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## VSI Accomplishments Portfolio - Details

**Following are some examples of the types of contributions our consultants have made as VSI team members or as individuals**

**Ancore/Rapiscan** <http://www.rapiscansystems.com/cargoandvehicle.html>

VSI team participated in the EE design, ME design, Regulatory agency compliance, systems design and production documentation for various Explosive & Drug Detection Systems (EDS) used in airports, border portals and sensitive facilities.

**Applied Materials** <http://www.appliedmaterials.com>

Evaluation of an electrical and mechanical manufacturing documentation package for an RF amplifier. The purpose of the review was to identify any discrepancies with the documentation package in terms of its consistency, completeness, and conformance to customary practice for pilot-run documentation.

**Bear Medical Systems,** <http://www.viasyshealthcare.com>

VSI core member served as Vice President of Eng. from the mid 1980's to the early 1990's and as project leader for the Bear 1000 critical care ventilator which is still being manufactured and sold. Bear Medical Systems is now part of Viasys Healthcare.

**Canon Research of America,** [http://www.usa.canon.com/html/industrial\\_medeq/drs.html](http://www.usa.canon.com/html/industrial_medeq/drs.html)

VSI core member participated in the EE and system design, regulatory compliance and developed pre-production documentation for various Internet-based document scanner/copier/printer and storage management systems.

**Digital Tech Displays,** <http://www.dtdisplays.com>

Financial planning and accounting services.

VSI core member was responsible for activities similar to that provided to Ryan Ranch Printer (below); identified a manufacturing software add-on product to enhance the existing accounting software.

**Egenera, Inc.,** [http://www.egenera.com/prod\\_home.php](http://www.egenera.com/prod_home.php)

System EE design, regulatory, pre-production.

VSI core member was engaged to design and architect power system, communication system as well as prepare for regulatory compliance, and production of blade-based, non-stop, Internet transaction systems. The systems were able to anticipate failure modes and be repaired without shutdown.

**Fortel Traffic, Inc., <http://forteltraffic.com>**

System EE design for LED-based traffic signs.

VSI core member designed fixed-message display, large seven segment digits and controller used to manage traffic control sign functions. Firmware was developed to manage sign functions and communicate to off-board radar unit. A palm interface is used to program sign features.

**IDEO Product development, <http://www.ideo.com>**

Various VSI members have provided mechanical, electrical, and software engineering, regulatory compliance consulting, systems architecture, manufacturing support, product testing, and project management for design projects involving consumer products, medical devices and systems, and industrial equipment.

**Integrated Surgical Systems, <http://www.robodoc.com/eng/>**

VSI core member was Director of Technical Operations when the company began manufacturing the RoboDoc (robotic device to assist hip replacement surgery) and the OrthoDoc (Unix-based image processing computer for surgical planning).

**Nordson, <http://www.Nordson.com>**

Product development of hot melt applicator system.

VSI team led a project development effort defining and developing a new hot melt applicator system for Nordson, the worldwide leader in this billion-dollar industry.

**Novellus Systems, Inc. <http://www.novellus.com>**

Mechanical engineering development of a wafer-indexing drive system. The design involved ferrofluidic and bellows seals, a Geneva indexing mechanism, coaxial shafts, an exclusion ring lift mechanism, modified process and vacuum lines, and addition of a purge-gas supply system. Engineering issues included precise wafer positioning, compatibility with hot corrosive gases, manufacturability, and service access. Produced several prototype assemblies for beta site and in-house process testing. Determined and detailed configuration changes necessary to retrofit the spindle to existing machines.

**Packard Instrument Co., <http://las.perkinelmer.com>**

Project management and lead - design/development of DNA microarray.

VSI core member was engaged as senior project manager for this manufacturer of laboratory equipment for medical and pharmaceutical research: lead the design and development of a system to produce DNA microarrays (also called BioChips) in larger quantities for the purpose of genetic research and drug discovery. Technologies employed include:

- High speed robotics- X/Y/Z servo controlled platforms with linear motors
- Piezo- controlled dispensing
- Video detection/ imaging processing for dispensing verification
- Windows GUI for control / display and monitoring

**Quadrus, *No URL Available***

Management turnaround project for acquisition preparation of company.

VSI was engaged with this \$100mm CM company in a successful management turnaround effort and preparation for acquisition. Company was successfully sold.

**Ryan Ranch Printers, No URL Available**

Financial planning and accounting services.

VSI core member was responsible for all areas of Finance and Accounting including the handling or delegating of financial, auditing, reporting, cost reduction, budgeting, and forecasting duties; performed cost analyses and devise cost reduction schemes; established internal control requirements and accounting and operating procedures; generate detailed monthly financial statements; established reporting requirements and accounting and operating procedures; identified a manufacturing software add-on product to enhance the existing accounting software; sourced new job estimating software.

**ThermoGenesis Corp., <http://www.thermogenesis.com>**

VSI core member was Director of R&D for the design and development.

A VSI core member participated in the direction of R&D for the design and development of cryogenic equipment to process and store biological materials: CryoSeal (an extraction of fibrin, a biological "epoxy glue") and BioArchive (stem cell storage) systems during the late 1990's

**Titan, <http://www.Titan.com>**

Design & management activities transitioning an unmanned air vehicle from R&D into production.

VSI has been engaged to assist Titan's International Systems Division with transitioning an unmanned air vehicle from R&D into production. VSI assisted with design for manufacturability, establishing and set up of the production facility including required infrastructure.

**United States Geological Survey <http://walrus.wr.usgs.gov>**

Mechanical engineering of new and modified underwater camera platforms to incorporate instrumentation used for scientific observations of the sea floor. <http://soundwaves.usgs.gov/2004/06/>