

## **Richard E. Thurmond (Rick)**

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### Special Skills

Real-Time and Embedded Systems Programming  
Hardware/Software/Firmware Interface Design  
Strong Object-Oriented Design and Programming Skills  
LXI (LAN Extensions for Instrumentation) Instrument Design Experience  
Lightwave and Microwave Instrumentation Design  
Basic Understanding of Astronomy

### Education

M.S., 1987 – Computer Engineering, University of Southern California  
B.S., 1984 – Electrical Engineering, University of Southern California  
Partially completed Master of Astronomy degree, University of Western Sydney

### Work Experience

Volt Technical Services (2004-2007)

As a contractor I designed firmware for an LXI-based microwave instrument and corresponding PC software. VxWorks and Windows XP, C++, DSP, Hardware Control Firmware. Also C#.NET.

Coyote Skies Photography (2001-2004)

Ran a photographic services and images company producing digital and darkroom fine-art photographs.

Specialized in Astronomical, Landscape, and Artwork photography. Developed astrophotography skills in my own observatory.

Agilent Technologies/Hewlett-Packard (1995-2001)

Architected and Designed object-oriented C++ firmware for lightwave and microwave instruments using real-time Unix and other operating systems. Work included device drivers, multi-threaded data acquisition, and hardware control.

DSC Communications (1994-1995)

Designed firmware for OC-3 telephone system. Developed object-oriented architecture for embedded systems.

Harris Corporation, Digital Telephone Systems (1994)

Wrote a network driver for a telephone switch using C. Provided hardware control for TCP/IP stack.

IA Corporation (1992-1993)

Designed Object-Oriented software in C++ for distributed client/server system on Sun/Solaris workstations. Specific task was the disk I/O server handling millions of transactions per day to hard disk with backup to optical disk.

Aerospace Corporation (1981-1992)

Designed hardware and software for real-time simulations to test satellites and launch vehicles. Used real-time Unix, HP-UX, and other operating systems, C, Fortran, and assembly language.