



Experience in application development began in 1979. Consulting experience began in 1993.

HARDWARE UTILIZED:

Intel based high-performance server architectures

SYSTEMS EXPERIENCE:

Operating Systems:	MS Windows NT/95/98/2000/XP/03
Programming Languages:	Microsoft .NET/VB.NET/C#
Server Applications:	MS SQLServer, MS Exchange, MS ISA
Database Structures	MS SQLServer
Communications:	TCP/IP, DNS, MS WINS/DHCP, RAS, XML

EDUCATION:

University of Minnesota -- Attended Electrical Engineering program from 1977 to 1981.

FUNCTIONAL EXPERIENCE:

Collected requirements, designed, built and supported complete Content Distribution System to allow content-provider to supply subscription data-services to subscriber-servers via .NET Web Services and client Windows Service software package. The server-based portion of the application allows the content-seller to track subscribers, the content they receive, their contract dates, and Web Service security parameters via a Microsoft SQL/Server database presentation of live customer-data as the system logs each piece of content delivered to a client.

Collected requirements, designed, specified, selected vendors, ordered, and implemented complete infrastructure H/W and S/W system to support a business-process-optimization service provider. The functionally fault-tolerant, multi-server system provided complete enterprise LAN/WAN functionality, and included implementation of: Microsoft Exchange Server, Microsoft SQL/Server, Microsoft Internet Security and Accelerator Server, Microsoft Conference Server, Microsoft Internet Information Services, and Norton Antivirus Enterprise. The system allowed for complete remote access to email, documents and video teleconferencing via the web-browsers on the Internet. Secure publication of Exchange server resources and web resources via MS ISA Server allowed remote functionality while minimizing intrusion risk.

Converted Microsoft Access application modules, forms and queries to support utilization of Microsoft SQL/Server back-end database to provide more robust data storage than the native Access database it replaced. The SQL/Server database configuration included complete support for single-publisher/multiple-subscriber data replication to support field data-collection operations by many personnel utilizing laptop implementations of the application.

Developed business-logic layer ActiveX DLLs in Microsoft Visual Basic for an e-commerce start-up company. This Active Server Pages web-site is based on an extremely flexible and detailed data model containing well over 150 tables – developed by Dennis Rue of ATB Consulting, Inc. – and references the ActiveX layer to push the data from the web page, through the business logic layer, into the database. Prior to, and during this programming effort, installed and maintained a multi-server mail/file/print/web/proxy enterprise network – providing complete MS-Interdev/SQL/IIS/MTS development functionality, as well as local intranet/Email (MS-Exchange)/file-storage utility to the rest of the company.

Developed a Laboratory Analytical System using PowerSoft's PowerBuilder and Microsoft SQL/Server in a Microsoft Windows NT Server/Workstation 32-bit environment. The system was designed and developed to provide Laboratory Analytical functions to track sample testing and quality assurance procedures. Project was a clean-sheet design – developed both database and application screens to meet highly specific laboratory needs. Employed S-Designer as data-modeling software to generate triggers, stored procedures, and schema.



Developed a General Ledger Reporting system for a major mail-order catalog merchandiser using Oracle CASE, SQL*Forms and Pro*C on an HP-9000 network under UNIX (HP-UX) over a one year period. This system was designed and developed utilizing the Oracle CASE software engineering tool. It replaced the existing COBOL reporting system and resulted in a significant increase in transaction processing rates.

Developed a manufacturing system for a major defense contractor using Oracle SQL*Forms and Pro*C on an HP-9000 network under UNIX (HP-UX) over a two year period. The system was designed and developed to provide Just-In-Time inventory control, tally management, and Work-In-Process tracking functions. Duties included Data Flow Diagram generation, physical design generation from logical specifications, SQL*Forms development and C coding. Additionally, full unit testing plans and documentation were required, generated and executed for each module.

Developed, coded, and tested a data archival system, for the same manufacturer, using MONITROL, a 4GL used to interface test equipment with a relational database, on an HP-9000 network under HP-UX over a six month period. Application was designed to archive on-line test data from a manufacturing environment. A magneto-optical disk storage unit was employed to save the data in database table format to speed access. UNIX shell scripts were written to aid testing of this system.

Managed an entire production data acquisition and test control network, for the same manufacturer, using QDM/1000, IMAGE/1000, and DS/1000 on an HP-1000 network under RTE/A and RTE/VI over a three year period. Responsibilities included all operating system generation and optimizations, as well as enhancement for specific test and data collection needs. Performed system programming and database management, as well as data collection application programming. Heavy emphasis on FORTRAN interface to IMAGE/1000 on what was the largest QDM (Quality Decision Management) database in the world at the time.

Managed a test programming development network, for the same manufacturer, using FORTRAN on an HP-1000 under RTE/A over a period of two years. Duties included system level configuration and generation, system programming/debugging, and real-time operating system maintenance and adjustment. Provided system level support to a team of test software developers.

Designed, developed, coded, tested, and integrated ATLAS and FORTRAN A.T.E. code, for the same manufacturer, on an HP-1000 under RTE/A over a period of six months. Software provided self-test functionality for a state-of-the-art anti-submarine weapons test platform.

Designed, developed, coded, tested and integrated software documentation tools and generic A.T.E. testing tools, for the same manufacturer, using FORTRAN on Honeywell Level 6 and DPS-90 under GCOS-6 and MULTICS over a period of six months. Tools developed were designed to rapidly generate documentation for complex code modules, and provide generic module test plan generation.

Developed and tested a prototype test station, for the same manufacturer, to test a millimeter wave (MMW) seeker/sensor assembly for an advanced anti-armor weapons system using instrumentation controllers on IEEE-488 over a period of six months. Interface provided complex test functionality, tying together MMW sweeping oscillators, frequency counters and wave form generators under computer control to test an FM/CW (frequency modulated/continuous wave) radar system.

Developed software modeling of MMW antenna designs, for the same manufacturer, using FORTRAN on Honeywell DPS machine under MULTICS over a period of two years. Package provided recursive approach to derive traveling wave microstrip patch antenna parameters needed to achieve the stated design goals of beam width and Standing Wave Ratio for arbitrary frequency data. Co-authored paper on this subject with principal investigator "A Dual Beam Microstrip Patch Antenna."