

## Summary

Developing software for over 24 years, serving many roles, and utilizing a variety of technologies, Lee Berg's depth of experience adds value to any product development team. Specifically, Lee is a motivated, logical and clear thinker with excellent leadership, communication and people skills. In addition, Lee:

- *Facilitates and enhances communication between all levels of the product development team, including stakeholders, product managers, business analysts, testers, and software developers.*
- *Understands that most software development projects are driven by the need to resolve real world business problems.*
- *Has experience working with global development teams to design, develop and test embedded and enterprise software products.*
- *Has experience in the development of business, network, telecommunications, database, mapping, graphics and embedded control applications on a variety of platforms, operating systems, networks and environments.*

## Technologies

### Languages and Operating Systems

C (28 yrs)	Java (2 yrs)
C++ (23 yrs)	ASP/JSP (4 yrs)
JavaScript (5 yrs)	SQL (5 yrs)
CSS (4 yrs)	Assembly (3 yrs)
JQuery (2 yrs)	Microsoft DOS, Windows
HTML (15 yrs)	Wind River VxWorks (versions 5.4, 6.8)
XML (5 yrs)	Embedded Linux (Ubuntu version 3.12.10)

### Development Environments and Tools

Eclipse	Standard Template Library (STL)
Sublime Text	Active Template Library (ATL)
Visual Studio (6 - 2010)	MFC Database (DAO, ADO)
Wind River Workbench	VxWorks Kernel
Wind River Tornado 2	Mercurial HG
MS SQL Server (2008 R2- 2012)	StarTeam
MS Foundation Classes (MFC)	MS Visual Source Safe

## Experience

### **Emerson Climate Technologies, Retail Solutions**

#### ***Software Manager (Jan, 2016 - Present)***

Bringing together developers, teams, and their managers based in the US, Italy, and China

- Defined processes, roles, and responsibilities for the global developer team and its management.
- Improved quality of offshore development team by developing, and socializing coding standards, best practices, and process standards.
- Led major refactoring of version control/change request management workflow for global development and QA teams.
- Implemented RS-485 bus management system to mediate network traffic for multiple serial port users, and manage control and configurations for a large number of serial devices.
- Led major parts of the effort to merge two application architectures, each of which, came from separate corporate acquisitions.
- Designed and led implementation of a small footprint, object-oriented IPC.
- Improved user experience by designing and implementing a reset/startup framework for an embedded system's browser interface.

### **Emerson Climate Technologies, Retail Solutions**

#### ***Senior Embedded Software Engineer (Mar, 2014 - Jan, 2016)***

- Provided domain expertise to optimization team in porting the VxWorks flagship supervisory controller to embedded Linux ARM platform.
- Designed and implemented an embedded Linux process manager, featuring a deterministic process launcher, thread/process watchdog, and signal/exception handler.
- Designed an RS-485 serial port manager to support multiple client process.
- Designed an application data manager to optimize data access from multiple processes.

### **Amerisave Mortgage**

#### ***Web Developer (Nov, 2012 - Mar, 2014)***

*Developed, maintained and enhanced browser-based and back end applications, utilizing SQL, HTML, Javascript, Cold Fusion, Java, and XML for all phases of a mortgage business, including application, processing, underwriting, closing, funding, post-closing and secondary marketing.*

- Developed, maintained and enhanced Electronic Data Interchange (EDI) applications to capture government agency data and electronically deliver mortgage loans to investors in version 3 MISMO (ULDD) and other formats, resulting in an increase in secondary marketing profitability.
- Directed changes to business processes to facilitate the electronic sale of Mortgage-Backed Security (MBS) and cash pools for Fannie Mae, Ginnie Mae and Freddie Mac. Stakeholders included underwriters, post-closers, secondary marketers, investors, and hedge partners.
- Designed, developed and maintained a system for configuring, assigning and executing mortgage loan deficiency audits. This facilitated identification of weaknesses in the business process workflow, thus improving the quality and profitability of loans delivered to investors.
- Maintained and enhanced applications vital to the collaboration between Amerisave's investment hedge partners throughout the life cycle of a mortgage (from lock through investor purchase).
- Developed, maintained and enhanced automated methods of capturing borrowers' documents and other information, required during the mortgage application, underwriting and closing processes.
- Enabled a new business channel by integrating automated tracking and auditing of FHA, VA and USDA mortgages from third party originators.
- Automated email and fax communications with borrowers' insuring agencies to request proof of hazard insurance and/or notify of change in mortgagee clause.
- Planned, implemented and directed the migration of mortgage interest rates database servers to enhance performance, including a reconfiguration of the MS SQL Server replication configuration. Migration plan accounted for minimal impact on normal operations and allowed for rapid rollback.

## **Emerson Climate Technologies**

### ***Embedded Software Engineer (Contract: Sep, 1996 - Oct, 2012)***

*Implemented refrigeration and HVAC control embedded systems, utilizing C/C++, XML, assembly language and Python*

- Technical leadership in successful redesign of legacy core subsystems to support a 32-bit data architecture.
- Designed and implemented a task framework to integrate messaging, watchdog and other features.
- Designed and implemented a scalable messaging subsystem to unify disparate networks, devices and protocols (Ethernet, RS-232, RS-485, LonWorks).
- Designed and implemented proprietary remote graphics terminal client/server.
- Designed and implemented file services wrapper subsystem.
- Designed and implemented factory/field/remote firmware load/upgrade.
- Designed and implemented control data logging subsystem.
- Customized an application runtime scheduler.
- Customized proprietary memory management.
- Implemented a proprietary flash file subsystem.
- Designed and implemented various MT-RTOS thread analysis tools.
- Designed and implemented multi-layered watchdog subsystems.
- Designed and implemented system hardware diagnostic test subsystems.
- Designed and implemented proprietary feature licensing subsystem.

*Implemented a variety of device drivers utilizing C/C++ and assembly language.*

- Network communication (RS-232, RS-485, LonWorks), Flash memory/file system, Processor exception handling, Precision time keeping, Keyboard.

*Implemented and maintained an application for monitoring, configuring and deploying a suite of embedded control systems utilizing C/C++, XML, and SQL.*

- Technical leadership in successful redesign of legacy core subsystems to support a 32-bit data architecture.
- Technical leadership in successful design and implementation of foreign (including Asian) language support for legacy Windows applications.

## **Personal Ventures (2001 - 2003)**

### **Web Development**

*Designed/implemented media-album.com, a web-based photo sharing service, utilizing a controller servlet, implemented with Java, HTML, Javascript, XML, JSP and Java Beans.*

- Java Advanced Imaging API automatically generates thumbnail and reduced-sized images.
- Java Mail API used for feedback and link sharing comments.
- Persistent configuration data managed, using XML Document Object Model.
- Java introspection features bind class property names to HTML form field and XML element names.
- Designed/implemented forms-based framework to present Microsoft Excel spreadsheets in a variety of formats (calendars, reports, catalog, etc.), allowing remote users to maintain their own "database" with MS Office. Updated files are uploaded using an authenticating servlet.

## **Health Watch**

### **Web Developer (2000)**

- Developed and maintained a 3-tier Healthcare Enterprise DBMS, using Java, HTML, Javascript, servlets and JDBC.

## **Byers Engineering**

### **View Products Development Manager (Aug, 1995 – Sep, 1996)**

- Managed the development and maintenance of a commercially successful PC-based facilities management GIS for the utilities industry.

## **Teleco**

### **Director of Technical Resources (Jun, 1994 - Jul, 1995)**

- Led a team of 20 software development and technical support engineers, and operational support staff to develop, enhance, support and maintain a variety of PC-based IVR products.

## **Byers Engineering**

### **Analyst (Aug, 1992 - Jun, 1994)**

*Implemented facilities mapping and management applications on a variety of platforms, utilizing C/C++ and SQL.*

- GIS feature identification, rendering and management.
- Integrated CAD graphics with other data stores.
- Implemented applications which synchronized mobile field notebook systems and enterprise information systems.
- Implemented work order management.

## **Innovative Technology**

### **Technical Support Manager (Jul, 1990 - Aug, 1992)**

*Supported, tested and collaborated in the development of PC-based IVR applications. Also designed and taught a 5-day training course, covering design, installation and maintenance of IVR systems for OEM installers, owners and sales personnel.*

- Voice messaging, Automated attendant, Message notification, Custom IVR.

### **OEM Instructor (Jul, 1989 - Jul, 1992)**

- Developed and taught a 5-day technical training course, covering telephone systems, PCs and IVR systems for a wide variety of students, including OEM owners, engineers and sales personnel.

### **System Administrator (Jul, 1988 - Jan, 1991)**

- Managed in-house computing resources for a VAX/VMS network.

## **Phillips Petroleum Company**

### **Program Development Analyst (Feb, 1982 - Jun, 1988)**

- Collaborated with developers to implement applications for vector and raster hard copy rendering, including dithering, and color table translation for reflection seismic and mapping data.
- Collaborated with developers to develop, enhance and maintain single- and multi-channel signal enhancement using filtering, deconvolution, and other DSP techniques.

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## *Miscellaneous*

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- Developed product for non-profit organizations to present spreadsheet information in a browser. Organization volunteers maintain their own "database", using MS Office, eliminating the need for a web-based solution (long before Google Docs). An authenticating upload servlet is used to update the online database (e.g., contact list, event calendar or duty roster, etc.).
- Manage various web sites for community non-profit and volunteer organizations.
- Served on the Cobb County, Georgia SPLOST Citizen's Oversight Committee (2006-2013).
- Friends of Mabry Park non-profit co-founder and past president (2009-2013).
- Served five years on Highland Pointe Recreation Association (neighborhood HOA) board, three as President.
- On behalf of the Northeast Cobb Coalition, acted as mediator between land developers and local residents in dozens of local land use, rezoning and other cases (2004-2013).
- BS Geophysics, Texas A&M University; math/physics emphasis, DSP (Dec, 1981).