

## Kenneth M. Thompson

thompson@milestonesolutions.com

678.562.9220

### Summary

20 yrs	Embedded and Realtime System Development	15+ yrs	C/C++ Software Development
10 yrs	Java Application using JDBC/Swing/JNLP	10 yrs	Network Design & Implementation
5 yrs	EJB/J2EE OOD/UML Architect, Technical Lead	8 yrs	Project & Technical Leadership
5 yrs	mySQL/postgreSQL/Oracle DB Applications	15 yrs	Development Infrastructure Installation
10 yrs	High Performance/Embedded UNIX/Linux	10 yrs	High Performance Customer Facing Web Apps
15 yrs	Commercial Cable Headend/Telephony Products	15+ yrs	Full Product Lifecycle Development
3 yrs	MPEG development with 3 patents	15 yrs	HPUX/Solaris/Linux Administration

Experienced software developer and system architect with strong leadership, teamwork, communication, analysis and design skills. Extensive experience developing commercial cable headend and central office products. Demonstrated ability to organize and manage effectively, coordinating efforts within a team environment and across organizational units. Strong communication skills supported by college-level teaching experience, participation in U.S. and international standards organizations, and a successful joint development with a Japanese firm. *Pro bono* work includes web site maintenance for local braille organization, Open Source projects and CVS hosting for the RXTX project.

### Education

**Master of Science in Information and Computer Science**  
**Bachelor of Electrical Engineering Technology**

Georgia Institute of Technology, 1983  
Southern Polytechnic State University, 1981

### Recent Experience

#### System Architect (06/1996-present)

*MileStone Solutions Inc.*

Successfully completed several product life-cycles for cable, telephony and business clients including Itochu Cable Systems, Cingular, Satelink Communications. Ported Linux to various embedded products including routers, remote terminals and dedicated servers with customized application environments. Developed an outbound conferencing module using Intel/Dialogic hardware in a SCO/C environment. Performed detailed technical analysis and re-engineered a high performance online telephony database in PostgreSQL and using Java and JDBC. Designed, developed and supported numerous distributed high performance systems using Java, J2EE (weblogic), JDBC, XML, PostgreSQL, apache, JSP and servlets. Re-architected and rebuilt Cingular's IVR middle-ware replacing a mix of Solaris and Windows NT with a consolidated, high performance J2EE system. Rewrote Cingular's national SIM manager using Java and JDBC. Designed and implemented patented J2EE technology improving container and system fault tolerance. Key member of internal technology startup team introducing J2EE components into Cingular's billing system consolidation infrastructure. Key developer on one of the first large online ordering and fulfillment systems written in C++ using a Sybase data repository. This 3-tier system provided online grocery shopping with independent inventory from individual stores. Responsible for the design, development and production release of an Addressable TAP headend controller for Itochu Cable Systems. Designed, implemented and maintain the nowMessenger wireless text messaging client as a Java WebStart application. Created an automated online software purchase and license management system integrated with PayPal using Java. Establish and maintain development environments, providing resources and training for developers and clients. Install and support secure networks including email and web filtering.

#### Product Developer, Engineering (07/2004-09/2006)

*EGT*

Brought a new product from concept to customer field trials and initial sales. This product, HEMi, integrates MPEG2 encoding, SPTS/MPTS stream multiplexing, QAM Modulation and RF upconversion and opened a new market area for the company. It involved coordination of multiple vendors, application integration and new development in C and C++ on a custom Linux platform. Co-designed and developed a closed-loop multiplexing solution for EGT's MPEG encoders providing the timing and network communication components in C. Provided technical direction for a diverse team responsible for platform architecture, Verilog/FPGA design and implementation, RTOS support, device drivers and development infrastructure. Provided internal support to manufacturing and quality assurance teams.

# Kenneth M. Thompson

## Prior Experience

<b>Senior Software Engineer</b> (06/1994-06/1996)	<i>ANTEC/Digital Video</i>
<b>Senior Software Engineer</b> (11/1991-05/1994)	<i>Melita International/divine, Inc.</i>
<b>Manager, Software Engineering</b> (05/1989-06/1991)	<i>IVEX Corporation</i>
<b>Member of Scientific Staff</b> (08/1997-05/1989)	<i>Bell Northern Research/Nortel</i>
<b>Senior Engineer</b> (05/1986-05/1989)	<i>BBL Industries</i>
<b>Software Engineer II</b> (05/1984-03/1986)	<i>Intecolor Corporation</i>
<b>Software Engineer</b> (05/1983-05/1984)	<i>Chalk Board, Inc.</i>
<b>Instructor (adjunct)</b> (09/1985-06/1989)	<i>Southern Polytechnic State University</i>

Lead system designer of MPEG video server and designed and implemented in C/C++ an MPEG Video Pump component with custom IRIX drivers on a Silicon Graphics platform. Participated as ANSI delegate to ISO MPEG Standards Committee. Authored SCTE presentation on behalf of the VP of Engineering. Received patents for MPEG server designs.

Lead role in software design for next generation UNIX-based product. Designed and implemented a high reliability RPC based Client/Server platform and messaging subsystem. Established a software development environment and trained members of the development team.

Responsibilities included budget, personnel and project administration, and technical lead for IVEX's software development department. Established software development environment and processes improving product stability and time to market. Lead software architect setting development strategy and leading software development of an FAA Level D certified visual system.

Ported and enhanced a proprietary RTOS written in 80xx assembly and supporting PL/M to extend the market life of a major product.

Managed critical software project delivering on time and budget. Coordinated product release with internal departments and provided technical assistance developing software for custom hardware. Custom driver development for XINU RTOS.

Designed custom algorithms for proprietary graphics hardware extending product life and performed RTOS analysis and evaluation of RTOS.

Co-designed and developed computer graphics programs. Provided engineering assistance to manufacturing and product presentations at trade shows.

Developed and taught undergraduate courses in programming languages, computer organization, and computer graphics. Developed a microprogramming simulator for lab use.

## Affiliations

**Member Institute of Electrical and Electronics Engineers (IEEE)**

**Member Association for Computing Machinery (ACM)**

**Registered Engineer in Training**, State of Georgia, 1982.

## Patents

2005	Patent Applied	Service Manager For Adaptive Load Shedding
1999	5856973	Data Multiplexing in MPEG Server to Decoder Systems
1999	5881245	Method and apparatus for transmitting MPEG data at an adaptive data rate
1999	5892535	Flexible, Configurable, Hierarchical System for Distributing Programming

## Publications

1996	Chapter Author	<b>Special Edition Using CGI, Que/MCP</b>
1996	Chapter Author	<b>Special Edition Software Engineering with Turbo C++, Que/MCP</b>
1996	Chapter Author	<b>Special Edition Using the Internet, First Edition, Que/MCP</b>
1983	Co-Author	<b>Solar Assisted Poultry Growout House Design, GT/EES</b>