

THEODORE FRANKLIN III

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theodorefranklin3.com

SUMMARY

An accomplished Digital Hardware Design Engineer with experience in Telecommunications and Broadband Audio and Video. Expertise in FPGA design and verification using VHDL, Verilog, SystemVerilog, ModelSim, VCS, Xilinx and Altera FPGA design tools. A resourceful and innovative, team oriented individual who has excellent problem solving skills and quickly adapts to new tools and processes.

KEY COMPETENCIES

VHDL • Verilog • SystemVerilog • Xilinx ISE • Xilinx EDK • Xilinx SDK • Quartus II • Synplify • RDL • ModelSim • Questa • VCS • DVE • Precision • Expedition • Cadence • DxDesigner • ReqTracer • C Programming
Subversion • CVS • GIT • PVCS • OS X • Windows • Linux • UNIX

PROFESSIONAL EXPERIENCE

Lexicon Technologies

Conyers, Georgia

CONTRACTOR

August 2015 – November 2015

- Created test setup and procedures to verify and evaluate 802.11a/b/g/n products using a purchased and unused \$16,000 WiFi high-performance test system. Trained a team of 15 technicians on the use of the test setup and the analysis of data.
- Debugged Embedded Systems Hardware to create repair methods and procedures.

Logiccircuit

Alpharetta, Georgia

CONTRACTOR

2013-2014

- Achieved 100% HDL Code Coverage for DO-254 requirements based verification and traceability for customer FPGAs.
- Completed DO-254 system integration verification of 4 third party VHDL and Verilog IP modules. Participated in multiple Code Peer Reviews and created project compliance documents.

CISCO Systems

Lawrenceville, Georgia

ELECTRICAL ENGINEER III

2006-2013

- Modified and added new features to a pre-existing Altera Program Stream Information VHDL design for use on a Video Encoder Xilinx Kintex-7 FPGA. Simulated module in a UVM environment. Successfully completed integration and debug of module and provided software engineers with top-level FPGA build files.
- Collected and analyzed customer data to correct an audio De-embedder issue. Acquired upstream legacy equipment used by customer to aid with debug.
- Used Verilog and VHDL to design an FPGA De-embedder and Dolby Decode module for use on a new generation Encoder Audio FPGA. Simulated modules and top-level FPGA in a UVM environment. Worked closely with a team of 10 engineers to design, implement and test the FPGA Transport Stream Output, PCIe input, Metadata interface, DSP interface and Host interface modules. Performed all Audio FPGA testing and PCB system-level testing for 5 major product releases.

- Drafted FPGA Engineering Verification and Test documents for SD Encoder Advanced Video Coding Card FPGAs. Performed Advanced Video Coding Card FPGA testing and Statmux function debug.

SCIENTIFIC ATLANTA

Lawrenceville, Georgia

ASSOCIATE STAFF ENGINEER

2001-2006

- Solved a major customer issue by designing and implementing a PCR packet inserter to solve statmux errors at low Encoder bitrates.
- Travelled to Copenhagen, Denmark to assist with the debug of a major customer issue. Worked with a group of 10 Copenhagen engineers to transfer the group's Advanced Video Encoder product during a company restructure.
- Implemented version control for 9 previously uncontrolled FPGAs. Performed FPGA builds and carried out system-level testing of 3 new Video Encoder features.
- Developed and tested multiple versions of an Advanced Digital Video Modulator PCB and 3 distinct audio PCBs. Developed FPGAs used on Modulator and Audio PCBs.

Nortel Networks

Atlanta, Georgia

SENIOR HARDWARE DESIGN ENGINEER

2000-2001

- Completed debug and testing of 3 revisions of the ADSL 32 Line Card.
- Redesigned the 24-port G.LITE Line Card PCB.

Harris Corporation

Palm Bay, Florida

ELECTRICAL ENGINEER

1996-2000

- Selected an \$18,000 Reed-Solomon IP Core for use with Modulator FPGA design.
- Developed and simulated FPGAs and ASICS using VHDL and performed PCB and system-level testing for various Multi-Million Dollar Government and Law Enforcement Contracts.

FAMU-FSU COLLEGE OF ENGINEERING

Tallahassee, Florida

RESEARCH ASSISTANT

- Composed and presented, "CMOS SRAM Process Monitors for Laser Assisted Single Event Effects Analysis," at the Radiation Studies Conference. Published in Proceedings of RADSCON 96.
- Studied the Steady State and Transient effects of radiation on Microelectronics.
- Instructed an Electronics Design Laboratory of approximately 25 Students.

EDUCATION/HONORS & ACTIVITIES

Bachelor of Science in Electrical Engineering: Florida Agricultural and Mechanical University

Florida A & M University Dean's List and Honor Roll • Phi Eta Sigma Honor Society • Research Careers for Minority Scholars • National Society of Black Engineers