**T.Michael Turney**
**Embedded Linux Problem Solver**
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## SUMMARY OF SKILLS

- Embedded Linux Applications: Open Embedded (Yocto and Classic)
- Porting: U-Boot, Kernel, Device Drivers, user-space apps
- Version Control: Git/GitHub, Subversion
- Device Interfaces: I2C, SPI, USB, JTAG, Microcontroller
- Development: C/C++, Python, Bash, Bitbake, CGI, Dbus/Glib
- Android Handset, CDMA/AMSS/L4

## PRODUCTS DELIVERED TO MARKET/CUSTOMER

- Numerous SDR Handsets based on various Linux Distributions (2012-2016)
- Motorola **Atrix/Webtop** Android Handset, CES Award Winner (2011)
- Motorola **Evoke/QA4** CDMA Handset (2009)
- Wireless Telecom Basestation Infrastructure (2003)
- PowerPlus Data Terminal **WIS400** (1995)
- 5 machines (Robotics/Semiconductor capital equipment) (1984 - 1993)

## LINUX & OPEN SOURCE PROJECT WORK

- Extensive use of OSS distributions for Embedded Linux Environment
- LAMP for web monitoring/configuration
- Customized version of DDD X-APP for use with BDI2000 JTAG debugger
- Published App Note: Debugging Linux Kernel with BDI2000
- Numerous LUG presentations
- Taught MVL Embedded Linux and Device Driver corporate training classes
- Taught ROP class through Palomar College: Introduction to Linux

## WORK EXPERIENCE

### *Mobile/Handset*

**Trellisware Technologies** (San Diego, CA) Oct.2012 – present
Staff Software Engineer

Delivered numerous SDR handsets to government agencies built on TI/OMAP OpenEmbedded Linux distributions. Concentrated on low-level device interfaces and kernel/u-boot ports. Extensive microcontroller integration.

**Motorola Mobility** (San Diego, CA) Sep.2005 – Aug.2012
Distinguished Member Technical Staff

Member of Webtop technical team, pioneering use of **parallel user-space stack** (Ubuntu Jaunty) on **Android hand-held**. Created Ubuntu replacement for **tombstone library**, utilized Dbus/Glib for Android/Ubuntu communication path. Previously worked on **QC AMSS/L4 Linux releases**, part of QC/Motorola interface team as QC/USA was created and QC started to provide Linux SDKs (pre-dates Android). Linux kernel work included patches to support alternative **panic handling and small core file generation**. Technical interface to internal OSS review board (OSRB) to verify license compliance.

### *Linux Contract*

**The PTR Group** (San Diego, CA) Sep.2004 – Sep.2005
Linux Software Contractor

Numerous engagements including **corporate trainings (Monta Vista Linux)**, and driver development (ADC card).

**NOC Systems** (San Diego, CA) Sep.2002 – Dec.2003
Linux Software Contractor

General resource for low-level board activities (kernel port, device drivers, build system). Using **LAMP** developed web-server infrastructure to configure and monitor system. Deployed to customer site (Cairo, Egypt) for initial installations. System was proprietary modem box delivering POTS service to third-world countries.

## ***Customer-facing Field Engineer***

**Monta Vista Software** (San Diego, CA) Oct.2000 – Jun.2002

**HNC Software / eHNC / Aptex** (San Diego, CA) Mar.1999 – Oct.2000

**Texas Instruments** (San Jose, CA) Apr.1998 – Feb.1999
**Spectron Microsystems** (San Diego/England) Jun.1995 – Apr.1998
Field Application Engineer **(SPOX)**

- TI acquired Spectron Microsystems in 1998.

Customer-facing technical role for DSP hardware/software company. Early trainer of new **TI** technology, **CodeComposerStudio**. Chosen for one year assignment in England acting as **software ambassador** to DSP hardware company headquartered in Loughborough, **LSI**.

## ***Embedded System/Machine Control***

**Washington Inventory System** (San Diego, CA) Mar.1994 – Jun.1995
Software Project Lead **(WIS400)**

- Windows/DOS development

Integrated new object/event scripting language into existing proprietary software stack for hand-held data entry terminals used by physical inventory counters. Created DOS simulator for rapid prototyping and debug harness.

**Ampex Recording Systems** (Redwood City, CA) Jun.1992 – Jan.1994
Staff Software Engineer **(DST800)**

- Solaris/Unix development, **Tcl test harness** for unit-testing

Designed and integrated **SCSI-II bus protocol** software to allow a mainframe/supercomputer host to control high performance tape jukebox system for online data storage (6 TB).

**Cybeq Systems** (Menlo Park, CA) Apr.1991 – Mar.1992
Wafer Process Software Manager **(CYBEQ 3900)**

- Windows/DOS development w/SMX RTOS

Using screen-shots from existing ladder-logic PLC program, re-designed system controller for Wafer Polisher, **ahead of schedule and under budget**. Responsible for machine control, state machine and GUI.

**Ultratech Stepper** (Santa Clara, CA)
Software Project Lead/Dept. Manager Mar.1989 – Mar.1991
Software Engineer **(Model 2000)** Aug. 1986 – Sep.1987

Acted as developer, project lead and eventually department manager in effort to deliver second-generation 1x Wafer Stepper to market, utilizing cutting-edge (for the time) technology, including:

- COTS and proprietary VME hardware
- Proprietary software stack based on VRTX family RTOS
- SUN/Unix development workstations

Participated in and led all phases of project work.

**Adaptive Intelligence Corporation** (Milpitas, CA) Oct.1987 – Mar.1989
Senior Software Engineer **(CCAPS)**

- Windows/DOS development, VRTX RTOS

Developed control software for **robotic workcell** as part of **US Navy CCAPS** program.

**Hunter & Ready** (Palo Alto, CA) Jun.1985 – Aug.1986
Application Engineer **(VRTX/IOX/FMX/TRACER)**

Actively engaged customer-base supporting integration of VRTX family of RTOS components.

## EDUCATION

- BA Computer Science, University of California, San Diego 1984
- Numerous “night-school” classes in Java, C++, Schlaer/Mellor, etc.