the guidance. The guidance will be effective for financial statements issued for fiscal years beginning after June 15, 2010. Early adoption is permitted. The Company does not anticipate the adoption of ASU 2009-14 to have a material impact on its financial statements.

Other Matters.

Management believes inflation has not had a material impact on the Company's operations.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

The Company's market risk is principally confined to changes in foreign currency exchange rates. During the year ended December 31, 2010, 44% of the Company's revenue was from contracts which required payments in a currency other than U.S. Dollars, principally Euros (31%), Japanese Yen (9%) and Swedish Krona (2%). For the years ended December 31, 2009 and 2008, 33% and 27%, respectively, of the Company's revenue was from contracts which required payments in a currency other than U.S. Dollars, principally Swedish Krona, British Pounds Sterling and Japanese Yen.

In addition, during the years ended December 31, 2010, 2009 and 2008, 13%, 13% and 14%, respectively, of the Company's expenses were incurred in Swedish Krona. The Company's exposure to foreign exchange rate fluctuations arises in part from inter-company accounts in which costs incurred in one entity are charged to other entities in different foreign jurisdictions. The Company is also exposed to foreign exchange rate fluctuations as the financial results of all foreign subsidiaries are translated into U.S. dollars in consolidation. As exchange rates vary, those results when translated may vary from expectations and adversely impact overall expected profitability.

The Company utilizes forward foreign currency exchange contracts to manage market risks associated with the fluctuations in foreign currency exchange rates. The principal currencies for which such forward exchange contracts are entered into are the Pound Sterling, the Euro and the Japanese Yen. It is the Company's policy to use such derivative financial instruments to protect against market risk arising in the normal course of business in order to reduce the impact of these exposures. The Company minimizes credit exposure by limiting counterparties to nationally recognized financial institutions.

As of December 31, 2010, the Company had foreign exchange contracts outstanding of approximately 1.6 million Pounds Sterling, 10.6 million Euro, and 865.2 million Japanese Yen at fixed rates. The contracts expire on various dates through February 2014. The Company had not designated the contracts as hedges and has recorded a loss on the change in the estimated fair value of the contracts of $745,000 for the year ended December 31, 2010. The estimated fair value of the contracts was a net asset of $81,000 at December 31, 2010. The Company recognized a gain of $851,000 for the year ended December 31, 2009, and a loss of approximately $174,000 for the year ended December 31, 2008, on the changes in fair value of its forward currency exchange contracts. A 10% fluctuation in the foreign currency exchange rates up or down as of December 31, 2010 would have increased/decreased the change in estimated fair value of the contracts by $8,100.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

INDEX TO FINANCIAL STATEMENTS

GSE SYSTEMS, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2010, 2009, and 2008

Report of Independent Registered Public Accounting Firm – Internal Control over Financial Reporting

The Board of Directors and Stockholders
GSE Systems, Inc.:

We have audited GSE Systems, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting Item 9A(b). Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of December 31, 2010 and 2009 and the related consolidated statements of operations, comprehensive loss, changes in stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2010, and our report dated March 14, 2011 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Baltimore, Maryland
March 14, 2011

Report of Independent Registered Public Accounting Firm – Consolidated Financial Statements

The Board of Directors and Stockholders
GSE Systems, Inc.:

We have audited the accompanying consolidated balance sheets of GSE Systems, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, comprehensive loss, changes in stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of GSE Systems, Inc. and subsidiaries as of December 31, 2010 and 2009, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2010 in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 10, 2011 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

Baltimore, Maryland
March 14, 2011

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

GSE SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	December 31, 2010	December 31, 2009
ASSETS		
Current assets:		
Cash and cash equivalents	$ 26,577	$ 25,270
Restricted cash	179	938
Contract receivables, net	17,201	15,941
Prepaid expenses and other current assets	1,992	1,491
Total current assets	45,949	43,640
Equipment and leasehold improvements	4,727	4,065
Accumulated depreciation	(3,667)	(3,076)
Equipment and leasehold improvements, net	1,060	989
Software development costs, net	1,790	1,865
Goodwill	2,609	1,739
Intangible assets, net	637	-
Long-term restricted cash	794	876
Other assets	775	411
Total assets	$ 53,614	$ 49,520
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 4,945	$ 5,009
Accrued expenses	1,753	852
Accrued compensation and payroll taxes	2,053	1,747
Billings in excess of revenue earned	4,268	2,579
Accrued warranty	1,680	1,273
Other current liabilities	1,210	711
Total current liabilities	15,909	12,171
Other liabilities	799	206
Total liabilities	16,708	12,377
Commitments and contingencies	-	-
Stockholders' equity:		
Preferred stock $.01 par value, 2,000,000 shares authorized, shares issued and outstanding none in 2010 and 2009	-	-
Common stock $.01 par value, 30,000,000 shares authorized, shares issued and outstanding 19,171,855 in 2010 and 18,930,368 in 2009	192	189

Additional paid-in capital		69,298		67,559
Accumulated deficit		(31,864)		(29,615)
Accumulated other comprehensive loss		(720)		(990)
Total stockholders' equity		36,906		37,143
Total liabilities and stockholders' equity	$	53,614	$	49,520

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

GSE SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Years ended December 31,		
	2010	2009	2008
Contract revenue	$47,213	$40,060	$29,004
Cost of revenue	36,081	29,736	21,187
Gross profit	11,132	10,324	7,817
Operating expenses			
Selling, general and administrative	11,683	7,749	7,383
ESA related charges	-	1,508	-
Depreciation	579	504	446
Amortization of definite-lived intangible assets	102	-	-
Total operating expenses	12,364	9,761	7,829
Operating income (loss)	(1,232)	563	(12)
Interest income, net	19	56	130
ESA related charges	-	(865)	-
Gain (loss) on derivative instruments	(913)	763	(453)
Other income (expense), net	83	(397)	(226)
Income (loss) before income taxes	(2,043)	120	(561)
Provision for income taxes	206	917	129
Net loss	$(2,249)	$(797)	$(690)
Basic loss per common share	$(0.12)	$(0.05)	$(0.04)
Diluted loss per common share	$(0.12)	$(0.05)	$(0.04)

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

GSE SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Years ended December 31,		
	2010	2009	2008
Net loss	$ (2,249)	$ (797)	$ (690)
Foreign currency translation adjustment	270	224	(327)
Comprehensive loss	$ (1,979)	$ (573)	$ (1,017)

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

GSE SYSTEMS, INC, AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(in thousands)

	Preferred Stock Shares	Amount	Common Stock Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
Balance, January 1, 2008	-	$ -	15,508	$ 155	$ 49,225	$ (28,128)	$ (887)	$ 20,365
Stock-based compensation expense	-	-	-	-	650	-	-	650
Common stock issued for options exercised, net of 30,645 shares returned to GSE to pay for employee's income tax liabilities of $251	-	-	194	2	29	-	-	31
Common stock issued for services provided	-	-	17	-	131	-	-	131
Common stock issued for warrants exercised	-	-	249	3	537	-	-	540

Foreign currency translation adjustment	-	-	-	-	-	-	(327)	(327)
Net loss	-	-	-	-	-	(690)	-	(690)
Balance, December 31, 2008	-	-	15,968	160	50,572	(28,818)	(1,214)	20,700
Stock-based compensation expense	-	-	-	-	906	-	-	906
Issuance of common stock	-	-	2,875	29	15,847	-	-	15,876
Common stock issued for options exercised	-	-	58	-	103	-	-	103
Common stock issued for services provided	-	-	19	-	113	-	-	113
Common stock issued for warrants exercised	-	-	10	-	18	-	-	18
Foreign currency translation adjustment	-	-	-	-	-	-	224	224
Net loss	-	-	-	-	-	(797)	-	(797)
Balance, December 31, 2009	-	-	18,930	189	67,559	(29,615)	(990)	37,143
Stock-based compensation expense	-	-	-	-	807	-	-	807

Common stock issued for options exercised	-	-	57	2	95	-	-	97
Common stock issued for warrants exercised	-	-	45	-	79	-	-	79
Common stock issued for services provided	-	-	17	-	76	-	-	76
Common stock issued for TAS acquisition	-	-	123	1	682	-	-	683
Foreign currency translation adjustment	-	-	-	-	-	-	270	270
Net loss	-	-	-	-	-	(2,249)	-	(2,249)
Balance, December 31, 2010	-	$ -	19,172	$ 192	$ 69,298	$ (31,864)	$ (720)	$ 36,906

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

GSE SYSTEMS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years ended December 31,		
	2010	2009	2008
Cash flows from operating activities:			
Net loss	$ (2,249)	$ (797)	$ (690)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation	579	504	446
Intangible asset amortization	102	-	-
Capitalized software amortization	978	483	274
Amortization of deferred financing costs	92	46	142
Change in fair value of contingent consideration	147	-	-
Stock-based compensation expense	883	1,019	781
Equity loss on investment in GSE-UNIS Simulation Technology Co. Ltd.	13	-	-
Elimination of profit on Emirates Simulation Academy, LLC contract	-	-	28
Amortization of deferred profit on Emirates Simulation Academy, LLC contract	-	(724)	-
Equity loss on investment in Emirates Simulation Academy, LLC	-	732	213
Reserve on cash collateral for Emirates Simulation Academy, LLC line of credit	-	1,291	-
(Gain)/loss on derivative instruments	913	(763)	453
Changes in assets and liabilities:			
Contract receivables	(903)	(5,100)	(527)
Prepaid expenses and other assets	(922)	155	(143)
Accounts payable, accrued compensation and accrued expenses	932	4,148	(1,033)
Billings in excess of revenues earned	1,669	(1,421)	1,750
Accrued warranty reserves	407	207	342
Other liabilities	(209)	546	220
Net cash provided by operating activities	2,432	326	2,256
Cash flows from investing activities:			
Release (restriction) of cash as collateral for letters of credit, bank guarantees, and foreign currency contracts	1,135	2,484	(836)
Capital expenditures	(519)	(361)	(705)
Capitalized software development costs	(903)	(861)	(591)
Investment in GSE-UNIS Simulation Technology Co. Ltd.	(587)	-	-
Acquisitions, net of cash acquired	(549)	-	-
Proceeds from sale/leaseback transaction	377	-	-
Drawdown of cash collateral on Emirates Simulation Academy, LLC line of credit	(294)	-	-

Investment in Emirates Simulation Academy, LLC	-	(14)	(486)
Net cash provided by (used in) investing activities	(1,340)	1,248	(2,618)
Cash flows from financing activities:			
Proceeds from issuance of common stock	176	15,997	571
Restriction of cash for credit facility collateral	-	(600)	-
Deferred financing costs	(82)	(20)	(88)
Net cash provided by financing activities	94	15,377	483
Effect of exchange rate changes on cash	121	45	(19)
Net increase in cash and cash equivalents	1,307	16,996	102
Cash and cash equivalents at beginning of year	25,270	8,274	8,172
Cash and cash equivalents at end of period	$ 26,577	$ 25,270	$ 8,274
Supplemental cash flow disclosures			
Non-cash financing activities			
Issuance of 122,617 shares of common stock to acquire TAS Holdings Ltd.	$ 683	$ -	$ -

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

1. Business and basis of presentation

GSE Systems, Inc. ("GSE Systems", “GSE” or the "Company") provides training simulators and educational solutions to the energy, process, manufacturing and government sectors.

The Company’s operations are subject to certain risks and uncertainties including, among others, rapid technological changes, success of the Company’s product development, marketing and distribution strategies, the need to manage growth, the need to retain key personnel and protect intellectual property, and the availability of additional financing on terms acceptable to the Company.

At December 31, 2010, the Company had cash and cash equivalents of $26.6 million. Although the Company was in default on two of its financial covenants under its line of credit agreement, the Company has received a written waiver from its bank. At December 31, 2010, the Company had two separate revolving credit agreements for revolving lines of credit with BOA which were to expire on May 31, 2012. The credit facilities enabled the Company to borrow funds to support working capital needs and standby letters of credit. The first line of credit which was in the principal amount of up to $5.0 million. This line of credit was 90% guaranteed by the Export-Import Bank of the United States. The second line of credit was in the principal amount of up to $2.5 million. Both credit agreements contained financial covenants with respect to the Company’s minimum tangible net worth, debt service coverage ratio, and funded debt to EBITDA ratio. The Company was in default on it’s the funded debt to EBITDA ratio as of December 31, 2010. Due to the Company’s financial covenant default, Bank of America (“BOA”) has made the following amendments to the Company’s revolving credit agreements effective March 14, 2011:

- A written waiver has been granted for the funded debt to EBITDA ratio default.
- The $5.0 million principal line of credit has been terminated.
- The financial covenants for the $2.5 million principal line of credit have been deleted.
- The Company is required to cash collateralize all outstanding standby letters of credit, which totals $3.4 million.
- All future letters of credit issued by BOA must be cash collateralized.
- Borrowings under the line of credit must be cash collateralized. Currently the Company has in place a $600,000 certificate of deposit as collateral for the line of credit.

Despite these changes to its lines of credit, the Company anticipates that its cash on hand and its normal operations will provide all of the funds necessary to fund its consolidated operations during the next twelve months. The Company believes that it will have sufficient liquidity and working capital without additional financing.

2. Summary of significant accounting policies

Principles of consolidation

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

Accounting estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, the Company evaluates the estimates used, including but not limited to those related to revenue recognition, the allowance for doubtful accounts receivable, impairments of goodwill and other intangible assets, valuation of intangible assets acquired and contingent consideration issued in business acquisitions, and income taxes. Actual results could differ from these estimates.

Revenue recognition

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 U.S. generally accepted accounting principles, 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.

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 must normally 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.

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 ASC 605-25 Revenue Recognition-Multiple Element Arrangements.

Revenues from certain consulting or training contracts are 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.

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and highly liquid investments with maturities of three months or less at the date of purchase.

The Company had $17.0 million and $150,000 deposited in a money market account with BOA on December 31, 2010 and 2009, respectively. There were no other cash equivalents.

Contract receivables

Contract receivables include recoverable costs and accrued profit not billed which represents revenue recognized in excess of amounts billed. The liability “Billings in excess of revenue earned” represents billings in excess of revenue recognized.

Billed receivables are recorded at invoiced amounts. The allowance for doubtful accounts is based on historical trends of past due accounts, write-offs, and specific identification and review of past due accounts. The activity in the allowance for doubtful accounts is as follows:

(in thousands)	As of and for the Years ended December 31,		
	2010	2009	2008
Beginning balance	$ 1,746	$ 2	$ 2
Current year provision	294	1,744	-
Current year write-offs	-	-	-
Ending balance	$ 2,040	$ 1,746	$ 2

At a meeting of ESA’s three shareholders held at ESA on February 17, 2010, in response to ESA's deteriorating financial condition, the shareholders reached agreement to significantly reduce costs and begin to explore options up to and including the selling of ESA. Accordingly, the Company increased its allowance for doubtful accounts by $1.6 million for the outstanding trade receivable from ESA as of December 31, 2009.

Equipment and leasehold improvements, net

Equipment is recorded at cost and depreciated using the straight-line method with estimated useful lives ranging from three to ten years. Leasehold improvements are amortized over the life of the lease or the estimated useful life,

whichever is shorter, using the straight-line method. Upon sale or retirement, the cost and related amortization are eliminated from the respective accounts and any resulting gain or loss is included in operations. Maintenance and repairs are charged to expense as incurred.

Software development costs

Certain computer software development costs are capitalized in the accompanying consolidated balance sheets in accordance with U.S. generally accepted accounting principles. Capitalization of computer software development costs begins upon the establishment of technological feasibility. Capitalization ceases and amortization of capitalized costs begins when the software product is commercially available for general release to customers. Amortization of capitalized computer software development costs is included in cost of revenue and is determined using the straight-line method over the remaining estimated economic life of the product, not to exceed three years.

Development expenditures

Development expenditures incurred to meet customer specifications under contracts are charged to contract costs. Company sponsored development expenditures are charged to operations as incurred and are included in selling, general and administrative expenses. The amounts incurred for Company sponsored development activities relating to the development of new products and services or the improvement of existing products and services, were approximately $1.6 million, $1.3 million, and $907,000, for the years ended December 31, 2010, 2009, and 2008, respectively. Certain of these expenditures were capitalized as software development costs. See Note 7, Software development costs.

Impairment of long-lived assets

Long-lived assets, such as property, plant, and equipment, capitalized computer software costs subject to amortization, and intangibles subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized at the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and would no longer be depreciated.

Goodwill and Intangible Assets

The Company’s intangible assets include amounts recognized in connection with acquisitions, including customer relationships, contract backlog and software. Intangible assets are initially valued at fair market value using generally accepted valuation methods appropriate for the type of intangible asset. Amortization is recognized on a straight-line basis over the estimated useful life of the intangible assets, except for contract backlog which is recognized in proportion to the projected revenue streams of the related backlog. Intangible assets with definite lives are reviewed for impairment if indicators of impairment arise. Except for goodwill, the Company does not have any intangible assets with indefinite useful lives.

Goodwill represents the excess of costs over fair value of assets of businesses acquired. The Company reviews its goodwill annually, on November 30, for impairment, or more frequently if events and circumstances indicate that the asset might be impaired. An impairment loss is recognized to the extent that the carrying amount exceeds the asset's fair value. For goodwill, the impairment determination is made at the reporting unit level and consists of two steps. First, the Company determines the fair value of a reporting unit and compares it to its carrying amount. Second, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the implied fair value of that goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation. The residual fair value after this allocation is the implied fair value of the reporting unit goodwill. No impairment losses were recognized in 2010, 2009 or 2008.

Foreign currency translation

Balance sheet accounts for foreign operations are translated at the exchange rate at the balance sheet date, and income statement accounts are translated at the average exchange rate for the period. The resulting translation adjustments are included in accumulated other comprehensive loss. Transaction gains and losses, resulting from changes in exchange rates, are recorded in operating income in the period in which they occur. For the years ended December 31, 2010, 2009, and 2008, foreign currency transaction gains/(losses) were approximately $(297,000), $130,000, and $41,000, respectively.

Warranty

As the Company recognizes revenue under the percentage-of-completion method, it provides an accrual for estimated future warranty costs based on historical experience and projected claims. The activity in the warranty accounts is as follows:

(in thousands)	As of and for the Years ended December 31,		
	2010	2009	2008
Beginning balance	$ 1,273	$ 1,066	$ 724
Current year provision	718	605	799
Current year claims	(330)	(407)	(448)
Currency adjustment	19	10	(9)
Ending balance	$ 1,680	$ 1,273	$ 1,066

Income taxes

Income taxes are provided under the asset and liability method. Under this method, deferred income taxes are determined based on the differences between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amounts expected to be realized. Provision is made for the Company's current liability for federal, state and foreign income taxes and the change in the Company's deferred income tax assets and liabilities.

Stock-based compensation

Compensation expense related to share based awards is recognized on a pro rata straight-line basis based on the value of share awards that are scheduled to vest during the requisite service period. During the twelve months ended December 31, 2010, 2009 and 2008, the Company recognized $807,000, $906,000 and $650,000, respectively, of pre-tax stock-based compensation expense under the fair value method. As of December 31, 2010, the Company had $2.6 million of unrecognized compensation related to the unvested portion of outstanding stock option awards expected to be recognized through April 2016.

Loss per share

Basic loss per share is based on the weighted average number of outstanding common shares for the period. Diluted loss per share adjusts the weighted average shares outstanding for the potential dilution that could occur if stock options, warrants or convertible preferred stock were exercised or converted into common stock. The number of common shares and common share equivalents used in the determination of basic and diluted loss per share was as follows:

(in thousands, except for share and per share amounts)

	Years ended December 31,		
	2010	2009	2008
Numerator:			
Net loss attributed to common stockholders	$(2,249)	$(797)	$(690)
Denominator:			
Weighted-average shares outstanding for basic earnings per share	18,975,007	16,938,392	15,746,616
Effect of dilutive securities:			
Employee stock options, warrants and convertible preferred stock	-	-	-
Adjusted weighted-average shares outstanding and assumed conversions for diluted earnings per share	18,975,007	16,938,392	15,746,616
Shares related to dilutive securities excluded because inclusion would be anti-dilutive	1,679,907	1,791,757	1,196,746

Conversion of outstanding stock options and warrants was not assumed for the years ended December 31, 2010, 2009 and 2008 because the impact was anti-dilutive. Included in the shares related to dilutive securities excluded from the diluted earnings per share calculation for the years ended December 31, 2010, 2009 and 2008, respectively, were in the money options and warrants totaling 518,546 shares, 641,631 shares and 910,480 shares, respectively.

Concentration of credit risk

The Company is subject to concentration of credit risk with respect to contract receivables. Credit risk on contract receivables is mitigated by the nature of the Company's worldwide customer base and its credit policies. The Company's customers are not concentrated in any specific geographic region, but are concentrated in the energy industry. The following customers have provided more than 10% of the Company’s revenue for the indicated period:

	Years ended December 31,		
	2010	2009	2008
Slovenské elektrárne, a.s.	22.0%	13.5%	0.0%
Emerson Process Management	11.1%	12.1%	16.2%
Titan-2 Concern	5.0%	10.7%	0.0%
American Electric Power	0.9%	6.8%	10.5%

Fair values of financial instruments

The carrying amounts of current assets and current liabilities reported in the Consolidated Balance Sheets approximate fair value due to their short term duration.

Deferred financing fees

The Company amortizes the cost incurred to obtain debt financing using the straight-line method over the term of the underlying obligations. The amortization of deferred financing costs is included in interest expense. Deferred financing costs are classified within other assets in the consolidated balance sheets.

Derivative instruments

The Company adopted ASC 815, Derivatives and Hedging, on January 1, 2009. ASC 815 enhances the disclosure requirements about an entity’s derivative instruments and hedging activities.

The Company utilizes forward foreign currency exchange contracts to manage market risks associated with the fluctuations in foreign currency exchange rates. It is the Company's policy to use such derivative financial instruments to protect against market risk arising in the normal course of business in order to reduce the impact of these exposures. The Company minimizes credit exposure by limiting counterparties to nationally recognized financial institutions.

As of December 31, 2010, the Company had foreign exchange contracts outstanding of approximately 1.6 million Pounds Sterling, 10.6 million Euro, and 865.2 million Japanese Yen at fixed rates. At December 31, 2009, the Company had foreign exchange contracts outstanding of approximately 2 million Pounds Sterling, 3 million Euro, and 759 million Japanese Yen at fixed rates. The contracts expire on various dates through February 2014. The Company had not designated the foreign exchange contracts as hedges and had recorded the estimated fair value of the contracts in the consolidated balance sheet as follows:

	December 31,	
(in thousands)	2010	2009
Asset derivatives		
Prepaid expenses and other current assets	$ 208	$ 515
Other assets	117	396
	325	911
Liability derivatives		
Other current liabilities	(204)	(34)
Other liabilities	(40)	(65)
	(244)	(99)
Net fair value	$ 81	$ 812

The changes in the fair value of the foreign exchange contracts are included in gain (loss) on derivative instruments in the consolidated statement of operations.

The foreign currency denominated trade receivables, unbilled receivables, billings in excess of revenue earned and subcontractor accruals that are related to the outstanding foreign exchange contracts are remeasured at the end of each period into the functional currency using the current exchange rate at the end of the period. The gain or loss resulting from such remeasurement is also included in gain (loss) on derivative instruments in the consolidated statement of operations.

For the years ended December 31, 2010, 2009 and 2008, the Company recognized a net gain (loss) on its derivative instruments as outlined below:

	Year ended December 31,		
(in thousands)	2010	2009	2008
Foreign exchange contracts- change in fair value	$ (745)	$ 851	$ (174)
Remeasurement of related contract receivables and billings in excess of revenue earned	(168)	(88)	(279)
	$ (913)	$ 763	$ (453)

New accounting standards

In October 2009, the FASB issued Accounting Standards Update ("ASU") 2009-13, Revenue Recognition (Topic 605), Multiple-Deliverable Arrangements. ASU 2009-13 amends the guidance that in the absence of vendor-specific objective and third-party evidence for deliverables in multiple-deliverable arrangements, companies will be required to develop a best estimate of the selling price to separate deliverables and allocate arrangements consideration using the relative selling price method. ASU 2009-13 expands the disclosure requirements for multiple-deliverable revenue arrangements. The guidance will be effective for financial statements issued for fiscal years beginning after June 15, 2010. The Company does not anticipate the adoption of ASU 2009-13 to have a material impact on its financial statements.

In October 2009, the FASB issued ASU 2009-14, Software (Topic 985), Certain Revenue Arrangements that Include Software Elements. ASU 2009-14 amends the guidance to exclude for the scope of software revenue accounting requirements tangible products if the product contains both software and non-software components that function together to deliver a product's essential functionality and factors to consider in determining whether a product is within the scope of the guidance. The guidance will be effective for financial statements issued for fiscal years beginning after June 15, 2010. The Company does not anticipate the adoption of ASU 2009-14 to have a material impact on its financial statements.

3. Acquisition

Effective April 26, 2010, GSE Systems Inc., through its wholly owned subsidiary GSE Systems, Ltd. ("GSE UK"), completed the acquisition of TAS Holdings Ltd. ("TAS"), a provider of engineering consulting, specializing in electrical system design, instrumentation and controls engineering and automation engineering. GSE UK acquired 100% of the outstanding common stock of TAS. The purchase price for the common stock of TAS was equal to (i) the consolidated net asset value of TAS as of April 26, 2010, approximately $600,000, and (ii) four times the adjusted consolidated pre-tax income of TAS for the year ended September 30, 2009, approximately $1.7 million (the "Adjusted Profit Consideration"), for a total of approximately $2.3 million in cash, GSE Systems, Inc. common stock and

contingent consideration.

Approximately $500,000 of the consolidated net asset value was paid on the closing date and the remaining $100,000 of the consolidated net asset value was paid during the third quarter 2010. On the closing date, the TAS Shareholders were entitled to receive approximately $683,000 (40% of the Adjusted Profit Consideration) payable in GSE common stock. Based upon the formula agreed to by the parties, the TAS Shareholders received 122,617 shares of GSE common stock.

On the first anniversary of the closing date, the TAS Shareholders are entitled to receive approximately $517,000 (30% of the Adjusted Profit Consideration) (the "First Payment"). At the option of GSE, the First Payment will be made either (i) 100% in cash or (b) 50% in cash and 50% in GSE Systems, Inc. common stock. The value of the GSE common stock will be based upon the weighted average of the closing prices of the common stock on the NYSE Amex stock exchange for the five-trading day period ending two trading days prior to the first anniversary of the closing date. If net profit before taxes of TAS for the nine month period ending December 31, 2010 is less than approximately $323,000, the First Payment will be reduced by an amount equal to four times the difference between (a) $323,000 and (b) the actual net profit before taxes of TAS for the nine-month period ending December 31, 2010.

On the second anniversary of the closing date, the TAS Shareholders are entitled to receive approximately $517,000 (30% of the Adjusted Profit Consideration) (the "Second Payment"). At the option of GSE, the Second Payment will be made either (i) 100% in cash or (ii) 50% in cash and 50% in GSE Systems, Inc. common stock. The value of the GSE common stock will be based upon the weighted average of the closing prices of the common stock on the NYSE Amex stock exchange for the five-trading day period ending two-trading days prior to the second anniversary of the closing date. If net profit before taxes of TAS for the twelve month period ending December 31, 2011 is less than approximately $431,000, the Second Payment will be reduced by an amount equal to four times the difference between (a) $431,000 and (b) the actual net profit before taxes of TAS for the twelve-month period ending December 31, 2011.

Of the $2.3 million gross purchase price, the Company accrued $740,000 of contingent consideration based on its estimate of the fair value of the potential contingent consideration payable to the TAS Shareholders on the first and second anniversaries of the closing date. The Company will estimate the fair value of the recorded amount of contingent consideration on a quarterly basis and any subsequent adjustments based on actual payments or revised estimates will be recognized in the selling, general, and administrative expenses of the consolidated statement of operations during the period of adjustment.

The estimated fair value of the purchase price recorded by the Company consisted of the following (in thousands):

Cash and stock purchase price	$	1,289
Estimated contingent consideration		740
Total estimated purchase price	$	2,029

The Company's purchase price allocation for the net assets acquired was as follows (in thousands):

	April 26, 2010 (unaudited)
Cash	$ 68
Contract receivables	594
Prepaid expenses and other current assets	17
Property, plant and equipment, net	496
Intangible assets	735
Goodwill	865
Total assets	2,775
Accounts payable, accrued expenses and other liabilities	703
Billings in excess of costs and estimated earnings on uncompleted contracts	43
Total liabilities assumed	746
Net assets acquired	$ 2,029

The Company recorded intangible assets as a result of the acquisition, which included $686,000 relating to contractual and non-contractual customer relationships. Contractual customer relationships acquired totaled $208,000 and are being amortized over the remaining life of the contracts, 1-4 years. Non-contractual customer relationships acquired totaled $478,000 and are being amortized over an estimated useful life of 10 years. The Company acquired $35,000 of customer related intangible assets for contract backlog which are being amortized over 1 year subsequent to the acquisition, and $14,000 related to trademarks, domain names and other marketing related intangibles which are being amortized over an estimated useful life of 3 years. The intangible assets and accrued contingent consideration for TAS were recorded at estimated fair value.

TAS' results of operations are included in the consolidated financial statements for the period beginning April 26, 2010.

On the closing date, TAS entered into a sale and leaseback agreement with the TAS Shareholders. Under the terms of the agreement, the TAS Shareholders purchased the building occupied by TAS for approximately $377,000 in cash, which was paid on the closing date, and TAS entered into a five-year lease for approximately $31,000 per year, payable in equal monthly installments. TAS may terminate the lease after April 26, 2013 upon six months written notice.

Pro forma results. Our consolidated financial statements include the operating results of TAS from the date of acquisition. For the twelve months ended December 31, 2010 and 2009, the unaudited pro forma financial information below assumes that our material business acquisition of TAS occurred on January 1, 2009.

(in thousands)	Twelve Months Ended December 31, (unaudited)	
Pro forma financial information including the acquisition of TAS	2010	2009
Revenue	$ 48,381	$ 43,811
Operating income (loss)	(1,153)	400
Net loss	(2,185)	(63)
Loss per common share — basic	$ (0.12)	$ 0.00
Loss per common share — diluted	$ (0.12)	$ 0.00

4. Contract receivables

Contract receivables represent balances due from a broad base of both domestic and international customers. All contract receivables are considered to be collectible within twelve months. Recoverable costs and accrued profit not billed represent costs incurred and associated profit accrued on contracts that will become billable upon future milestones or completion of contracts. The components of contract receivables are as follows:

(in thousands)	December 31,	
	2010	2009
Billed receivables	$ 7,733	$ 8,183
Recoverable costs and accrued profit not billed	11,508	9,504
Allowance for doubtful accounts	(2,040)	(1,746)
Total contract receivables, net	$ 17,201	$ 15,941

5. Prepaid expenses and other current assets

Prepaid expenses and other current assets consist of the following:

(in thousands)	December 31,	
	2010	2009
Prepaid expenses	$ 416	$ 348
Employee advances	96	-
Deferred income taxes- current	35	-
Value added tax receivable	718	464
Other current assets	727	679
Total	$ 1,992	$ 1,491

6. Equipment and leasehold improvements

Equipment and leasehold improvements consist of the following:

(in thousands)	December 31,	
	2010	2009
Computer equipment	$ 3,446	$ 2,954
Leasehold improvements	533	166
Furniture and fixtures	748	944
	4,727	4,064
Accumulated depreciation	(3,667)	(3,075)
Equipment and leasehold improvements, net	$ 1,060	$ 989

Depreciation expense was approximately $579,000, $504,000, and $446,000 for the years ended December 31, 2010, 2009, and 2008, respectively.

7. Software development costs

Software development costs, net, consist of the following:

(in thousands)	December 31,	
	2010	2009
Capitalized software development costs	$ 2,594	$ 2,318
Accumulated amortization	(804)	(453)
Software development costs, net	$ 1,790	$ 1,865

Software development costs capitalized were approximately $903,000 $861,000, and $591,000 for the years ended December 31, 2010, 2009, and 2008, respectively. Amortization of software development costs capitalized was approximately $978,000, $483,000, and $274,000, for the years ended December 31, 2010, 2009, and 2008, respectively, and was included in cost of revenue. In the fourth quarter of 2010, the Company wrote off the remaining capitalized value of four generic training simulators totaling $317,000.

8. Investment in Emirates Simulation Academy, LLC

On November 8, 2005, the Emirates Simulation Academy, LLC ("ESA"), headquartered in Abu Dhabi, United Arab Emirates, was formed to build and operate simulation training academies in the Arab Gulf Region. The members of the limited liability company include Al Qudra Holding PJSC of the United Arab Emirates (60% ownership), the Centre of Excellence for Applied Research and Training of the United Arab Emirates (30% ownership) and GSE (10% ownership). The Company accounted for its investment in ESA using the equity method. For the year ended December 31, 2009 and 2008, the Company recognized a $615,000 and $213,000 equity loss, respectively, on its investment in ESA. The equity loss was recorded in other income (expense), net.

In January 2006, GSE received a $15.1 million contract from ESA (the "ESA Contract") 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. For the year ended December 31, 2008, the Company recognized $1.2 million, of contract revenue on this project using the percentage-of-completion method, which accounted for 4.2% of the Company's consolidated revenue. In accordance with the equity method of accounting, the Company eliminated 10% of the profit from the ESA Contract as the training simulators were assets that had been recorded on the books of ESA, and the Company was thus required to eliminate its proportionate share of the profit included in the asset value. The profit elimination totaled $28,000 for the year ended December 31, 2008, and was recorded as another liability on the balance sheet. ESA assigned a four year life to the simulators and began to amortize the training simulators on their books effective January 1, 2009. Accordingly, on January 1, 2009, GSE began to amortize the deferred profit to other income over a four year period, recognizing income of $181,000 in the year ended December 31, 2009.

The Company has provided a partial guarantee of 10% of ESA's credit facility with Union National Bank ("UNB"); $1.2 million was deposited into a restricted interest-bearing account with UNB in 2006. The interest earned on the restricted cash is part of the pledged deposit.

At December 31, 2009, ESA had borrowed a total of AED 36.4 million ($9.9 million) from its credit facility with UNB, including accrued interest payable. ESA was delinquent in paying both principal and interest (a total of AED 5.3 million or $1.5 million) and in January 2010, UNB drew upon the guarantees of the three partners to pay off the delinquency, withdrawing $145,000 from GSE's restricted cash account. In February 2010, GSE was notified that ESA had missed another loan payment and that 10% of the amount due ($24,000) would be withdrawn from the Company's restricted cash account.

At a meeting of ESA's three shareholders held at ESA on February 17, 2010, the shareholders reached agreement to significantly reduce costs and begin to explore options up to and including the selling of ESA.

Accordingly, based upon these events, the Company determined that its remaining investment in ESA at December 31, 2009 was impaired and established reserves for the $1.6 million trade receivable due from ESA at December 31, 2009 and for the cash that GSE has on deposit with UNB as a partial guarantee for ESA's credit facility. Partially offsetting these charges was the reversal of the remaining deferred profit related to the Company's sale of five simulators to ESA in prior years and the remaining agent fee that was due upon payment of the final outstanding receivable. The charges recorded and the presentation in the statement of operations for the year ended December 31, 2009 are as follows:

(in thousands)	Year ended December 31, 2009
Trade receivable	$ 1,604
Accrued agent fee	(96)
Operating expense	1,508
Restricted cash- bank guarantee and accrued interest income	1,291
Investment in ESA	117
Deferred profit	(543)
Other expense, net	865
Total	$ 2,373

In 2010, Union National Bank withdrew a total of $294,000 from the cash GSE had on deposit with them as a partial guarantee against ESA's line of credit. Any interest income earned from this account in 2010 was not recorded in interest income but was credited to the reserve balance. At December 31, 2010 the Company had $1.0 million remaining in the UNB account which was fully reserved.

9. Fair Value of Financial Instruments

The Company adopted ASC 820, Fair Value Measurements and Disclosures for nonfinancial assets and nonfinancial liabilities measured on a nonrecurring basis in the first quarter of fiscal 2009, and such adoption did not have a material impact on the Company's financial statement disclosures.

ASC 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principle or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

The levels of the fair value hierarchy established by ASC 820 are:

Level 1: inputs are quoted prices, unadjusted, in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2: inputs are other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. A Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3: inputs are unobservable and reflect the reporting entity's own assumptions about the assumptions that market participants would use in pricing the asset or liability.

The Company considers the recorded value of certain of its financial assets and liabilities, which consist primarily of cash and cash equivalents, accounts receivable and accounts payable, to approximate the fair value of the respective assets and liabilities at December 31, 2010 and December 31, 2009 based upon the short-term nature of the assets and liabilities.

The Company had $17.0 million and $150,000 deposited in a money market account with BOA on December 31, 2010 and 2009, respectively.

As of December 31, 2010, the Company was contingently liable for five standby letters of credit and three surety bonds totaling $4.7 million which represent performance bonds on eight contracts. The Company has deposited the full value of one standby letters of credit in certificates of deposit ($179,000) which have been restricted in that the Company does not have access to these funds until the related letters of credit have expired. The cash has been recorded on the Company's balance sheet at December 31, 2010 as restricted cash and long-term restricted cash depending on the expiration date of the certificate of deposit.

On May 5, 2009, one of the Company's two credit agreements with Bank of America was amended to include a $600,000 certificate of deposit issued by Bank of America in the borrowing base calculation to determine the maximum amount of available funds that the Company could borrow from the line. The cash deposited in this certificate of deposit has been recorded on the Company's balance sheet at December 31, 2010 and 2009 as restricted cash.

The following table presents assets and liabilities measured at fair value at December 31, 2010:

(in thousands)	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Money market fund	$ 17,017	$ -	$ -	17,017
Certificates of deposit	779	-	-	779
Foreign exchange contracts	-	325	-	325
Total assets	$ 17,796	$ 325	$ -	$ 18,121
Foreign exchange contracts	$ -	$ (244)	$ -	$ (244)
Total liabilities	$ -	$ (244)	$ -	$ (244)

10. Long-term debt

At December 31, 2010 and 2009, the Company had no long-term debt.

Line of Credit

At December 31, 2010, the Company had two separate revolving credit agreements for revolving lines of credit with BOA which were to expire on May 31, 2012. The Company and its subsidiary, GSE Power Systems, Inc., were jointly and severally liable as co-borrowers. The credit facilities enabled the Company to borrow funds to support working capital needs and standby letters of credit. The first line of credit which was in the principal amount of up to $3.5 million was amended on March 29, 2010 to increase the principal amount to $5.0 million. This revolving line of credit enabled the Company to borrow funds up to 90% of eligible foreign accounts receivable, plus 75% of eligible unbilled foreign receivables and 100% of cash collateral pledged to BOA on outstanding warranty standby letters of credit. This line of credit was 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 was in the principal amount of up to $2.5 million. This line of credit enabled the Company to borrow funds up to 80% of domestic accounts receivable, 30% of domestic unbilled receivables and 100% of the principal balance of a $600,000 certificate of deposit issued by BOA. The interest rate on this line of credit was based on the daily LIBOR rate plus 225 basis points, with interest only payments due monthly. The credit agreements contained certain restrictive covenants regarding future acquisitions, incurrence of debt and the payment of dividends. In addition, both credit agreements contained financial covenants with respect to the Company's minimum tangible net worth, debt service coverage ratio, and funded debt to EBITDA ratio. At December 31, 2010 and throughout all of 2010, the Company had not paid any interest or principal payments related to any borrowings for over one year. As such the debt service coverage ratio is not applicable at December 31, 2010. The financial covenant calculations at December 31, 2010 are shown below:

	Covenant	As of Dec. 31, 2010
Tangible net worth	Must Exceed $15.0 million	$31.8 million
Funded debt to EBITDA ratio	Not to Exceed 2.50 : 1.00	(30.90) : 1.00

For the funded debt to EBITDA ratio calculation, the amount of outstanding standby letters of credit and surety bonds that are not cash collateralized are included as funded debt. At December 31, 2010, the Company had outstanding standby letters of credit and surety bonds that were not cash collateralized of $4.4 million. Due to the Company's net loss of $2.2 million for the year ended December 31, 2010, the Company was in default on its funded debt to EBITDA ratio at December 31, 2010.

Due to the Company's financial covenant default, BOA has made the following amendments to the Company's revolving credit agreements effective March 14, 2011:

- A written waiver has been granted for the funded debt to EBITDA ratio default.
- The $5.0 million principal line of credit has been terminated.
- The financial covenants for the $2.5 million principal line of credit have been deleted.
- The Company is required to cash collateralize all outstanding standby letters of credit, which totals $3.4 million.
- All future letters of credit issued by BOA must be cash collateralized.
- Borrowings under the line of credit must be cash collateralized. Currently the Company has in place a $600,000 certificate of deposit as collateral for the line of credit.

11. Income taxes

The consolidated income (loss) before income taxes, by domestic and foreign sources, is as follows:

(in thousands)	Years ended December 31,		
	2010	2009	2008
Domestic	$ (3,114)	$ (2,115)	$ (674)
Foreign	1,071	2,235	113
Total	$ (2,043)	$ 120	$ (561)

The provision for income taxes is as follows:

(in thousands)	Years ended December 31,		
	2010	2009	2008
Current:			
Federal	$ -	$ 29	$ -
State	9	80	10
Foreign	233	512	245
Subtotal	242	621	255
Deferred:			
Foreign	(36)	296	(126)
Subtotal	(36)	296	(126)
Total	$ 206	$ 917	$ 129

The Company is entitled to a deduction for federal and state tax purposes with respect to employees' stock option activity. The net reduction in taxes otherwise payable in excess of any amount credited to income tax benefit has been credited to additional paid-in capital. As of December 31, 2010, the Company had $5.6 million of unrecognized excess tax deductions related to compensation for stock option exercises which will be recognized when the net operating loss carryforwards are fully utilized and those excess tax benefits result in a reduction to income taxes payable.

The effective income tax rate differed from the statutory federal income tax rate due to the following:

	Effective Tax Rate Percentage (%) Years ended December 31,		
	2010	2009	2008
Statutory federal income tax rate	34.0 %	34.0 %	(34.0) %
State income taxes, net of federal tax benefit	(0.5)	44.1	1.2
Effect of foreign operations	(4.6)	(157.2)	0.2
Change in valuation allowance	(38.8)	669.6	39.6
Other, principally permanent differences	(0.2)	173.7	16.0
Effective tax rate	(10.1) %	764.2 %	23.0 %

Deferred income taxes arise from temporary differences between the tax bases of assets and liabilities and their reported amounts in the financial statements. A summary of the tax effect of the significant components of the deferred income tax assets (liabilities) is as follows:

(in thousands)	December 31,		
	2010	2009	2008
Deferred tax assets:			
Net operating loss carryforwards	$ 5,893	$ 5,650	$ 6,691
Capital loss carryforwards	2,472	2,443	1,675
Accruals and reserves	126	251	61
Expenses not currently deductible for tax purposes	1,358	1,153	412
Alternative minimum tax credit carryforwards	166	166	162
Other	1,163	660	654
Total deferred tax asset	11,178	10,323	9,655
Valuation allowance	(8,662)	(8,375)	(8,259)
Total deferred tax asset less valuation allowance	2,516	1,948	1,396
Deferred tax liabilities:			
Tax in excess of book depreciation	-	-	(8)
Undistributed earnings of foreign subsidiary	(1,790)	(1,313)	(683)
Software development costs	(677)	(724)	(579)
Other	(421)	(87)	-
Total deferred tax liability	(2,888)	(2,124)	(1,270)
Net deferred tax asset (liability)	$ (372)	$ (176)	$ 126

In assessing the realizability of deferred tax assets, 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 income in making this assessment.

Management believes that the Company will achieve profitable operations in future years that will enable the Company to recover the benefit of its deferred tax assets. However, other than for a portion of the deferred tax assets that are related to the Company's Swedish and English subsidiaries, the Company presently does not have sufficient objective evidence to substantiate the recovery of the deferred tax assets. Accordingly, the Company has established a full $8.7 million valuation allowance on its U.S. and Scottish deferred tax assets at December 31, 2010. The valuation allowance for deferred tax assets increased by $287,000 in 2010, increased by $116,000 in 2009 and decreased by $609,000 in 2008.

At December 31, 2010, the Company's largest deferred tax asset related to a U.S. net operating loss carryforward of $5.6 million which expires in various amounts between 2017 and 2030. 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.

The Company is not aware of any tax positions for which it is reasonably possible that the total amounts of unrecognized tax benefits would significantly decrease or increase within the next twelve months.

The Company's policy for recording interest and penalties associated with uncertain tax positions is to record such items as a component of income tax expense. As of December 31, 2010, the Company has no accrued interest or penalties.

12. Capital stock

The Company's Board of Directors has authorized 32,000,000 total shares of capital stock, of which 30,000,000 are designated as common stock and 2,000,000 are designated as preferred stock. The Board of Directors has the authority to establish one or more classes of preferred stock and to determine, within any class of preferred stock, the preferences, rights and other terms of such class.

On September 4, 2009, the Company raised $15.0 million through the sale of 2.5 million shares of its common stock, $.01 par value per share. The shares were sold under a shelf registration statement which was declared effective by the Securities and Exchange Commission on August 21, 2009. On September 23, 2009, the Company raised an additional $2,250,000 when the Company's underwriter, exercised an over-allotment option in full to purchase an additional 375,000 shares of the Company's common stock at the public offering price of $6.00 per share. The aggregate net proceeds received by the Company from the two transactions was approximately $15.9 million. The Company paid the underwriter a fee in the amount of 6% of the gross proceeds received by the Company from the offering ($1,035,000) and paid 339,000 in other transaction fees.

As of December 31, 2010, the Company has reserved 2,589,683 shares of common stock for issuance: 2,016,617 shares upon exercise of outstanding stock options; 257,511 shares upon exercise of outstanding warrants; 148,888 shares for future grants under the Company's 1995 Long-Term Incentive Plan; and 166,667 shares upon exercise of warrants that the Company is obligated to issue in the event of a default under its June 2007 common stock sale.

13. Stock-based compensation

Long-term incentive plan

During 1995, the Company established the 1995 Long-Term Incentive Stock Option Plan (the "Plan"), which permits the granting of stock options (including incentive stock options and nonqualified stock options) stock appreciation rights, restricted or unrestricted stock awards, phantom stock, performance awards or any combination of these to employees, directors or consultants. Options to purchase shares of the Company's common stock under the Plan expire in either seven or ten years from the date of grant and generally become exercisable in three installments with 40% vesting on the first anniversary of the grant date and 30% vesting on each of the second and third anniversaries of the grant date, subject to acceleration under certain circumstances. The Plan expires on June 30, 2018; the total number of shares that could be issued under the Plan is 3,500,000. As of December 31, 2010, the Company had 148,888 shares of common stock reserved for future grants under the Plan.

The Company recognizes compensation expense on a pro rata straight-line basis over the requisite service period for stock-based compensation awards with both graded and cliff vesting terms. The Company recognizes the cumulative effect of a change in the number of awards expected to vest in compensation expense in the period of change. The Company has not capitalized any portion of its stock-based compensation.

During the years ended December 31, 2010, 2009, and 2008, the Company recognized $807,000, $906,000 and $650,000, respectively of pre-tax stock-based compensation expense under the fair value method.

Stock option and warrant activity

During the year ended December 31, 2010, the Company granted stock options to purchase 422,143 shares of common stock to GSE directors, officers, and employees. No warrants to purchase shares of common stock were issued in 2010.

Information with respect to stock option and warrant activity as of and for the year ended December 31, 2010 is as follows:

	Number of Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value (in thousands)	Weighted Average Remaining Contractual Life (Years)
Shares under option and warrant, December 31, 2009	2,061,611	$ 4.33		
Options granted	422,143	4.22		
Options exercised	(57,000)	1.67		
Warrants exercised	(45,198)	1.77		
Options expired	(285)	5.95		
Options forfeited	(107,143)	5.95		
Shares under option and warrant, December 31, 2010	2,274,128	4.35	$ 1,538	4.46
Options expected to vest	902,294	5.35	$ 45	6.65

A summary of the status of the Company's nonvested options as of and for the year ended December 31, 2010 is presented below. All outstanding warrants were vested prior to 2010.

	Number of Shares	Weighted Average Fair Value
Nonvested options at December 31, 2009	827,723	$ 4.35
Options granted	422,143	1.52
Options vested during the period	(240,144)	3.74
Options forfeited	(107,143)	4.34
Nonvested options at December 31, 2010	902,579	$ 3.19

The fair value of the options granted in 2010, 2009 and 2008 were estimated on the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	Years ended December 31,		
	2010	2009	2008
Risk-free interest rates	.57% - 2.93%	1.71% - 3.04%	2.75% - 3.05%
Dividend yield	0%	0%	0%
Expected life	2.5 - 6.5 years	5.5 - 7.0 years	4.9 - 8.5 years
Volatility	37.2 - 63.8%	65.9% - 78.22%	68.8% - 78.22%
Weighted average volatility	55.38%	67.85%	77.40%

As of December 31, 2010, the Company had $2.6 million of unrecognized compensation expense related to the unvested portion of outstanding stock options expected to be recognized on a pro-rata straight line basis over a weighted average remaining service period of approximately 4.9 years.

The Company received cash for the exercise price associated with stock options exercised of $95,000, $103,000, and $282,000 during the years ended December 31, 2010, 2009, and 2008, respectively. The total intrinsic value realized by participants on stock options exercised was $159,000, $213,000 and $1.4 million during the years ended December 31, 2010, 2009, and 2008, respectively.

Common stock issued for services provided

In April 2006, the Company entered into a consulting agreement with an investor relations firm. After the initial term, the consulting agreement was extended for an additional eighteen months from November 2007 through April 2009 and an additional 25,000 shares of common stock was issued as partial compensation for services rendered, with the shares vesting in monthly increments of 1,388 shares. The Company delivered the 25,000 common shares to the

investor relations firm in April 2009.

The consulting agreement was extended again for an additional eighteen months from May 2009 through October 2010 and an additional 30,000 shares of common stock was issued as partial compensation for services rendered, with the shares vesting in monthly increments of 1,666. The Company delivered the 30,000 shares of common stock to the investor relations firm in October 2010.

Compensation expense is determined based on the price per share on the last day of each month. In October 2010, the consulting agreement expired. For the ten months ended October 31, 2010, the average price per share was $4.55 and the total compensation expense recognized by the Company was $76,000. For the year ended December 31, 2009, the average price per share was $5.96 and the total compensation expense recognized by the Company was $113,000. For the year ended December 31, 2008, the average price per share was $7.87 and the total compensation expense recognized by the Company was $131,000.

14. Commitments and contingencies

Leases

The Company is obligated under certain noncancelable operating leases for office facilities and equipment. Future minimum lease payments under noncancelable operating leases as of December 31, 2010 are as follows:

(in thousands)	Gross Future Minimum Lease Payments
2011	$ 715
2012	604
2013	525
2014	430
2015	443
Thereafter	1,204
Total	$ 3,921

Total rent expense under operating leases for the years ended December 31, 2010, 2009, and 2008 was approximately $942,000, $867,000, and $921,000, respectively.

Standby Letters of credit, bank guarantees, surety bonds and performance bonds

As of December 31, 2010, the Company was contingently liable for five standby letters of credit and three surety bonds totaling $4.7 million which represent performance bonds on eight contracts. The Company has deposited the full value of one standby letter of credit, $179,000, in a certificate of deposit, which has been restricted in that the Company does not have access to these funds until the related letter of credit has expired. The cash has been recorded on the Company's balance sheet at December 31, 2010 as restricted cash.

The Company has provided a partial guarantee of 10% of ESA's credit facility with Union National Bank; $1.2 million was deposited into a restricted interest-bearing account with UNB in 2006. The interest earned on the restricted cash is part of the pledged deposit. In January 2010, the Company was notified by UNB that ESA was delinquent in making principal and interest payments on the outstanding borrowings from their credit facility and that UNB had drawn upon the guarantees of the three partners to pay off the delinquency. The Company established a full reserve against the $1.3 million restricted cash account as of December 31, 2009. In 2010, Union National Bank withdrew a total of $294,000 from the cash GSE had on deposit with them as a partial guarantee against ESA's line of credit. Any interest income earned from this account in 2010 was not recorded in interest income but was credited to the reserve

balance. At December 31, 2010 the Company had $1.0 million remaining in the UNB account which was fully reserved.

Contingencies

Various actions and proceedings are presently pending to which the Company is a party. In the opinion of management, the aggregate liabilities, if any, arising from such actions are not expected to have a material adverse effect on the financial position, results of operations or cash flows of the Company.

15. Employee benefits

The Company has a qualified defined contribution plan that covers substantially all U.S. employees under Section 401(k) of the Internal Revenue Code. Under this plan, the Company's stipulated basic contribution matches a portion of the participants' contributions based upon a defined schedule. The Company's contributions to the plan were approximately $245,000, $197,000, and $171,000 for the years ended December 31, 2010, 2009, and 2008, respectively.

16. Segment information

The Company has one reportable business segment that provides simulation solutions and services to the nuclear and fossil fuel power industry, and to the chemical and petrochemical industries. Contracts typically range from 10 months to three years.

For the years ended December 31, 2010, 2009, and 2008, 72%, 73%, and 54% of the Company’s consolidated revenue was from customers in the nuclear power industry, respectively. The Company designs, develops and delivers business and technology solutions to the energy industry worldwide. Revenue, operating income (loss) and total assets for the Company’s United States, European, and Asian subsidiaries as of and for the years ended December 31, 2010, 2009, and 2008 are as follows:

(in thousands)	Year ended December 31, 2010				
	United States	Europe	Asia	Eliminations	Consolidated
Contract revenue	$37,197	$9,699	$317	$ -	$ 47,213
Transfers between geographic locations	(674)	121	553	-	-
Total contract revenue	$36,523	$9,820	$870	$ -	$ 47,213
Operating income (loss)	$(2,397)	$1,157	$8	$ -	$ (1,232)
Total assets, at December 31	$70,783	$12,689	$353	$ (30,211)	$ 53,614

(in thousands)	Year ended December 31, 2009				
	United States	Europe	Asia	Eliminations	Consolidated
Contract revenue	$34,056	$6,004	$-	$ -	$ 40,060
Transfers between geographic locations	323	30	604	(957)	-
Total contract revenue	$34,379	$6,034	$604	$ (957)	$ 40,060
Operating income (loss)	$(536)	$1,018	$81	$ -	$ 563
Total assets, at December 31	$71,216	$5,710	$231	$ (27,637)	$ 49,520

(in thousands)	Year ended December 31, 2008				
	United States	Europe	Asia	Eliminations	Consolidated
Contract revenue	$24,483	$4,521	$-	$ -	$ 29,004
Transfers between geographic locations	177	23	407	(607)	-
Total contract revenue	$24,660	$4,544	$407	$ (607)	$ 29,004
Operating income (loss)	$(682)	$641	$29	$ -	$ (12)
Total assets, at December 31	$55,460	$3,110	$82	$ (27,637)	$ 31,015

Approximately 71%, 65%, and 63% of the Company's 2010, 2009, and 2008 revenue, respectively, was derived from international sales of its products and services from all of its subsidiaries.

17. Supplemental disclosure of cash flow information

(in thousands)	Year ended December 31,		
	2010	2009	2008
Cash paid:			
Interest	$ -	$ 1	$ 2
Income taxes	$ 545	$ 206	$ 68

18. Quarterly financial data (unaudited)

The Company's quarterly financial information has not been audited but, in management's opinion, includes all adjustments necessary for a fair presentation.

(in thousands, except per share data)

	Year ended December 31, 2010 Quarterly Data			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Contract revenue	$11,208	$11,773	$11,904	$12,328
Operating income (loss)	453	751	(328)	(2,108)
Net income (loss)	449	370	(548)	(2,520)
Basic income (loss) per common share	$0.02	$0.02	$(0.03)	$(0.13)
Diluted income (loss) per common share	$0.02	$0.02	$(0.03)	$(0.13)

(in thousands, except per share data)

	Year ended December 31, 2009 Quarterly Data			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Contract revenue	$8,128	$10,650	$10,217	$11,065
Operating income (loss)	531	658	428	(1,054)
Net income (loss)	333	571	458	(2,159)
Basic income (loss) per common share	$0.02	$0.04	$0.03	$(0.11)
Diluted income (loss) per common share	$0.02	$0.03	$0.03	$(0.11)

19. Subsequent Events

On January 4, 2011, GSE Systems, Inc. ("GSE") completed the acquisition of EnVision Systems, Inc. ("EnVision"). EnVision is headquartered in Madison, NJ and has an office in Chennai, India. EnVision's tutorials and simulation models serve the rapidly growing entry-level training market for the oil & gas, refining, and specialty chemicals industries. EnVision's products provide a foundation in process fundamentals, and plant operations and interaction. With this knowledge base, users may then graduate to the full-scope, high-fidelity, real-time simulations provided by GSE. EnVision has an installed base of more than 750 systems in over 28 countries, and its approximately 130 clients include Shell Oil Company, BP, Total and Chevron. EnVision will operate as a wholly-owned subsidiary of GSE, and has been re-named GSE Envision, Inc.

On the Closing Date, GSE paid $1.2 million in cash to the shareholders of EnVision. In addition, if EnVision attains certain revenue targets for the four-year period ending December 31, 2014, the shareholders of EnVision could receive up to an additional $3.05 million.

ITEMCHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL
9. DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES.

(a) Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed by it in its reports filed or submitted pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that information required to be disclosed by the Company in its Exchange Act reports is accumulated and communicated to management, including the Company's Chief Executive Officer ("CEO"), who is its principal executive officer, and Chief Financial Officer ("CFO"), who is its principal financial officer, to allow timely decisions regarding required disclosure. At the end of the period covered by this report, an evaluation was performed under the supervision and with the participation of our management including our CEO and our CFO, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13-15(e) of the Exchange Act. Based on the evaluation of our disclosure controls and procedures as of December 31, 2010, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

(b) Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Exchange Act rule 13a-15(f). Our internal control processes and procedures are designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements in accordance with United States generally accepted accounting principles.

Under the supervision and with the participation of management, including our CEO and CFO, we conducted an evaluation of internal control over financial reporting as of December 31, 2010 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control—Integrated Framework. Based upon our evaluation, we concluded that our internal control over financial reporting was effective as of December 31, 2010.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2010 has been audited by KPMG LLP, an independent registered public accounting firm, whose report appears in Item 8 of this Annual Report on Form 10-K.

(c) Changes in Internal Control over Financial Reporting

The Company has made no changes in its internal controls over financial reporting during the quarter ended December 31, 2010 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

(d) Limitation of Effectiveness of Controls

Internal control over financial reporting has inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate this risk.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The information required by this item, including items 401, 405 406 and 407 of Regulation S-K, is incorporated by reference to the section captioned “Directors and Executive Officers” in the definitive Proxy Statement for the Company’s 2011 Annual Meeting of Shareholders and incorporated herein by reference or will be provided in an amendment to this Annual Report on Form 10-K.

The Company has adopted a Conduct of Business Policy that applies to its directors, officers and employees, including its principal executive officer, and principal financial officer. The Conduct of Business Policy is available on the Company’s website at www.gses.com. In addition, the Company has adopted a Code of Ethics for its principal executive officer and senior financial officers which is also available on the Company’s website. The Company will post on its website information about any amendment to, or waiver from, any provision of the Code of Ethics that applies to its principal executive officer, principal financial officer, or principal accounting officer.

ITEM 11. EXECUTIVE COMPENSATION.

The information required by this item will either be set forth under the “Executive Compensation” section in the definitive Proxy Statement for the 2011 Annual Meeting of Shareholders and incorporated herein by reference or will be provided in an amendment to this Annual Report on Form 10-K.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The information required by this item will be either set forth under the sections captioned “Voting Securities and Principal Holders Thereof,” and “Executive Compensation” in the definitive Proxy Statement for the 2011 Annual Meeting of Shareholders and incorporated herein by reference or will be provided in an amendment to this Annual Report on Form 10-K.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE.

The information required by this item will be either set forth under the “Directors and Executive Officers” section in the definitive Proxy Statement for the 2011 Annual Meeting of Shareholders and incorporated herein by reference or will be provided in an amendment to this Annual Report on Form 10-K.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The information required by this item will be either set forth under the “Directors and Executive Officers” section in the definitive Proxy Statement for the 2011 Annual Meeting of Shareholders and incorporated herein by reference or will be provided in an amendment to this Annual Report on Form 10-K.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) List of Financial Statements

The following financial statements are included in Item 8:

GSE Systems, Inc. and Subsidiaries

Report of Independent Registered Public Accounting Firm – Internal Control over Financial Reporting
Report of Independent Registered Public Accounting Firm – Consolidated Financial Statements
Consolidated Balance Sheets as of December 31, 2010 and 2009

Consolidated Statements of Operations for the years ended December 31, 2010, 2009, and 2008
Consolidated Statements of Comprehensive Loss for the years ended December 31, 2010, 2009, and 2008
Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2010, 2009, and 2008
Consolidated Statements of Cash Flows for the years ended December 31, 2010, 2009, and 2008
Notes to Consolidated Financial Statements

(a) (2) List of Schedules

All other schedules to the consolidated financial statements are omitted as the required information is either inapplicable or presented in the consolidated financial statements or related notes.

(a) (3) List of Exhibits

The Exhibits which are filed with this report or which are incorporated by reference are set forth in the Exhibit Index hereto.

SIGNATURES

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

GSE Systems, Inc.

By: / s / JAMES A. EBERLE
James A. Eberle
Chief Executive Officer

Pursuant to the requirements of the Securities Act, this report has been signed by the following persons in the capacities and on the dates indicated.

Date: March 14, 2011	/s / JAMES A. EBERLE James A. Eberle, Chief Executive Officer (Principal Executive Officer)
Date: March 14, 2011	/ s / JEFFERY G. HOUGH Jeffery G. Hough, Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)

Date: March 8, 2011	(Jerome I. Feldman, Chairman of the Board)	By: / s / JEFFERY G. HOUGH
	(Michael D. Feldman, Director)	Jeffery G. Hough
	(Dr. Sheldon L. Glashow, Director)	Attorney-in-Fact
	(Jane Bryant Quinn, Director)	
	(Dr. Roger Hagengruber, Director)	
	(Joseph W. Lewis, Director)	
	(George J. Pedersen, Director)	
	(Orrie Lee Tawes III, Director)	

A Power of Attorney, dated March 8, 2011 authorizing Jeffery G. Hough to sign this Annual Report on Form 10-K for the fiscal year ended December 31, 2010 on behalf of certain of the directors of the Registrant is filed as Exhibit 24.1 to this Annual Report.

Exhibit	Description of Exhibit
1	Underwriting Agreement
1.1	Underwriting Agreement, dated August 31, 2009 between the Company and Roth Capital Partners, LLC. Previously filed in connection with Form 8-K as filed with the Securities and Exchange Commission on September 1, 2009 and incorporated herein by reference.
2	Plan of acquisition, reorganization, arrangement, liquidation, or succession
2.1	Share Purchase Agreement relating to TAS Holdings, Ltd. dated April 26, 2010, by and between John Maplesden,
2.2	Anthony Maplesden, and John Easton and GSE Systems, Ltd and GSE Systems, Inc. previously filed with Form 8-K as filed with the Securities and Exchange Commission on April 30,
2.3	2010.
2.4	Contract for the Sale and Leaseback of Land and Buildings at 37-39 Norton Road, Stockton-on-Tees TS18 2BU between TAS Holdings Ltd. and John Maplesden, Anthony Maplesden and John Easton, dated April 26, 2010, previously filed with Form 8-K as filed with the Securities and Exchange Commission on April 30, 2010.
	Stock Purchase Agreement, dated as of January 1, 2011 among GSE Systems, Inc., Toshi Shinohara, Santosh Joshi, Hideo Shinohara, and EnVision Systems, Inc. Previously filed with Form 8-K as filed with the Securities and Exchange Commission on January 10, 2011.
	Employment Agreement, dated as of January 1, 2011 between Santosh Joshi and EnVision Systems, Inc. Previously filed with Form 8-K as filed with the Securities and Exchange Commission on January 10, 2011.
3	Articles of Incorporation and Bylaws
3(i)	Fourth Amended and Restated Certificate of Incorporation of the Company. Previously filed in connection with the GSE Systems, Inc. Form DEF 14A as filed with the Securities and Exchange Commission on November 20, 2007 and incorporated herein by reference.

3(ii) Amended and Restated Bylaws of the Company. Previously filed in connection with Form DEF 4A as filed with the Securities and Exchange Commission on November 20, 2007 and incorporated herein by reference.

4. Instruments Defining Rights of Security Holders, including Indenture.

4.1 Specimen Common Stock Certificate of the Company. Previously filed in connection with Amendment No. 3 to the GSE Systems, Inc. Form S-1 Registration Statement as filed with the Securities and Exchange Commission on July 24, 1995 and incorporated herein by reference.

4.2 Form of Warrant to Purchase 166,667 shares of Common Stock of GSE Systems, Inc. dated as of June 15, 2007. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on June 18, 2007 and incorporated herein by reference.

4.3 Securities Purchase Agreement, dated as of June 15, 2007 by and between GSE Systems, Inc. and each of the Investors to sell a total of 1,666,667 shares of GSE Common Stock. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on June 18, 2007 and incorporated herein by reference.

4.4 Registration Rights Agreement, dated as of June 15, 2007 by and between GSE Systems, Inc. and each of the Investors. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on June 18, 2007 and incorporated herein by reference.

4. 5 Consent and Waiver, dated as of June 15, 2007, among GSE Systems, Inc., GSE Power Systems, Inc. and Laurus Master Fund Ltd. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on June 18, 2007 and incorporated herein by reference.

10. Material Contracts

10.1 Agreement among ManTech International Corporation, National Patent Development Corporation, GPS Technologies, Inc., General Physics Corporation, Vattenfall Engineering AB and GSE Systems, Inc. (dated as of April 13, 1994). Previously filed in connection with the GSE Systems, Inc. Form S-1 Registration Statement as filed with the Securities and Exchange Commission on April 24, 1995 and incorporated herein by reference.

10.2 GSE Systems, Inc. 1995 Long-Term Incentive Plan, amended as of September 25, 2007. Previously filed in connection with the GSE Systems, Inc. Form DEF 14A as filed with the Securities and Exchange Commission on November 20, 2007 and incorporated herein by reference. *

10.3 Form of Option Agreement Under the GSE Systems, Inc. 1995 Long-Term Incentive Plan. Previously filed in connection with the GSE Systems, Inc. Form 10-K as filed with the Securities and Exchange Commission on March 22, 1996 and incorporated herein by reference. *

10.4 Memorandum of Association of Limited Liability Company dated November 8, 2005 by and between Al Qudra Holding PJSC, Centre of Excellence for Applied Research and Training, and GSE Systems, Inc. Previously filed in connection with the GSE Systems, Inc. Form 10-Q/A filed with the Securities and Exchange Commission on October 4, 2006 and incorporated herein by reference.

10.5 Supply Agreement Contract by and between Emirates Simulation Academy, LLC and GSE Power Systems, Inc. dated January 3, 2006. Previously filed in connection with the GSE Systems, Inc. Form 10-Q/A filed with the Securities and Exchange Commission on October 4, 2006 and incorporated herein by reference.

10.6 License and Technology Transfer Agreement by and Between GSE Power Systems, Inc. and Emirates Simulation Academy, LLC dated January 3, 2006. Previously filed in connection with the GSE Systems, Inc. Form 10-Q/A filed with the Securities and Exchange Commission on October 4, 2006 and incorporated herein by reference.

10.7 Office Lease Agreement between 1332 Londontown, LLC and GSE Systems, Inc. (dated as of February 27, 2008). Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on March 11, 2008 and incorporated herein by reference.

10.8 $3,500,000 Ex-Im Bank-Guaranteed Transaction Specific Revolving Line of Credit, dated as of March 28, 2008. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

10.9 Security Agreement by and among GSE Systems, Inc., GSE Power Systems, Inc and Bank of America, N.A. dated March 28, 2008. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

10.10 Borrower Agreement by and among GSE Systems, Inc., GSE Power Systems, Inc. and Bank of America, N.A. dated March 28, 2008. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

10.11 $1,500,000 Domestic Revolving Line of Credit dated as of March 28, 2008. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

10.12 Security Agreement by and among GSE Systems, Inc., GSE Power Systems, Inc. and Bank of America, N.A. dated as of March 28, 2008 (Domestic Revolving Line of Credit). Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

10.13 Continuing and Unconditional Guaranty by GSE Process Solutions, Inc. and Bank of America, N.A. dated as of March 28, 2008. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

10.14 Continuing and Unconditional Guaranty by MSHI, Inc. and Bank of America, N.A. dated as of March 28, 2008. Previously filed in connection with the GSE Systems,

10.15 Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

Pledge Agreement by and among the Company, MSHI, Inc., GSE Power Systems, Inc., GSE Process Solutions, Inc. and Bank of America, N.A. dated as of March 28, 2008. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 3, 2008 and incorporated herein by reference.

10.16 First Amendment to $1,500,000 Domestic Revolving Line of Credit, dated May 5, 2009. Previously filed in connection with the GSE Systems, Inc. Form 10-Q as filed with the Securities and Exchange Commission on May 11, 2009 and incorporated herein by reference.

10.17 First Amendment to Security Agreement by and among GSE Systems, Inc., GSE Power Systems, Inc. and Bank of America N.A (Domestic Revolving Line of Credit), dated as of May 5, 2009. Previously filed in connection with the GSE Systems, Inc. Form 10-Q as filed with the Securities and Exchange

Commission on May 11, 2009 and incorporated herein by reference.

10.18 Ratification of Guarantee by GSE Process Solutions, Inc. and MSHI, Inc. (Ex-Im Bank-Guaranteed Transaction Specific Revolving Line of Credit), dated May 5, 2009. Previously
10.19 filed in connection with the GSE Systems, Inc. Form 10-Q as filed with the Securities and Exchange Commission on May 11, 2009 and incorporated herein by reference.
10.20
Second Amendment to Loan Agreement (Ex-Im Bank-Guaranteed Transaction Specific Revolving Line of
10.21 Credit) dated March 29, 2010. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 2, 2010 and
10.22 incorporated herein by reference.

Second Amendment to Loan Agreement (Domestic Revolving
10.23 Line of Credit) dated March 29, 2010. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 2, 2010 and incorporated herein by reference.

Ratification of Guaranty (Ex-Im Bank-Guaranteed Transaction Specific Revolving Line of Credit) dated March 29, 2010. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 2, 2010 and incorporated herein by reference.

Ratification of Guaranty (Domestic Revolving Line of Credit) dated March 29, 2010. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 2, 2010 and incorporated herein by reference.

Consulting Agreement, dated as of April 30, 2010 between John V. Moran and GSE Systems, Inc. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on April 30, 2010 and incorporated herein by reference.

10.24 Employment Agreement dated as of November 1, 2010 between GSE Systems, Inc. and James Eberle. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed
10.25 with the Securities and Exchange Commission on November 1, 2010 and incorporated herein by reference.*

10.26

10.27	Employment Agreement dated as of January 1, 2011 between GSE Systems, Inc. and Chin-our Jerry Jen. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on February 2, 2011 and incorporated herein by reference.
	Employment Agreement dated as of January 1, 2011 between GSE Systems, Inc. and Jeffery G. Hough. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on February 2, 2011 and incorporated herein by reference.
	Employment Agreement dated as of January 1, 2011 between GSE Systems, Inc. and Michael D. Feldman, filed herewith.

10.28 Employment Agreement dated as of January 1, 2011 between GSE Systems, Inc. and Gill Grady. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on February 2, 2011 and incorporated herein by reference.*

10.29 Employment Agreement dated as of January 1, 2011 between GSE Systems, Inc. and Lawrence Gordon, filed herewith.

10.30 Third Amendment to Loan Agreement (Ex-Im Bank-Guaranteed Transaction Specific Revolving Line of Credit) dated March 14, 2011. Filed herewith.

10.31 Third Amendment to Loan Agreement (Domestic Revolving Line of Credit) dated March 14, 2011. Filed herewith.

10.32 Ratification of Guaranty (Domestic Revolving Line of Credit) dated March 14, 2011. Filed herewith.

10.33 Employment Agreement dated as of January 1, 2011 between GSE Systems, Inc. and Jerome I. Feldman. Previously filed in connection with the GSE Systems, Inc. Form 8-K filed with the Securities and Exchange Commission on February 2, 2011 and incorporated herein by reference.

14. Code of Ethics

14.1 Code of Ethics for the Principal Executive Officer and Senior Financial Officers. Previously filed in connection with the GSE Systems, Inc. Form 10-K filed with the Securities and Exchange Commission on March 31, 2006 and incorporated herein by reference.

21. Subsidiaries.

21.1 List of Subsidiaries of Registrant at December 31, 2010, filed herewith.

23. Consents of Experts and Counsel

23.1. Consent of KPMG LLP, filed herewith.

24. Power of Attorney

24.1 Power of Attorney for Directors' and Officers' Signatures on SEC Form 10-K, filed herewith.

31. Certifications

31.1 Certification of Chief Executive Officer of the Company pursuant to Securities and Exchange Act Rule 13d-14(a)/15(d-14(a), as adopted pursuant to Section 302 and 404 of the Sarbanes-Oxley Act of 2002, filed herewith.

31.2 Certification of Chief Financial Officer of the Company pursuant to Securities and Exchange Act Rule 13d-14(a)/15(d-14(a), as adopted pursuant to Section 302 and 404 of the Sarbanes-Oxley Act of 2002, filed herewith.

32. Section 1350 Certifications

32.1 Certification of Chief Executive Officer and Chief Financial Officer of the Company pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, file herewith.

* Management contracts or compensatory plans required to be filed as exhibits pursuant to Item 14 (c) of this report.