

Leonard B. Bergsman

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EDUCATION

CORNELL UNIVERSITY, College of Engineering, Ithaca, NY

Bachelor of Science Degree in Engineering: May 2004

Major: Electrical and Computer Engineering **Cumulative GPA:** 3.39

Deans List: Five of eight semesters

RELEVANT COURSEWORK

Microelectronic Analysis · Integrated Circuit Analysis · Digital Systems Design · Signals and Systems · Probability and Statistics · Computer Organization/Architecture · Electromagnetic Fields and Waves · Java Programming · Microcontroller Design · Nanofabrication · RS-232 · Financial and Managerial Accounting · GPS Theory and Application · Radio Frequency Circuits · Complex Networks

LABORATORY SKILLS

Integrated Circuits · Altera 7000S Chip FPGA · Lab PC+ Multipurpose I/O Board · MIPS Processor · Oscilloscopes · Sourcemeters · Temperature Controllers · Motion Controllers · Power Supplies · Function Generators · Pressure Transducers

COMPUTER SKILLS

Programming: Java, PHP, C, C++, Matlab, MIPS, some x86 and other RISC assembly

Applications / Packages: Pspice · Altera MAX+PLUS II · LabVIEW · Matlab · Verilog HDL · MS Excel / Powerpoint / Access · Adobe PhotoShop · AutoCAD · Macintosh and Linux familiarity

DESIGN PROJECTS

Prototype Ambulatory Blood Pressure Monitor

- Designed and implemented logic and hardware for control of motor / pump and solenoid valve
- Converted and modified DSP algorithm from MATLAB to C for microcontroller; implemented changes after testing and integration
- Developed communications protocol between microcontroller group and PC software group within our team
- Device was controlled by an Atmel MEGA128 microcontroller
- Designed to conform to FDA and AAMI standards

Developed an Application on an Atmel Mega32 Microcontroller that produced monochrome television graphics and sound that was controlled by a Nintendo® Light Gun

- Determined the operating parameters of the light gun with no specifications
- Implemented interface using only the light gun
- Replicated most of the original Duck Hunt™ style of game play
- Application runs on almost any TV with standard RCA inputs
- Designed hardware for interfaces with microcontroller
- Created extensive set of HTML based documentation

Designed and Simulated a Pipelined MIPS (RISC) Processor

- Used CAST as initial Hardware Description Language (VHDL)
- Later developed a more advanced superscalar version with a L1 cache using the Verilog VHDL.

WORK EXPERIENCE

Lab Operator (2003-2004)

CORNELL INFORMATION TECHNOLOGIES, Ithaca, NY

- Assisted university community members who experienced computer difficulties
- Maintained computer equipment and diagnosed related problems

Technical Support / Designer (1996-2004)

EAST CLEVELAND RUBBER STAMP CO., E. Cleveland, OH

- Created custom designed computer graphics
- Technical consulting support

Auditor (2001-2003)

RGIS INVENTORY SPECIALISTS, Cleveland, OH

- Performed inventories for a wide range of businesses in both large and small teams

Direct Sales Staff (Summer 2000)

VECTOR MARKETING, Cleveland, OH

OTHER ACTIVITIES

Treasurer, Assistant Treasurer, and Historian: Delta Tau Delta Fraternity