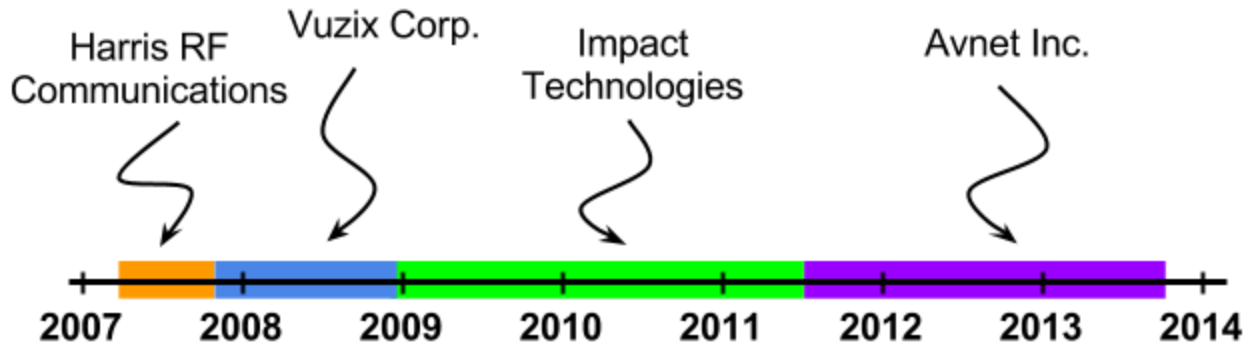


## Timothy Duffy

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**Objective:** Continue to apply my enthusiasm, skill, and knowledge of Computer and Electrical Engineering in the field of research and product development.

### Avnet Inc.

- Xilinx dedicated Field Applications Engineer (FAE) covering the majority of upstate, central, and western New York.
- Continuous training on latest technology from Xilinx as well as dozens of other suppliers. I was able to inform engineers of the best possible choices when starting new programs.
- Acted as an extension of the sales force working as an account manager for smaller accounts.

### Impact Technologies

- Rapid aging and classification of RISC based processors using National Instruments hardware and LabView software
- FPGA based test stand for rapidly aging MOSFET and IGBT transistors to provide baseline data sets for Remaining Useful Life calculations.
- Automated fiber optic end-face handheld inspection device using real-time image processing. Utilizing OpenCV image processing functions to perform end-face inspection to determine Go/No-Go state
- Electronic embedded blast monitoring device for use in field on soldiers to determine blast exposure level
- Polymorphic computing platform implementation and design using Xilinx FPGA's. Worked with RAYTHEON on the MONARCH polymorphic computing IC and Virtex-5.

### Vuzix Corp

- Design and implementation of Real-time Autofocus, Motion Compensation, Color Blindness Compensation, and other image processing related algorithms in VHDL running on a Xilinx FPGA.
- Assisted in creating company internal software ecosystem for continued use on other programs.

### Harris RF

- .Net 2.0 C# Programming for QA on the Falcon 3 Tactical Radio System

## **Rochester Institute of Technology**

BS Degree in Computer Engineering Technology  
Belonged to the on-campus group Engineering House

## **Newtown High School**

- Achieved the highest rank within the Boy Scouts of America, The Eagle Award
- Received a National Student Emmy Award for technical achievement through video production

## **Patents**

- Apparatus and method to automatically distinguish between contamination and degradation on a fiber optic cable endface (United States 13/523992)

## **Publications**

- Advanced situational awareness and obstacle detection using a monocular camera (IEEE)
- Automated Fiber Optic Cable Endface Field Inspection Technology (IEEE/Autotestcon)

## **Skill Specifics**

- Software: Xilinx ISE 10.1+, Xilinx Vivado, Xilinx Vivado HLS, Visual Studio 2003-2010, Microsoft Office, VMWare ESXi 5, Apache, nginx
- Hardware: Xilinx FPGA's, Xilinx CPLD's,
- Programming: VHDL, C, C++, C#, GNU Octave, Matlab, Python, PHP, HTML, CSS
- Operating systems: Windows 2000, Windows XP, Windows 7, Vanilla Linux Kernel, Ubuntu
- Additional Skills: Image processing, functional working knowledge of fiber optics, website design, IT infrastructure,

## **Contract, School, and Mentoring**

- Radio Test and Translation Equipment for the Vermont Power Company - produce a CPLD based language translation circuit to integrate new technology with legacy technology with BIST
- Data Acquisition Independent Study - Worked with another student to produce a data acquisition board using a Xilinx Spartan FPGA
- Brushless DC motor - Worked with a Mechanical Engineering Technology student to build a brushless DC motor for implementation within a silent assisted wheelchair for imagine RIT.

## **Interests and Hobbies**

- Enjoy blogging and writing, new skills learned through work and life experience, things found by others on the internet, working on cars, small electronics projects, run and maintain several websites