Xixi Gu

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EDUCATION

Candidate for Master of Science in Computer Engineering ***Sep 2014-May 2016***

George Washington University, Washington DC
GPA: 3.8/4.0
Relevant Courses: VLSI Design, Microcomputer system architecture, RF Design, Database Management System, Device Electronics, Testing.

Bachelor of Science in Computer Science ***Aug 2010-Jun 2014***

XIDIAN UNIVERSITY，China
GPA: 3.2/4.0
Relevant Courses: C Programming, Java, Data Structure and Algorithm, Operating System Computer Network, Database Application.

Academic projects

George Washington University, Washington DC

Real Time Depth Detection Based on Dual Cameras on DE2 **Nov 2014**

- Implement the depth detection on DE2 board with two camera. Used two TRDB-D5M cameras side by side to capture object signal separately. Solved the timing problems.
- The signal is processed by ROW-to-RGB module, RGB-to-GRAYSCALE module, GRAYSCALE-to-SOBLE module. Also, used erosion algorithm to eliminate the noise signal (RTL for algorithms).
- Used Sum Absolute Difference(SAD) to calculate the pixels difference(disparity), and calculate the depth from the camera to the object.

Online Shopping Store **Jun 2015**

- Designed web pages by using JavaScript and friendly-user interface by using Visual Studio.
- Created a database in SQL server to store the information like goods' and customers' information.
- Enhanced business intelligence purpose by creating multiple store procedures and triggers.
- Connected the database to the web page by using Visual Studio with C#.

Design and a 8-bit Multiplier using ON/AMI 0.6μm Technology **Nov 2014**

- Added mux tree for chip test. The mux tree was designed to test the multiplier module and the binary-to-BCD module.
- Used Cadence Virtuoso to design the schematic and layout for all kinds of modules of multiplier.
- DRC and LVS report analysis was done for each module.
- Used both test bench and the Verilog to do the simulations of each module.

FPGA games based on EEG mind wave **May 2015**

- Analyzed the EEG data which reflect the thought of brain.
- Used the attention value got from the raw data and did the digital signal processing connected the EEG equipment with the raspberry pi and the FPGA board.
- Implemented the FPGA game controlled both by camera and the attention value from our mind.

Technical & Programming Skills

Programming: C/C++, Java, Verilog/VHDL, Testing.
Databases: SQL Server, MySQL Design Skills: ASIC Design, RF design.
Tools: Microsoft SQL Server, Visual Studio, Cadence Virtuoso, ADS, Modelsim, MATLAB, Design Vision, Silvaco, Quartus II, Eclipse, Xcode.

Publications

Jerry Wu, Harold Szu, Xixi Gu, Yuechen Chen, Ran Guo. Spatially revolved high density electroencephalography. Proc. SPIE 9496, Independent Component Analyses, Compressive Sampling, Large Data Analyses (LDA), Neural Networks, Biosystems, and Nanoengineering XIII, 94960S (June 3, 2015)