



Manufacturing Information Integration and Infrastructure

Manufacturing Technologies

The Information Infrastructure Team in the Computer Applications for Manufacturing Department can provide programming and analysis support for information applications for manufacturing. The Team works closely with customers to help them define their requirements. The Team's experience and expertise can help your manufacturing information needs.

Resources—How the Team Helps its Clients

- The Team is the centralized resource responsible for the Manufacturing Science & Technology Center's total information structure.
- We design, implement and maintain information systems to facilitate the collection, storage, retrieval, and protection of the information that enables the center to maintain its leadership position in manufacturing science and technology.
- We integrate commercial, off the shelf information technologies into customers standard manufacturing practices by thoroughly understanding customer requirements.

Capabilities

- Provide computer hardware and software standards that directly support the seamless manufacturing initiative.

- Develop graphical user interfaces (GUI) for applications using the proprietary Windows environment or an open system design using Web servers and client browsers.
- Provide computer hardware support, including all personal computer platforms, stand-alone and networked.
- Provide network hardware support, including copper and fiber Ethernet cabling.
- Provide network protocol support, including TCP/IP, NetBEUI, and remote access service.
- Provide network server administration support for Windows 2000/NT and CAD/CAM applications(i.e. Pro/E and SolidWorks).
- Provide operating system support, including, Windows 2000/NT, Windows 95/98, and DOS.
- Provide application design support, including data definition models, data process, data flow and data control diagrams, disaster recovery for Windows NT environments, database management systems, electronic file transfer, Web site development, dial-up systems, and database design and access systems.
- Provide application program support. This includes Microsoft SQL Server, Microsoft Active Server Pages, Microsoft Internet

Information Server, Pro/E, Job Boss, CribMaster, and Sandia's COE (Common Operating Environment)

- Provide programming language support. This includes C/C++, Visual Basic, Java, and Structured Query Language (SQL) ANSI-89 and greater. We also support web-based technologies using Active Server Pages, JavaScript, and Hypertext Markup Language (HTML).

Accomplishments—How the Team has Helped its Clients

- Developed a Web-based software system for a delegated corporate buyer. The system reduced paperwork by 80% and duplicated efforts by 100%. The system automatically tracks purchases and allows selective queries to be performed on the database.
- Developed a Web-based purchase requisition system. This system allowed access to the database through a Web GUI from any Web-enabled workstation, regardless of the operating system. The system decreased the cycle time for software changes by 60%, decreased software installation time on the clients' workstation by 100%, and decreased paper reports by 50% to 100%.
- Completed network rewiring using copper and fiber for SNL Building 840. We reconnected users from old thin net to new copper or fiber network.
- Developed a file transfer system to allow electronic transfer of information to and from suppliers.

Who the Team Is

The Team is comprised of highly professional Sandia staff that includes computer information systems specialists, computer network integrators for hardware and software, computer program-

mers and computer security experts.

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