

**Stephen Lubbs**  
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**Objective: Position as a Senior Software Engineer/Architect.**

### **HIGHLIGHTS**

- Over 14 years experience in the planning, specification, and execution of software development projects, emphasizing a hands-on approach to architecture, system engineering, design, and implementation.
- Proven ability to provide creative solutions to difficult problems.
- Experienced in the requirements, architecture, and development phases of product development.
- Experienced in the specification, design, and implementation of embedded software.
- Extensive network protocol experience including VOIP, SIP, Megaco, SGCP, MGCP, RTP, TCP/IP, UDP/IP, Sockets, and Ethernet.
- Experience spanning a broad base of operating systems, including Windows, OS/2, UNIX, Linux, and VxWorks.
- Experienced in multiple languages including Java, Visual C++, GNU C++, and Intel assembler.
- Extensive experience designing and implementing distributed software.
- Experienced with multi-threaded design and implementation.
- Experienced in multi-platform development.
- Proven ability to quickly become productive with new technologies.

### **EXPERIENCE AND ACCOMPLISHMENTS**

#### **SYSTEM ENGINEERING**

- Defined redundancy and load-sharing requirements for a new SIP call processing product.
- Defined requirements for several versions of Avaya Communication Manager Messaging.
- Defined requirements, architecture, and developed a high-availability architecture utilizing SIP, ARP, and virtual IP addressing for a distributed, web-enabled, standards based IVR platform.
- Defined requirements and architecture for an embedded Voice-Over-Packet controller.
- Defined requirements and architecture for an IP-based video-conferencing product.
- Defined requirements, architecture, and developed an SNA APPN LEN End Node implementation and an SNA APPN End Node implementation.
- Defined a high-level architecture providing redundancy and load-sharing capabilities to an existing video-conferencing product.
- Defined a high-level architecture providing redundancy and load-sharing capabilities to an existing Call Manager product.
- Defined and/or provided analysis of product functional requirements, product designs, and customer documentation developed both in-house and by ISVs.

#### **PRODUCT DEVELOPMENT**

- Developed Restful Web Services for a smart-energy product based on Digi and Energate hardware devices communicating via the Digi Etherios cloud.
- Provided continuing engineering support for the Avaya Modular Messaging voicemail product.
- Developed software that provided high-availability capabilities to an IVR platform.
- Developed a highly available SIP redirect and registration server for an IVR platform.
- Developed a Streaming Media Server.

- Re-designed an embedded Voice-Over-Packet controller to provide greater stability, extensibility, and ease of maintenance.
- Developed Voice-Over-IP products based on SIP, SGCP, MGCP, and RTP protocols.
- Developed an SGCP protocol implementation.
- Developed CORBA objects that implemented a control interface between SS7, PSTN, and IP networks enabling Voice-Over-IP services.
- Developed an MFC-based class library providing support for multi-threaded network servers based on IO-completion ports.
- Re-engineered an unstructured DB2 application to adhere to a transaction model and improve reliability.
- Ported, re-designed, and debugged graphics and GIS database C++ class libraries comprising over 100,000 lines of code from Unix to Windows.
- Provided maintenance and modification support for an existing asset management application.

## **TEAM LEADERSHIP**

- Team Lead and Technical Lead for various product development teams.

## **AWARDS AND PATENTS**

- Received a personal award for exemplary teamwork.
- Awarded Avaya Cup award for Communication Manager Messaging definition and development.
- US Patent #8,391,320, "State Based Management of Messaging System Jitter Buffers."

## **SKILLS**

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|------------------------|-------------|------------------------|------------------------|
| • Restful Web Services | • Ethernet  | • VxWorks              | • OO Programming       |
| • VOIP                 | • CORBA     | • Windows              | • Agile Development    |
| • Packet Telephony     | • Sockets   | • Windows GUI          | • Visual C++           |
| • Video-Over-IP        | • C         | • Windows System       | • GNU C++              |
| • SIP                  | • C++       | Services               | • SQL Server           |
| • Megaco               | • Java      | • Win32 API            | • SQL                  |
| • SGCP                 | • JNI       | • Multi-threading      | • ODBC                 |
| • RTP                  | • Pascal    | • pthreads             | • DB2                  |
| • MGCP                 | • UNIX      | • MFC                  | • Project Management   |
| • ARP                  | • Assembler | • Real-time            | • Networking Protocols |
| • TCP/IP               | • Solaris   | • Embedded             |                        |
| • UDP/IP               | • Linux     | • OO Analysis & Design |                        |

## **WORK HISTORY**

Senior Software Engineer, CA Technologies, Fort Collins, CO, 2014 to 2015  
 Software Engineering Staff, Magpie Software, Westminster, CO, 2013 to 2014  
 Member of Technical Staff, Avaya, Westminster, CO, 2005 to 2013  
 Software Architect and Team Lead, SandCherry, Inc., Boulder, CO 2003 to 2005  
 Senior Member of Technical Staff, Intel Corp., Boulder, CO 2002 to 2003  
 Chief System Architect, Global Crossing Corp., Boulder, CO 2001 to 2002  
 Team Lead, Peak Software Solutions, Denver, CO 2000-2001  
 Contract Software Engineer, Telcordia, Piscataway, NJ 1998-2000

## **EDUCATION**

Masters Computer Science, 2006, Colorado State University, Fort Collins, CO

## **Professional Development Courses:**

- Agile Development
- Computer Architecture
- Computer Networks
- Computer Security
- CORBA Applications in Java
- Database Systems
- Distributed Systems
- Effective Communications
- Machine Learning
- Object-Oriented Software Design
- Parallel Programming
- Parallel Processing
- Project Estimation
- Scheduling Techniques
- Real Time Software
- Software Specification and Design
- Systems Engineering
- Time Management