JIM BERG

Professional Experience

Capabilities	Business Architecture, Service Oriented Architecture (SOA), Integration Architecture, SOA/API/Microservice Design/Mapping; Solution Architecture; Business Analysis; Systems Analysis; Object-Oriented Analysis and Design; UML Modeling; Software Process Architecture; Project Planning and Costing; Database Design.
Software Engineering	Utilize techniques such as service-oriented architecture (SOA), object-oriented analysis and design, n-tiered client/server architecture to perform or produce analysis and design documentation, systems architecture, and reusable software components.
Application Frameworks - Model Driven Development	Designed and built multiple application frameworks that make use of model-driven development (MDD) to generate code that reads and maintains the entities stored in databases or other data stores. Multiple frameworks leveraged Rational Software Architect/Rational Rose, a UML modeling tool, to design, document, and generate code for the building of integration/middleware services.
Best Practices	Defined best practices for creating Agile User Stories and Use Case Specifications, UML Canonical Models, and designing Reusable Components/Services.
Application Development Summary	Online Banking; Mobile Banking, ATM, Integrated Voice Response (IVR), Branch and Call Center CRM; Internet Account Opening; Brokerage CRM; Warehousing and Distribution utilizing radio frequency; Health, Environmental, and Regulatory Management; Integrated Manufacturing Control and Management; Competitive Pricing; Labor Scheduling/Time and Attendance; In-Store Receiving System using radio frequency; Integrated Process Control; Manufacturing Quality Assurance; Non-Conformance Tracking; Inspection Planning; Inventory Management; Medical Laboratory Management; Patient Care; Research Library Management; Text Retrieval and Analysis; Patent Research and Analysis; Human Resource Management; Software and Firmware Code Management and Distribution; Insurance Tracking; Accounting; University Related: Registration, Student Records, Alumni, Computer-Aided Instruction.
Representative Clients	PNC Bank, National City Corporation, The Sherwin-Williams Company, Insite Technology Group, Thomas Steel Strip Corporation, OfficeMax, PETsMART, Allen-Bradley, LTV Steel, Cleveland Pneumatic, BP America, Cleveland Clinic, Automated Tracking Systems.

Employment History

1995 - Present	AUTOMATION TECHNOLOGIES CONSULTING, INC. *President* *Founded ATC, an information technology consulting firm specializing in helping organizations improve their software development process and practices through mentoring and through the implementation of industry standard software design and development tools.*	Cleveland, Ohio
1994 - 1995	BERISH & ASSOCIATES, INC. *Project Manager*	Cleveland, Ohio
1987 - 1994	TECHNISOLVE, INC. *Director of Systems Architecture and Quality* *Project Manager*	Cleveland, Ohio
1985 - 1987	SYTEK, INC. *Software Development Consultant*	Cleveland, Ohio

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Product Experience

Primary Software Experience			
Rational Software Architect	C++	Microsoft Project
Rational Rose	Visual Basic	Microsoft Visio
Rational RequisitePro	Object Oriented Cobol	Microsoft Visual SourceSafe
Rational Unified Process	Oracle DBMS	Microsoft Word
Unified Modeling Language (UML)	SQL*Plus	Swagger Editor by SMARTBEAR
TopLink (Persistence Framework)	Oracle PL/SQL	Swagger OpenAPI 3.0
Enterprise Java Beans (EJB)	JSON	XML
WebGain VisualCafé	Microsoft Access	YAML
Java	Microsoft Excel	
Jira	Microsoft PowerPoint	

Secondary Software Experience			
IBM Integration Bus (IIB)	INGRES DBMS	C
Dell Boomi	INFORMIX DBMS	Microfocus Cobol
BizTalk	Rdb/VMS DBMS	Telxon TCAL
webMethods	VAX RMS	VAX Basic
SQL*ReportWriter	VAX FMS	VAX Pascal
SQL*Forms	DATATRIEVE	VAX Fortran
SQR	Hypercard	Smalltalk
Flexis spII	MetaDesign	Clarion

Project Experience

Enterprise Data Services (EDS) Integration Projects

Enterprise API Architect, API Designer, Solutions Architect, Business Systems Analyst

- Collaborate with the Business Sponsors, Product Owners, System Architects, Business/Systems Analysts, Testing Engineers, and Development Resources to craft design approaches, API specifications, and Kafka messages to solve complex party, customer, and account retrieval and maintenance capabilities to support Retail, Asset Management Group, Enterprise, Lending, and Corporate and Institutional Banking applications.
- Elicit service requirements from project stakeholders in order to identify API reuse and/or requirements for new shared service APIs.
- Design reusable microservice and orchestration APIs and Kafka messages utilizing API/Microservices best practices and industry standard service models such as the Banking Industry Architecture Network (BIAN) and ISO 20022.
- Produce API design artifacts such as Swagger Specifications, API Mapping Specifications, Orchestration/Microservice UML Flow Diagrams, and BPMN Process Flow Diagrams.
- Design orchestration APIs and Kafka messages to maintain and synchronize party, customer, and account information in multiple data stores including the master data management (MDM) system and the legacy customer information system while consumers and providers of this information transition from the legacy system to the newest system of record. Since both systems have varying schedules of availability, the APIs are designed to synchronously store to the system of record, then asynchronously store to the legacy system and retry when legacy system is not available. APIs also perform name standardization, address standardization, and email standardization by integrating with internal and external service providers.
- Establish best practices for modeling/documenting service design and mappings.
- Create and manage all user stories, requirements, and story acceptance criteria in Jira for the pipeline of demand for new or enhanced services.
- Mentor crew members in the best practices for API Design, Mapping of Service API to Systems of Record, and Service Orchestration.

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Retail Banking Shared Services Integration Projects
Senior Business SOA/Microservices Architect, API Designer/Architect, Solutions Architect, Business Systems Analyst

- Engage with the Lines of Business from various Channels (Online Banking, Mobile Banking, Branch & Call Center, ATM, Integrated Voice Response, Teller, Fraud, Disputes Processing) to understand their project requirements and desired capabilities in order to design/build/reuse services that integrate with the systems of record and/or orchestrate a process (such as a deposit or a payment, where multiple systems of record are part of the process). Services integrate with both internal and external source systems.
- Design reusable business services utilizing SOA/API/Microservices best practices and industry standard service models such as the Banking Industry Architecture Network (BIAN) and the Interactive Financial Exchange (IFX).
- Create and maintain service design/model and mappings to various systems of record to support Retail, Asset Management Group, and Corporate and Institutional Banking initiatives.
- Establish best practices for modeling/documenting service design and mappings to various systems of record.
- Collaborate with the Architecture, Infrastructure, Engineering, Business Systems Analysts, and Development Resources to assemble Architecture Documentation, and Technical Design.
- Create and manage user stories for the pipeline of demand for new, enhanced, or reused services.
- Collaborate with Test Leads to ensure traceability of service design and architecture to test approach, test scenarios, and test cases.
- Manage the pipeline of projects, project releases, services, service versions, and subscribers of each service operation.
- Mentor new crews in the best practices for API Design, Mapping of Service API to Systems of Record, and Service Orchestration.

Investment & Retirement CRM Business Intelligence Portal
Senior Business Systems Analyst

- Defined requirements for an interactive Referral Lifecycle Dashboard that allows users to view both the total referrals, qualified referrals, referral goals, sales generated from the referrals, and referral and sales trends.
- Defined requirements for an interactive Sales Metrics Dashboard for the Asset Management Group (AMG) that allows managers to analyze and compare the current year sales revenue with the sales goals.

Basel II Compliance Program (International Banking Regulations)
Senior Enterprise Architect, Basel Business Architect, Basel Application Architect

- Reviewed, analyzed, and evaluated Basel Initiative Business Requirements, Technical Requirements (Functional / Non-Functional Requirements), and Design Documents (Architecture Flows) in order to visually depict the program level view of the Business Architecture, Application Architecture, and Operational Calendar information.
- Maintained Basel Program Business Architecture, Application Architecture, and Operational Calendar information within the key program diagrams and supporting documents.
- Facilitated sign-off and validation of Business and Application Architecture and the Operational Calendar artifacts.
- Identified and documented Operational Calendar Timing Gaps, then facilitated the remediation of the gaps.
- Educated and mentored business and technology stakeholders in the effective use of the Basel Program Business Architecture, Application Architecture, and Operational Calendar artifacts.

Online Banking Offer Presentation and Fulfillment
Senior Business Systems Analyst, Middleware Technical Lead, Software Engineer

- Defined requirements for an initiative to provide customized relationship-based offers, as well as contextual (geographic) offers to Online Banking customers based on their profile, behavior, and situations.
- Facilitated meetings to gather and review business and technical requirements.
- Produced requirements documentation (Use Case Specifications) using Rational RequisitePro.

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- Identified and documented project risks, issues, assumptions, and decisions.
- Performed analysis and high-level design in order to produce +/-15% estimates for the design, development, testing, and implementation of middleware services/components.
- Ensured all business and technical requirements were mapped to design documentation and test cases.
- Designed and documented middleware services/components in Rational Rose, a UML Modeling Tool.
- Provided knowledge transfer and coaching to development resources.
- Consulted and assisted with the development of middleware services/components.
- Supported unit testing and integration testing of Online Banking and the supporting middleware services/components.
- Supported implementation of the middleware services/components into production.

Internet Account Opening
Senior Business Systems Analyst, Middleware Technical Lead, Software Engineer
- Defined requirements for a banking internet application with unique, sophisticated, real-time account opening function for new and existing customers with branch and call center customer relationship management (CRM) system integration. From the internet, the system performs customer identification for new and existing customers, decisioning of deposit and credit product applications, and real-time funding of deposit accounts via ACH or internal funds transfer.
- Facilitated meetings to gather and review business and technical requirements and project estimates.
- Produced requirements documentation (Use Case Specifications) using Rational RequisitePro.
- Identified and documented project risks, issues, assumptions, and decisions.
- Performed analysis and high-level design in order to produce +/-15% estimates for the design, development, testing, and implementation of middleware services/components.
- Ensured all business and technical requirements were mapped to design documentation and test cases.
- Designed and documented middleware services/components in Rational Rose, a UML Modeling Tool.
- Provided knowledge transfer and coaching to development resources.
- Consulted and assisted with the development of middleware services/components.
- Supported unit testing and integration testing of the middleware services/components.
- Supported implementation of the middleware services/components into production.

Enterprise Middleware Architecture with Model Driven Development (MDD) Framework
Lead Business Systems Analyst, API Designer/Architect, UML Modeler
- Designed and developed a Code Generator to generate key pieces of source code (input/output schema, input validation logic, data mapping logic) from the Rational Rose model required to implement each mainframe middleware service/component. Additionally, the Code Generator creates key artifacts (XML Input/Output Schemas, Positional Input/Output Schemas) needed to build each distributed service in the distributed middleware product (BizTalk, webMethods).
- The Code Generator has significantly reduced the implementation time, improved the quality of the components, and has made it easier to add additional technical resources to the team. With the Code Generator, all parties that provide and utilize each middleware service are kept synchronized with the information retained in the Rational Rose model.
- Over a 6 year period, the MDD Middleware Framework has been utilized to build over 500 mainframe components and hundreds of distributed middleware services, supporting over 24 front-end applications (e.g. Branch and Call Center CRM, Online Banking, Internet Account Opening System, Mobile Banking, Brokerage CRM, Integrated Voice Response System, Sweep System, Internet Online Banking Enrollment, Internet CRM, Wire Transfer System). Each front-end application has an average of more than *86% reuse of middleware services* (i.e. 86% of the middleware services used by each front-end application are also used by one or more other front-end applications). Each middleware service is used on average by four (4) different front-end applications.

- *In addition to the impressive reuse statistics, the combination of high-quality software development processes, flexible architecture, and the MDD framework has resulted in many consecutive enterprise releases with zero (0) defects resulting in any design and/or coding changes to the middleware services. Moreover, most releases have zero (0) defects during systems testing and integration (QA) testing.*

Line of Credit Payment Protection Automation

Senior Business Systems Analyst

- Defined requirements to automate the application and approval of Payment Protection Insurance (Credit Life, Disability) as part of the sale of lines of credit. Once the application was approved, the system automated the setup of insurance with the insurance carrier and provided additional automation of insurance documents into the Electronic Imaging and Workflow System.
- Identified and documented project risks, issues, assumptions, and decisions.
- Identified and documented the business and technical requirements.
- Facilitated meetings to gather and review business and technical requirements and project estimates.
- Participated in design sessions in order to ensure that the design supported the business and technical requirements.
- Provided knowledge transfer and coaching to development resources.
- Consulted and assisted with the development of system software.
- Supported unit testing and integration testing of the system software.
- Supported implementation of system software into production.

Branch and Call Center CRM Automation Initiatives

Senior Business Systems Analyst, Middleware Technical Lead, Software Engineer

- Defined business and technical requirements for several initiatives that provided the following capabilities to the Branch and Call Center CRM:
  1. Simplified process for adding and deleting signers to retail deposit accounts in compliance with the US Patriot Act.
  2. Interstate banking capabilities and the collapse of multiple banking charters into a single chartered bank.
  3. Enhancements to enable part of the consumer lending process to be managed by the central fulfillment area.
  4. Provide the capability for customers to send their CD interest and IRA disbursements to another financial institution via ACH transactions.
  5. Allow the customer's business checking account to be linked to a new or existing Visa Business credit card for overdraft protection. Advances are automatically made from the customer's business credit card to fund the overdrawn business checking account.
  6. Allow the customer's checking account to be linked to a Savings, Home Equity Loan, or Signature Line of Credit for overdraft protection. Advances are automatically made from the customer's overdraft account.
  7. Automate the setup of sweep accounts in the sweep system, formerly a paper-based process.
  8. Offer passbook savings accounts to support the MidAmerica Bank Acquisition.
  9. Allow customers the capability to identify a non-profit entity to receive a donation from an interest-bearing account.
- Performed analysis and high-level design in order to produce +/-15% estimates for the design, development, testing, and implementation of middleware services/components.
- Ensured all business and technical requirements were mapped to design documentation and test cases.
- Designed and documented middleware services/components in Rational Rose (Class Diagrams, Sequence Diagrams).
- Provided knowledge transfer and coaching to development resources.
- Consulted and assisted with the development of middleware services/components.
- Supported unit testing and integration testing of Online Banking and the supporting middleware services/components.

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- Supported implementation of the middleware services/components into production.

Branch and Call Center Customer Relationship Management (CRM) System

Lead Systems Analyst, Software Engineer, UML Modeler

- Participated in the analysis, design, and implementation of a system that replaced three core front-end systems. The new system replaced three different front-end systems, one used by Tellers, one by Branch Customer Service Representatives, and one used by the Call Centers. The new GUI (Graphical User Interface) front-end application sends messages to SMI (National City's Shared Message Infrastructure) who in turn routes and delivers each message to the system and component that can process the request. SMI uses Microsoft BizTalk and IBM MQSeries as the middleware software.
- As part of a small team of analysts/designers, we defined over 350 components (wrappers, business process objects) to perform all the various business functions available from the various core back-end systems. All the functionality needed by the new front-end system (Argo) was made available through these components. All the components were designed and documented in Rational Rose, a UML modeling tool.

Health, Environmental, and Regulatory System

System Architect and Designer

- Directed an effort to define and document a process for software development that applies to projects that are performed as part of the Health, Environmental, and Regulatory Systems (HEARS) of the Sherwin-Williams Company. The process drew upon concepts and processes defined as part of the Rational Unified Process (RUP) and techniques and tools defined as part of the Unified Modeling Language (UML). The process document delineates the common phases and activities of the software development process and defines which artifacts (deliverables) are required or recommended during each phase of the project.
- Participated in the analysis, design, and implementation of a system that manages all regulatory information required to classify and describe the type of product being transported and the hazardous nature of each product. This system mitigates compliance risks associated with national and international transport of Sherwin Williams' products by land, air, and sea. The system was architected using Rational Rose, Java, Enterprise Java Beans (EJB), TopLink (Persistence Framework), BEA WebLogic Server, and an Oracle database on a Unix platform.

Automated Warehouse Control System (Radio Frequency Based)

Lead Designer, System Architect, Project Manager

- Responsible for the design of strategic enhancements to the system to support the regional distribution centers and manufacturing facilities of the Sherwin-Williams Company. Strategic enhancements included multiple product primes, multi-location multi-product replenishments, product mortgaging, workload management by area/zone, alternate product packaging and assortments, dock management, and billing.
- Designed the overall architecture and foundation classes to support the transition of the product development tools from Cobol and C to C++ and Rational Rose. The foundation classes included services to communicate with the Oracle database, maintain (validate, authorize) and persist business data to a back-end Oracle database, report and log errors, and present application information both on personal computers and radio frequency devices. Other services included a messaging infrastructure for communicating with radio frequency devices, data marshaling utilities, and utilities for communicating with legacy Cobol components.
- Designed Model Driven Development (MDD) framework for developing application components that are modeled in Rational Rose. The framework includes a code generator that reads the Rational Rose model and generates 80-90% of the code required to fetch and maintain business entities to a back-end database such as Oracle.
- Managed the implementation of software enhancements for a typical team size of five to ten professionals. The system was implemented using an object-oriented programming environment utilizing Rational Rose, C++, Oracle Stored Procedures, Functions, and Packages, and an Oracle database on a Unix platform.
- Designed the system to support an object-oriented architecture as well as a three-tiered client/server architecture consisting of a presentation layer, business logic layer, and a database layer.

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- Responsible for mentoring team members in object-oriented analysis and design as well as a three-tiered/n-tiered client/server architecture.

Enterprise Software Development Process for Banking Systems

System Architect and Designer

- Assisted in defining and documenting the software development process used by the Enterprise Application Infrastructure (EAI) group of National City Corporation. The process drew upon concepts and processes defined as part of the Rational Unified Process (RUP) and techniques and tools defined as part of the Unified Modeling Language (UML). The process, which is publishing on the Corporate Intranet, delineates the phases and activities of the software development process and defines which artifacts (deliverables) are required or recommended during each phase of the project. Best practices and standards were also developed.
- Defined and documented the process for managing all use case and design models defined in Rational Rose under version control (Visual SourceSafe) in a multi-user team environment.
- Responsible for mentoring team members in object-oriented analysis and design, Rational Rose, the Unified Modeling Language (UML), Visual SourceSafe, and the Rational Unified Process (RUP).

Enterprise Architecture for Banking Systems

System Architect and Designer

- Participated in the development of an enterprise architecture for National City Corporation that provided a framework for developing applications that allow any client component, whether on the same platform or not, to access the functionality and data of legacy systems. All communication between components was performed through a messaging infrastructure that encapsulated the physical location and the technical mechanism of communication.
- Assisted in the design and development of a library of foundation classes providing services for storing, retrieving, and maintaining data of an object. Other foundation components included messaging services, transport services, data marshaling services, security services, and error reporting and logging services. All designs were modeled and documented using Rational Rose.

Manufacturing Management System

System Architect and Lead Designer

- Responsible for mentoring Insite Technology Group in an object-oriented analysis and design methodology as well as a three-tiered/n-tiered client/server architecture.
- Insite's manufacturing product which includes modules for quoting, estimating, routing, sales orders, work orders, scheduling, inventory control, general ledger, accounts payable/receivable, invoicing, data collection, and EDI was re-designed and re-implemented using a three-tiered client/server architecture with Rational Rose, Visual Basic 5.0 and Oracle, Sybase, and SQL Server databases.

Integrated Manufacturing Control System

System Architect and Designer

- Responsible for introducing Thomas Steel Strip Corporation to the benefits and practical application of an object-oriented analysis and design methodology as well as a three-tiered/n-tiered client/server architecture.
- Directed an effort to produce an object-oriented design model of their manufacturing system. The model served as a tool for understanding their current application and as a framework for designing and implementing other manufacturing related support systems. The effort assisted the organization in applying a more formalized methodology for analyzing, designing, and implementing software systems.

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Labor Scheduling/Time and Attendance System
Project Manager
- Responsible for the qualification, selection, and coordination of the core project team of six professionals that successfully completed the implementation of a Labor Scheduling/Time and Attendance packaged system for OfficeMax on schedule and to the client's satisfaction.
- Project Roles included: Liaison between project team and management; Conducted meetings necessary to gather information and make decisions related to the configuration and customization of the system; Assigned project tasks; Coordinated design modification specifications required to implement the vendor package; Developed and executed test plans; Developed implementation plans; Performed software training, installation, and store site support; Coordination of hardware and software vendors.

Fulfillment Center Management System
Project Manager
- Managed the completion of a project for OfficeMax to implement a fulfillment center management system.
- Project Roles included: Managed the software development and testing effort; Coordinated/assigned project tasks; Redesigned portions of the system to meet requirements; Developed and executed test plans;
- The system was implemented using Microfocus Cobol with an Informix database on a Unix platform.

Competitive Pricing System
Project Manager, Senior Software Engineer
- Directed a team of three professionals over a year in the design and implementation of a comprehensive strategic system to manage pricing for PETsMART, a retail chain of over 100 stores. The system included components for competitive pricing data collection using hand-held computers, directed data collection scheduling, on-line competitive pricing analysis tools, and an expert system for suggesting price changes.
- Responsible for the design of the overall systems architecture for this product. The product was implemented using an object-oriented programming environment utilizing traditional languages (Microfocus Cobol and C) and an Oracle database on a Unix platform. This product, known as PriceRight™, is being marketed nationally by Sterlings Software.

Automated Warehouse Control System (Radio Frequency Based)
Technical Lead, Senior Software Engineer
- Technical lead for three years on a team of ten professionals to design, develop, and implement a real-time, knowledge-based warehouse control and management system utilizing radio frequency client computers and an open system Unix server for the Sherwin-Williams Transportation Services Division. The system was designed to operate eight regional distribution centers ranging from 200,000 to 500,000 square feet. The system included functions for receiving, putaway, demand-driven replenishment and rewarehousing, case picking, bulk pallet picking, shipping, productivity planning, and work-flow priority and management.
- Participated in the design and implementation of an object-oriented programming environment using traditional languages on a Unix platform. The environment provided event-driven screen management, menu/security, and relational database access. The client has used the environment to develop several other in-house applications. The system was architected using Microfocus Cobol, C, spII (for screens/windows), and Oracle on a Unix platform. The radio frequency computers utilized Telxon TCAL.
- Responsible for the design and implementation of several of the most sophisticated components of the system including the knowledge-based putaway algorithm, interleaving of tasks algorithm (putaway, replenishment, bulk pick), case pallet building algorithm, and demand-driven replenishment and rewarehousing.
- *In an article published in July 1993 by the Warehouse Education and Research Council entitled "Radio Frequency Data Communication for Warehouse Management", Sherwin-Williams was highlighted in a case study for their success in implementing a state-of-the-art solution to warehouse automation.*

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Integrated Process Control System

Project Leader, Senior Software Engineer

- Solely responsible for a three-month development project to design and implement a quality assurance system for LTV Steel's Integrated Process Control Group. The system was designed to exchange and track effectiveness of ISO9000 compliance standards among LTV suppliers and customers.
- The system was built using CLARION on a PC running DOS.

Software and Firmware Code Management and Distribution

Project Leader, Senior Software Engineer

- Directed a team of three professionals on a six-month project to develop a PLC software and firmware source code management, control, and distribution system for Allen Bradley. The effort employed VAX Pascal, VAX Basic, and VAX Fortran, FMS, and Oracle running on a DEC VAX running VMS.
- As part of the project, a set of software tools were developed to provide a Macintosh®-like user interface with 4GL capabilities, event-driven forms management, menu/security, and relational database access.

Insurance Tracking System

Senior Programmer/Analyst

- Participated on a team of five professionals for six months to re-develop an insurance tracking system for Automated Tracking Systems. The system was converted from a DEC PDP to a DEC VAX running VMS using VAX Basic, FMS, and RMS.

Inspection Tag System (Non-Conformance Tracking)

Senior Programmer/Analyst

- Participated on a team of five consultants to develop an inspection tag system for the Cleveland Pneumatic Company to manage the process of bringing manufactured parts back into conformance.
- System employed VAX Basic, FMS, and Oracle on a DEC VAX running VMS.

Inspection Planning System

Senior Programmer/Analyst

- Participated on a team of five consultants over a period of ten months to develop a system to assist in the inspection process by maintaining inspection plans, tracking inspection results, and detecting non-conformance criteria for the Cleveland Pneumatic Company.
- System employed VAX Basic, FMS, and Oracle on a DEC VAX running VMS.

Patent Research and Analysis System

Senior Programmer/Analyst

- Participated on a team of two consultants to develop a system for BP America to parse and load information gathered from on-line research services. The information was loaded into a database for subsequent analysis.
- The system was written in VAX Basic, RMS, and DATATRIEVE for ad-hoc queries.

Organ Transplant Patient Care System

Senior Programmer/Analyst

- Participated on a team of three professionals in the development of a Patient Care System for the Cleveland Clinic to track patient information, laboratory information, and donor information necessary to match candidates to available organ donors.
- The system was developed using VAX Basic, FMS, and RMS on DEC VAX running VMS.
- Responsibilities included database design and specification, program development, system integration, demonstration, and customer training.

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Histocompatibility Immunogenetics Departmental Analysis

Senior Programmer/Analyst

- Assisted in an in-depth three-month departmental analysis for the Cleveland Clinic to determine the requirements for a Medical Laboratory Management System. The results of the analysis were used to evaluate packaged software as well as custom development.
- Deliverables included: Functional Specifications; Benefit Projections including time spent per task, expected time savings, and intangible benefits such as quality improvements; Data Flow Diagrams and Data Dictionary; Cost estimates for custom package development.

Human Resource Management System

Senior Programmer/Analyst

- Participated in the development of a Human Resources Information System for BP America. The system utilizing Rdb/VMS (DEC's Relational Database), VAX BASIC, and FMS on a VAX CLUSTER running VMS.
- Responsibilities included database design and specification, project planning, development of standards for programming environment, program development, system integration, demonstration, and customer training.

Inventory Management System

Programmer/Analyst

- Designed and implemented a software package for the in-house ordering of stock for BP America's Research Lab and three area branches. The system was implemented using VAX BASIC, RMS, and DATATRIEVE on VAX running VMS.

Administrative College Software Systems
  (Accounting, Registration, Student Records, Alumni Coordination)

Systems and Programming Manager, Interim Director

- Responsible for the maintenance and enhancement of all Administrative Software Systems, supervision and training of programming staff, and user support and training for Hiram College.
- Programmed applications for administrative offices using VAX BASIC, RMS, FMS, and DATATRIEVE on a DEC VAX 11/780 running VMS.
- Instructed and assisted administrative offices in the operation of application and system software.

Computed-Aided Instruction

Student Programmer, Programmer/Analyst

- Designed and implemented a large graphics-based CAI package for the Hiram College Biology Department under a National Science Foundation grant.
- Participated in the design and implementation of a math proficiency package for the Hiram College Education Department.

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Education	HIRAM COLLEGE Hiram, Ohio Bachelor of Arts, Computer Science and Management, June 1985 Magna Cum Laude, GPA: 3.83/4.0
Distinctions	Phi Beta Kappa, Presidential Scholarship, Garfield Scholarship, Departmental Honors in both Computer Science and Management, Omicron Delta Kappa - National Leadership Honor Society, Alpha Society, Student Leader of the Month.
Continuing Education	CLEVELAND STATE UNIVERSITY, DIVISION OF CONTINUING EDUCATION Object-Oriented Analysis and Design Using Object-Oriented Features in Microsoft Visual Basic 4.0 C++ Object-Oriented Programming Java Programming Java Programming: Advanced Topics RATIONAL UNIVERSITY Object Oriented Analysis and Design Introduction to Rational Rose WEBGAIN Fundamentals of TopLink for WebLogic Server
Certifications	DELL Dell Boomi Professional Architect Certification, Issued May 2019, Expires May 2021
References	See LinkedIn profile (www.linkedin.com/in/JimBergATC)

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