Andrew Fuller

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Brief

My objective is to work with hardware and low level software, creating new and exciting devices for the future. I enjoy building high-performance systems which are extremely reliable.

Projects

DORI: Distributed Outdoor Robotic Instruments (2013, http://dori.qartis.com)
A robotic vehicle with environmental sensors and a distributed network of processors. Various sensors and devices (SPI, I2C, UART, 1-Wire, Hayes AT, CAN, Motorola FBus, analog), motors, Microchip MCP2515 CAN controllers, AVR processors.

Translink tickets (2012, http://blog.qartis.com/translink_tickets/)
Fully reverse-engineered magnetic stripe format. Magnetic tape head (analog), MSR-202 credit card writer (USB), custom software.

Education

B.Eng. Computing Engineering, Zhejiang University (2011)
B.Sc. Computing Science, Simon Fraser University (2014)

Experience

Waymo LLC Feb 2017 - Present
Senior Hardware Engineer

• Founding member of Production Test Engineering team, responsible for all hardware testers and factory test activities after EVT phase
• Led hardware failure analysis team which handles root cause analysis, RMA/rework and repair processing
• Test dev. in Python & C++: flashing stations, board functional testers, HIL test fixtures, test equipment drivers
• Lidar manufacturing testbed design, implementation and repair
• Responsible for interface between local MES/Shop Floor system and test equipment at all CM sites (forced routing, genealogy, statistical process control)
• CAD for prototype test fixtures (Onshape), schematics and layout for interface boards (Altium)
• Remote manufacturing line oncall support/SRE
• Responsible for facility network design and operations at all CM sites (US & Asia)

Google Inc. Aug 2016 - Feb 2017
Hardware Engineer (Google Fiber)

• Hardware lead for ethernet-over-coax project for apts, with G.hn and MoCA variants (schematic, board bring-up)
• Project lead for TV box 2nd gen remote control (design, sourcing, schematic, layout, bringup, bluetooth drivers)
• Implemented 64-channel DWDM wavelength coordination routine for faster deployment with GPON
• Implemented tech demo for last-mile network deployment via circular polarization and high-gain RF couplers
• Worked on rapid neighborhood deployment via “leaky feeder” and Goubau-line cable
• Cadence Concept and OrCAD for schematic capture

Google Inc. Mar 2015 - Aug 2016
Embedded Software Engineer (Google Fiber)

• Worked on Uboot drivers, wrote board support packages for board smoke tests and bringup
• Ported system software components from Python to C
• Built tech demo for low-latency cloud gaming service

Fortinet Technologies Inc. Jan 2014 - Mar 2015
Embedded Software Engineer

• Worked on Fortigate and Fortimanager, C-based platform running on Linux