



# ***CE Linux Forum***

## **Linux Symposium Canada Live Report**

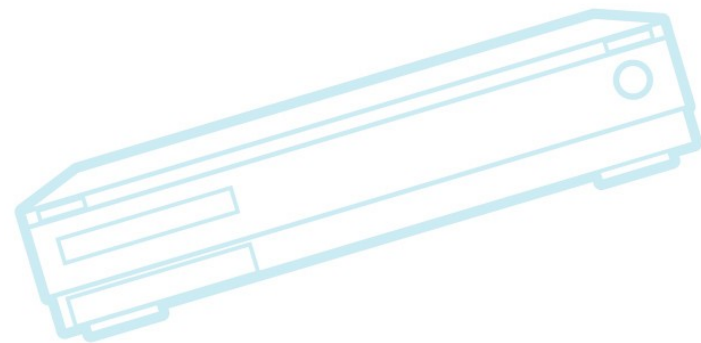
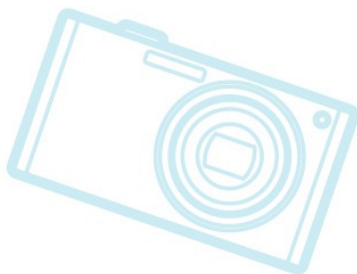
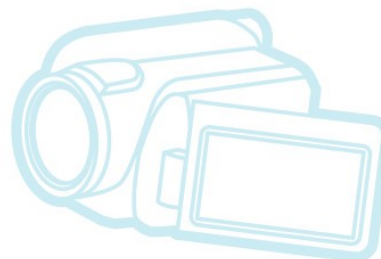
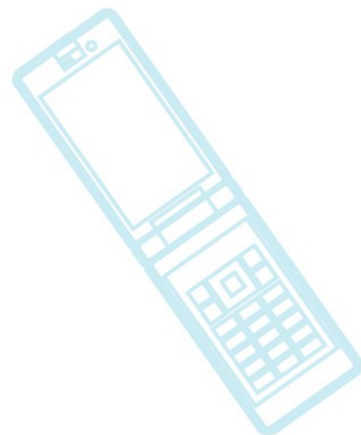
**Tim Bird - CELF AG Chair**



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# Outline

- Overview of Conference
- Talks so far
- Observations about event

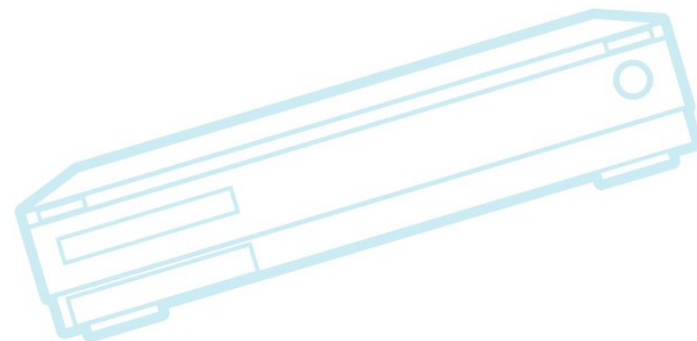
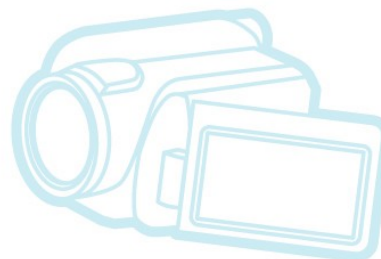




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# Overview of Conference

- New Venue in Montreal
  - Montreal is a “big city” – busier than Ottawa
  - New venue is nice (not a dungeon)
- Tuesday - Tracing mini-Summit
- Wednesday
  - Jonathan Corbet Keynote
  - Technical talks
- Thursday
  - OIN keynote by Keith Bergelt
  - Technical Talks





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# Tracing Mini-summit

- Presentations:
  - Implementing an LTTng trace viewer in Eclipse – Francois Choinard
  - Adding user-space tracepointing to GDB – Marc Khouzam
  - Report on Ftrace – Frederick Wiesbecker
  - SystemTap – Frank Eigler
  - History and status of Linux tracing – Christoph Hellwig
- Panel: Requirements for Linux Tracing Systems
  - Most of the above, and me



# Tracing Issues Raised

- Need to unify kernel infrastructure for tracepoint definition (and clock sources and ring buffer implementations) between LTTng and Ftrace
- Issues with tracers in embedded
  - Clock source are often crummy
  - Many systems don't handle host-target well (if at all)
  - Embedded platform support lags X86
  - Memory/Performance/Storage constraints
  - Production platforms have limited I/O channels to extract trace data



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# Jonathan Corbet Keynote

- Status of Linux Kernel
  - Not slowing down, despite prediction of Andrew Morton
    - Last year - 54000 change sets
- Status of lots of individual features
  - FS - BTRFS, SquashFS, NILFS
    - SSD's soon capable of 100K ops/second
  - Networking – mostly done but big iptables churn coming
  - RT – maybe last bits will get merged
  - Security – TOMOYO, Integrity measurement



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# Wednesday Talks

- Programmatic kernel crash dump analysis tools
- Fedora BOF
- GStreamer on TI OMAP35x chips
- Sandboxer – lightweight application isolation for MIDs
- Combined tracing of kernel and user-space with LTTng
- Function Duration tracing with Ftrace (by me)



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# Thursday Keynote

- “Keeping Open Source Open”
  - Keith Bergelt of Open Invention Network
- Very interesting talk about fighting patent trolls
- There are some well-known trolls
- Microsoft starting to get aggressive
  - TomTom lawsuit
  - OIN helped lessen the damages





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# Thursday Keynote (cont.)

- OIN has several strategies to defend open source
  - Peer-to-patent = system to present prior art to patent office
  - Defensive publications = codify prior art before patents are granted
  - Patent portfolio, including active patent development
- Important Note:
  - Microsoft is “prowling” Japan for more victims
  - Make sure your company calls OIN before doing any deals with Microsoft
    - [kbergetl@openinventionnetwork.com](mailto:kbergetl@openinventionnetwork.com)
    - 1-347-721-8511 (24 hours)



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# Thursday Talks

- **Dynamic Debug**
  - Mainlined in 2.6.28
  - To use:
    - Use `prdebug()` instead of `printk()`
    - Turn on `CONFIG_DYNAMIC_DEBUG`
    - `cat debugfs control file` to see list of debug points
    - `echo <expr>` into control file to turn on/off debug points
    - Examine kernel log buffer



# Thursday Talks (cont.)

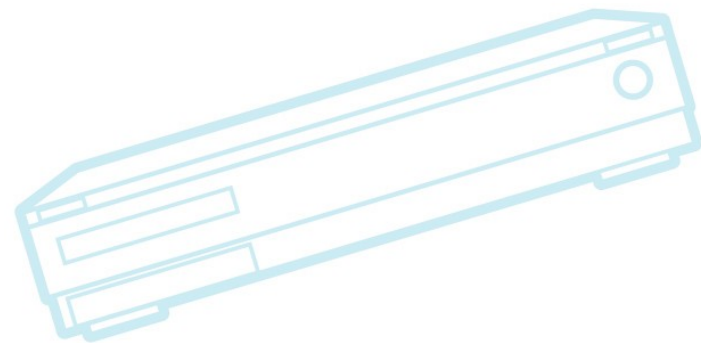
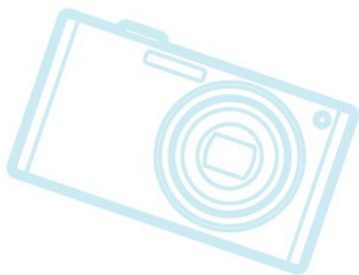
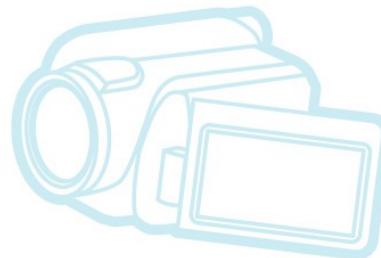
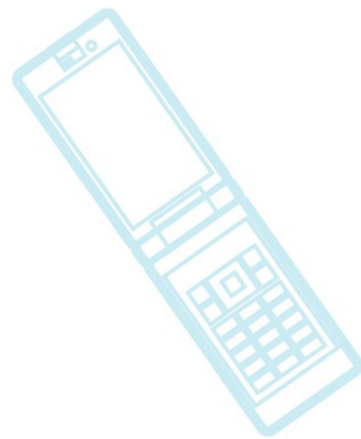
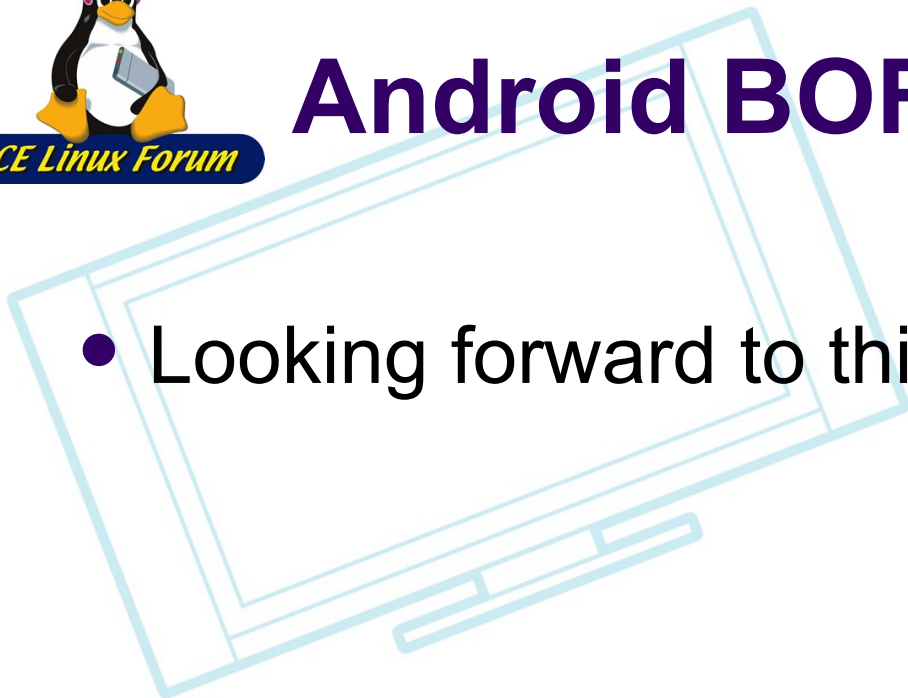
- Autotest
  - Nice automated test framework from Google
  - Overview
    - Web control interface
    - Server to control jobs
    - Clients on targets to perform jobs
      - Autotest client is in python
    - Communication with client is via SSH
    - Handles failures, logging, reporting, etc



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# Android BOF

- Looking forward to this tomorrow





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# Observations

- Attendance is down (~300)
- Important community members still attend (maybe fewer than previous years)
  - Christoph Hellwig
  - Jon Masters
  - James Bottomley
  - Tim Riker
- Sessions are good

