

JEFFREY ERBRECHT

2B Electrical Engineering

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SKILLS SUMMARY

- Strong aptitude for, and interest in, digital hardware design
- Strong knowledge of fundamental programming concepts and their application in C#, C++, VB6/VB.NET, ARM/THUMB assembly, Java, HTML and PHP, developed through 9 years of self study
- Proficient with Microsoft Windows and the Microsoft Office software suite
- Workplace experience with oscilloscopes, logic analyzers, software debugging and hardware debugging
- Proficient in surface-mount soldering

WORK EXPERIENCE

ASIC Systems Engineer, IDT Corporation, Toronto, ON, Jan – Apr 2010

- Designed and brought up a complex video processing system for a top-tier electronics corporation
- Designed a system for extracting raw video from HDMI 1.4 signals
- Learned and participated in the professional practice behind the design and manufacture of circuit boards
- Maintained regular correspondence with external contractors
- Participated in the bring-up of a new top-of-the-line video processing chip
- Performed surface-mount hardware modifications on a regular basis
- Wrote software frontends to improve productivity

ASIC Systems Validation Engineer, IDT Corporation, Toronto, ON, May – Aug 2009

- Completed a significant portion of validation for a top-of-the-line video processing chip
- Performed temperature-controlled tests; made several hardware modifications for testing purposes; used oscilloscopes and logic analyzers for hardware validation and debugging
- Met with team members and directors on a weekly basis to report on progress
- Kept track of several chip revisions and dozens of chip samples
- Maintained deployable software kits for customers on a regular basis

Data Consolidator, The *MOTHER 3* Handbook, Fangamer LLC, March 2009

<http://handbook.fangamer.com/>

- Worked with a team of many talented people over the Internet to produce and sell a handbook/guide for the game *MOTHER 3*
- Systematically retrieved useful information from the game's binary data
- Wrote scripts in C# to dump the data and parse it into a format useful to the handbook's designers and writers
- Various data included enemy statistics, shops and item prices, maps, and much more

Lead Localization Developer, The *MOTHER 3* Fan Translation Project, July 2007 – present
<http://mother3.fobby.net>

- Co-developed a fan-based translation project for a Japanese Gameboy Advance video game with a massive English-speaking following in the tens of thousands, *MOTHER 3*
- Reverse-engineered and reprogrammed parts of the game's code to accommodate a full English translation without using the original source code as a reference
- Used a professional real-time software emulator/debugger for analyzing compiled code in ARM/THUMB assembly
- Currently managing and maintaining source code in response to bug reports post-release
- Project received widespread coverage from respected industry news sources pre- and post-release, including Joystiq, Kotaku, and Destructoid

EDUCATION

Candidate for Bachelor of Applied Science, Honours Electrical Engineering, Co-op Program,
University of Waterloo, Sept 2008 – present

AWARDS

- Winner of Queen Elizabeth II Aiming for the Top Scholarship, University of Waterloo, September 2008 (\$3500)
- Ontario Top Scholar, Streetsville Secondary, School, 2008 (awarded to student with highest average in the school – published at <http://www.peel.edu.on.ca/media/news2002/080714.htm>)
- Lion's Club Scholarship, Streetsville Secondary School, 2008 (awarded to student with highest average in the school; \$3000)
- Honour roll, Streetsville Secondary School, 2004 – 2008 (attained every grade from 9 – 12)