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Real time and embedded Linux

February Meeting: Real time and embedded Linux

Date: February 4, 2010 at 7 p.m.
Location: Algonquin College (Woodroffe Campus), room B457

Real-time applications have operational deadlines between some triggering event and the application's response to that event. Real time Linux runs a modified task scheduler that allows some tasks to have a garanteed response time.

Embedded Linux is part of a complete device such as a cell phone rather than a general purpose computer.

The two presentations will be followed by a show and tell of embedded-Linux gadgets and a general discussion.

Contact the mailing list if you wish to show a gadget.

Real Time RTAI Linux

Speaker: Matthew Bastian

The speaker will describe real time Linux and some applications.

- What is realtime?
- Realtime Linux (RTlinux and RTAI Linux)
- Kernel space drivers vs. user space drivers
- Creating a custom realtime Linux distro (uClinux, busybox, Linux from scratch)
- Example code
- PC104 used as distributed data nodes
- Photos of some installations and applications

About the Speaker

Matthew Bastian is a flight test engineer with the National Research Council of Canada. When he's not

busy flying on research aircraft, he writes real time airborne data acquisition software.

Embedded Linux

Speaker: Glenn Henshaw

Linux is powering devices ranging from car radios to cameras to coffee makers. This talk will explore why a developer would embed Linux into such devices, what trade-offs are necessary to accommodate the system, and some common implementation ideas.

About the Speaker

Glenn Henshaw has been developing embedded systems since the days of the Intel 8085. While most of these devices have run proprietary operating systems, his more recent developments have focused on Linux embedded in telecommunications routers and financial devices.