

JAMES DAVID SCUDDER

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Twenty two years experience as a consultant in the electronic industry involved in designing hardware and software computer peripherals with a specialty in real-time data acquisition and control.

EXPERIENCE

Cybernetics; Lynchburg, Virginia: 1979 to present

Responsible for development of computer peripherals, including hardware and software, that allow for real-time scientific data acquisition and control as applied to a variety of special needs for many large corporations.

Carbone of America; Farmville, Virginia: 1995 to present

Developed high speed closed loop computer welding system for high current welding of for Ford Motor Company. This automated system produced 6 sigma quality fuel pumps for Ford. The system further produced a log all important data of each weld. The system could be monitored from any where in the world with a windows PC and correct security input.

- Developed smart closed loop feedback system which controlled high speed hydrogen and oxygen soldering systems. The computer-based system controlled both the hydrogen and oxygen separately based on data from infrared pyrometer and thermocouples. This process included the development of the mathematics that made the system work.
- Developed a network based visual inspection system which captured real-time visual imagery of the products in various stages of manufacture and distributed the images to a server on the network.
- Developed the program to view the visual data anywhere on the network.
- Installed a NT 4.0 primary domain network to accomplish the above.

Courtaulds Performance Films; Martinsville, Virginia: 1996 to present

- Developed a computer system which computes and monitors film impedance for sputtering machines. This system replaced an earlier analog system. A complex sweep frequency with tracking filters and true RMS integration was used on the analog side of the system. Complex mathematical processes are used on computer side which further refine the data and deduce both linear and ohms square impedance of the film. The actual measurement takes place in an extremely hostile EMF environment.

Super Collider Super Conductor: 1992-1993

- Worked with Babcock & Wilcox and Westinghouse Corporation to design, develop, and manufacture the electronics to monitor and control the super conducting magnets for the super collider super conductor.

- Worked extensively with Fermi Lab, Brookhaven Lab, and major universities to design the system. It was applied to 3 types of magnets: dipole, focus, and accelerator. The system supplied the power to the magnets, monitored the voltage and current conditions of the magnets, and monitored the temperature of the system. The system interfaced with multiple computer systems from Hewlett Packard, Sun Systems, Allen Bradley, and IBM.
- Designed all of the analog electronics and much of the digital electronics for the above system. Designs were both Euro frame standard bus and Allen Bradley.

IBM Corporation: 1983 to 1990

Manufactured computer peripherals for IBM PCs.

- Designed the IBM Personal Science Lab
<http://www.eyethinkcorp.com/resources/expmonth/sep00.asp>
 Entry Systems Division: Boca Raton, Florida
 Special Education Division: Rockville, Maryland
 Education Systems Division: Atlanta, Georgia
 Information Systems Group: Boulder, Colorado
- Functioned as record engineer for design engineer and manufacturing..

Atari, Inc.: Sunnyvale, California

- Worked with the founders as an independent consultant in designing hardware and software for implementation of high tech games.
- Designed and licensed game controllers and controller drivers and games.

Cybernetic Medical: Lynchburg, Virginia: 1973-1979

- Responsible for all aspects of the development of the company in the microcomputer instrument field. Did the very early work in developing data-taking computer peripherals.
- Researched and developed special equipment for individual and medical biophysical monitoring.
- Worked extensively with University of Virginia, Emory, and various rehabilitation centers in setting up biophysical measurement labs.
- Design and developed classified projects for the US Coast Guard under a government contract. Designed a radio controlled device to gather and disseminate information.