GSE SYSTEMS INC
Form 10-K
March 16, 2009

Conformed

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

(Mark
One)

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

OR

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

Commission File Number 001-14785

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

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

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

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

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

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: NONE

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

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

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

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

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

Large accelerated filer  [ ]    Accelerated filer  [ X ]    Non-accelerated filer [ ]    Smaller reporting company [ ]

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in rule 12(b)-2 of the Exchange Act).   Yes  [ ] No [X]

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

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

DOCUMENTS INCORPORATED BY REFERENCE

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

1

GSE SYSTEMS, INC.
FORM 10-K
For the Year Ended December 31, 2008

TABLE OF CONTENTS

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

2

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.

3

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.

<div align="center">PART I</div>

ITEM 1.                                                                                BUSINESS.

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

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

Recent Developments.

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

4

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

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

5

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

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

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

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

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

6

Background.

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

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

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

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


Simulation Business.

I.  Nuclear and Fossil Fuel Power Simulation.

Industry History

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

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

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

7

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

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

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

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

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

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

Industry Future

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

8

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

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

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

GSE's Solution

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

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

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

9

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

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

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

Products of the Power Simulation business include:

♦ Java Applications & Development Environment (JADE™), a Java-based application that provides a window into the simulation instructor station and takes advantage of the web capabilities of Java, allowing customers to access the simulator and run simulation scenarios from anywhere they have access to the web.  JADE includes the following software modeling tools:

   ♦ JFlow™, a modeling tool that generates dynamic models for flow and pressure networks.
   ♦ JControl™, a modeling tool that generates control logic models from logic diagrams.
   ♦ JLogic™, a modeling tool that generates control logic models from schematic diagrams.
   ♦ JElectric™, a modeling tool that generates electric system models from schematic and one-line diagrams.
   ♦ JTopmeret™, a modeling tool that generates two phase network dynamic models.
   ¨ JDesigner™, a JADE based intuitive graphic editor for all JADE tools.
   ¨ JStation™, a JADE based web-enabled Instructor Station.

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

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

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

10

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

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

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

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

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

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

Strategy

The goal of the Power Simulation business is to expand its business on three fronts:
♦ Continue serving its traditional customer base.
♦