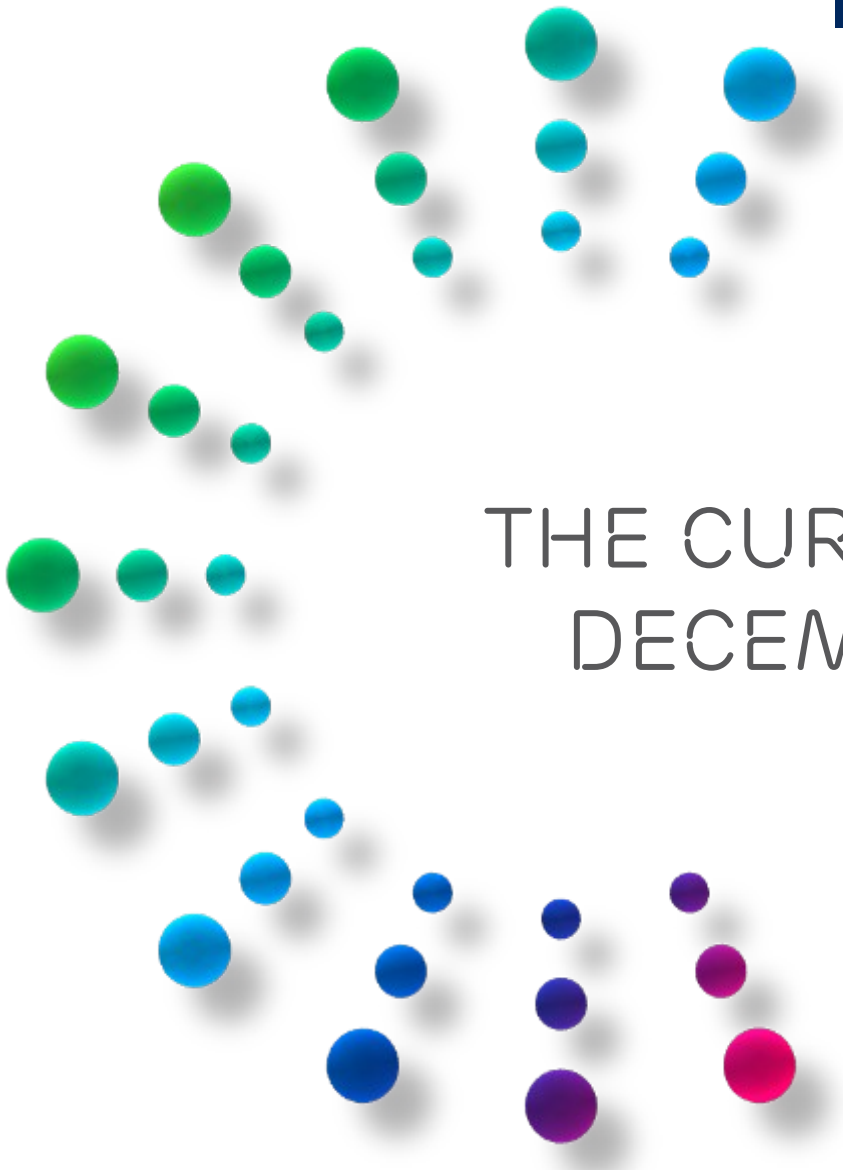


THE CURRENT STATE OF TMF
DECEMBER 2013 EDITION

ALEXANDRE MONTPLAISIR, ERICSSON – PROGRESS REPORT MEETING, DEC 2013

PLAN

- What is TMF, brief overview
- Recent features
- Coming soon
- Questions

TRACING AND MONITORING FRAMEWORK

- Open-source (EPL) framework to implement trace analyzers
  - Generic interfaces, classes, views
- Support for:
  - CTF traces
    - Reference views for LTTng kernel and UST traces
  - GDB traces
  - Custom text or XML logs
- Can be used as Eclipse plugins, or as a stand-alone application (RCP)

TRACING AND MONITORING FRAMEWORK

Quick demo

RECENT FEATURES

- RCP (Rich Client Platform) edition
  - Stand-alone, “real” application. No need for the Eclipse IDE.
  - Smaller download
  - MUCH easier setup
  - Starts faster
  - Extensible
  - File → Open !

  http://lttng.org/eclipse

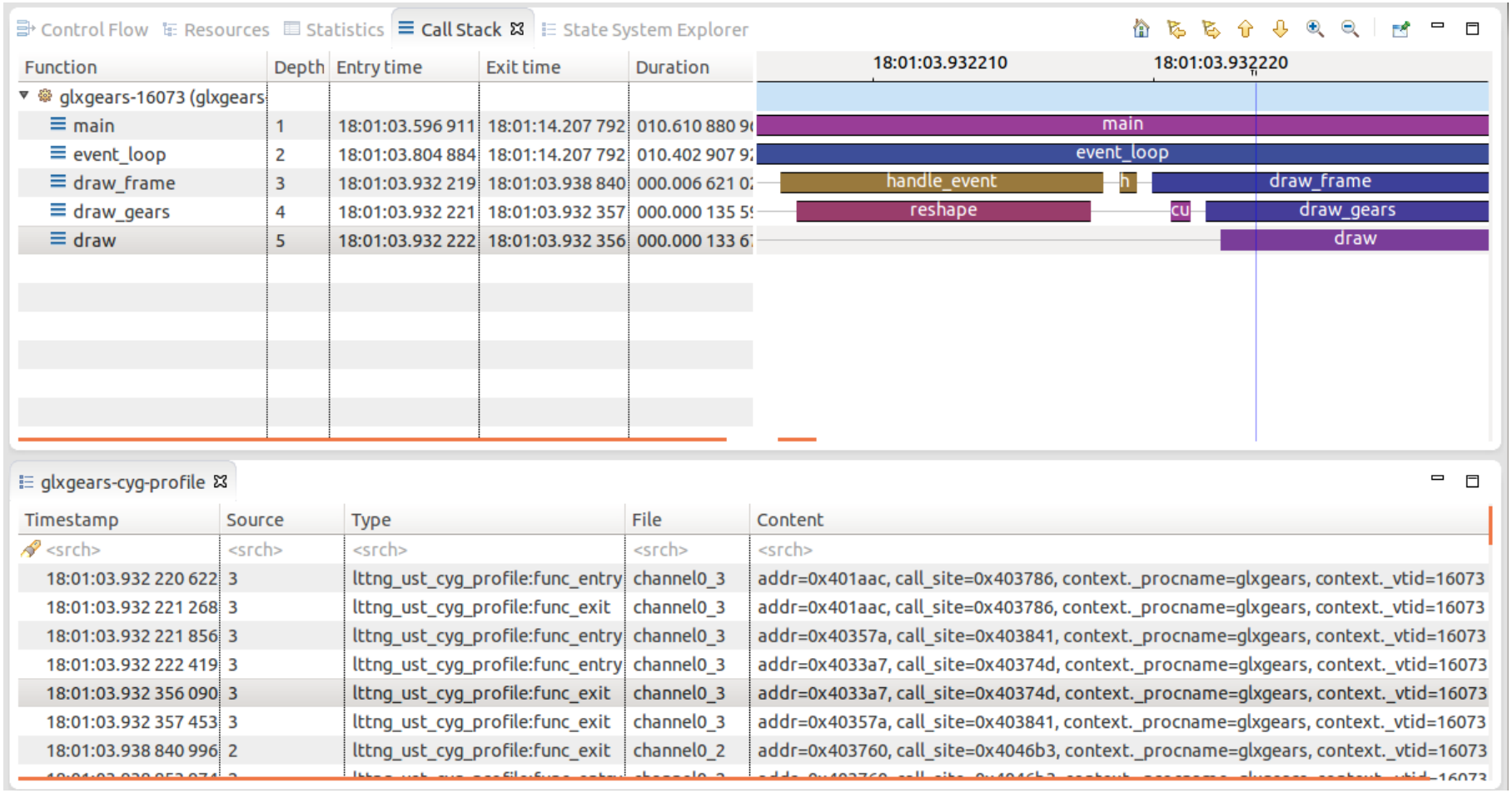
RECENT FEATURES

- Simplified Import dialog
- Batch Import dialog
- Generic Callstack View
  - Support for lttng-ust-cyg-profile traces

LTTNG-UST-CYG-PROFILE HOWTO

- Recompile your program with `-finstrument-functions`
- `lttng create`
- `lttng enable-event -a -u`
- `lttng add-context -t vtid -t procname`
- `lttng start`
- `LD_PRELOAD=liblttng-ust-cyg-profile.so ./myprogram`
- `lttng stop`
- `lttng destroy`

LTTNG-UST-CYG-PROFILE HOWTO



LTTNG-UST-CYG-PROFILE HOWTO

- To get the function names in the Callstack View:

- Compile binary with `-g`
- `nm myprogram > func.txt`
- Import `func.txt` into the Callstack View

- Planned features:
  - Support for reading the binary directly via CDT
  - Integrate with UST libdl instrumentation, to trace calls in dynamic libraries

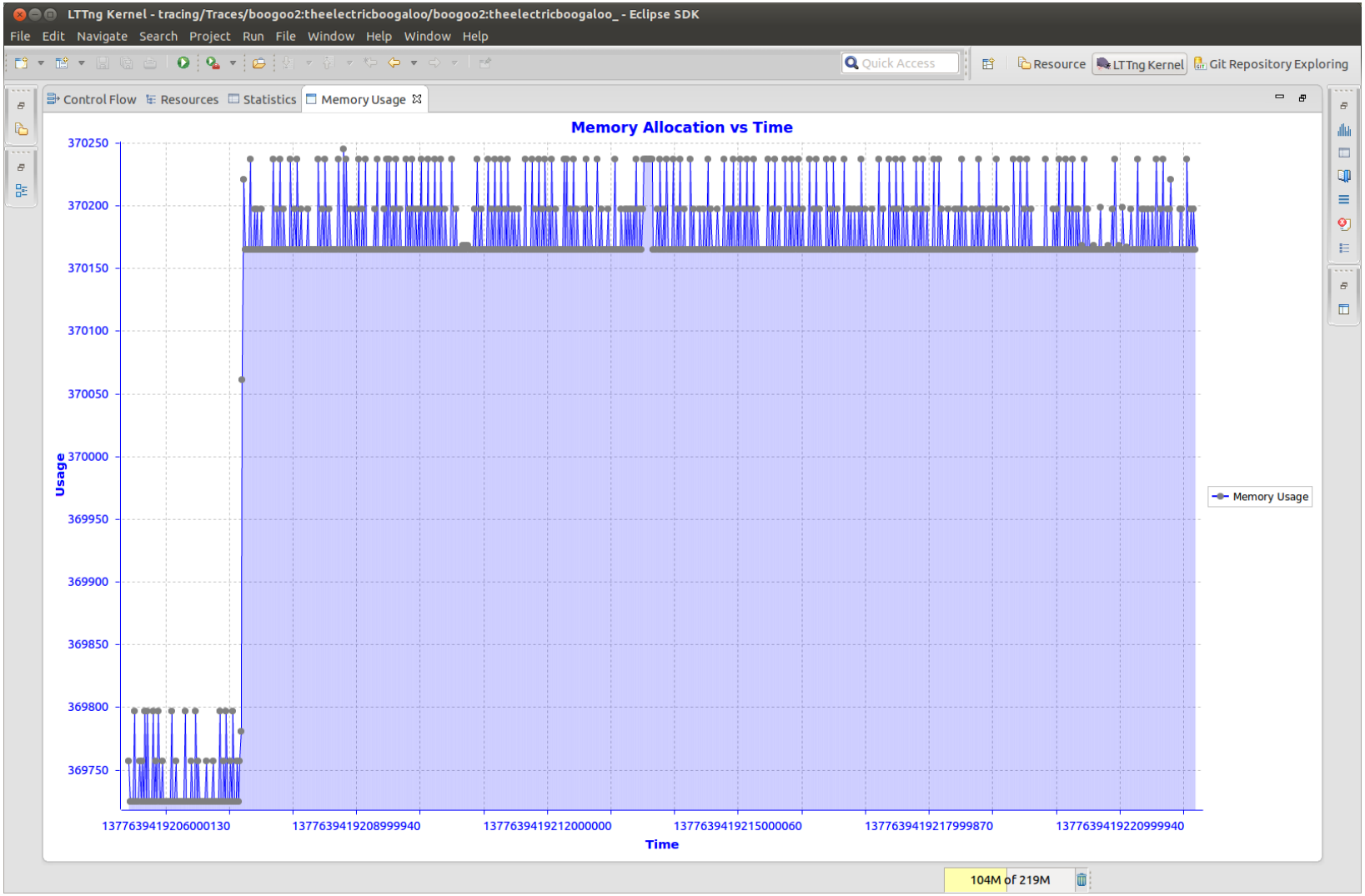
OTHER RECENT FEATURES

- Trace synchronization infrastructure
  - Support for synchronizing LTTng kernel traces with network events
  - Plan to add a manual linear offset
- Index on disk
  - Much faster to re-open existing traces
- Other general performance improvements

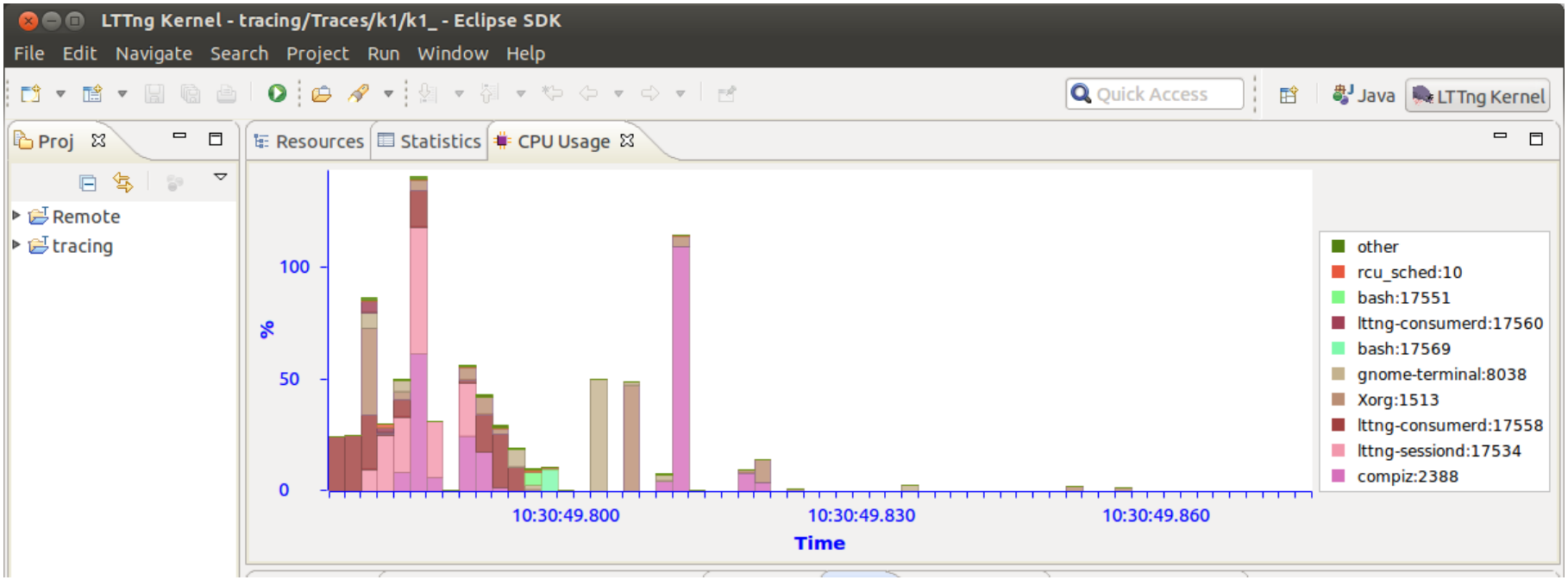
COMING SOON

- Generic SWTChart views
  - Bar charts, XY plot, Pie charts(!)
  - New Histogram, much faster
- Data-driven state system providers
  - Define states in XML
  - Eventually, data-driven views

COMING SOON


LTTng Kernel - tracing/Traces/boogoo2:theelectricboogaloo/boogoo2:theelectricboogaloo_ - Eclipse SDK
File Edit Navigate Search Project Run File Window Help Window Help
Quick Access
Resource
LTTng Kernel
Git Repository Exploring
Control Flow
Resources
Statistics
Memory Usage
Memory Allocation vs Time
370250
370200
370150
370100
370050
370000
369950
369900
369850
369800
369750
Usage
1377639419206000130
1377639419208999940
1377639419212000000
1377639419215000060
1377639419217999870
1377639419220999940
Time
Memory Usage
104M of 219M

COMING SOON


LTTng Kernel - tracing/Traces/k1/k1_ - Eclipse SDK
File Edit Navigate Search Project Run Window Help
Quick Access
Java
LTTng Kernel
Proj
Resources
Statistics
CPU Usage
Remote
tracing
100
50
0
%
10:30:49.800
10:30:49.830
10:30:49.860
Time
other
rcu_sched:10
bash:17551
lttng-consumerd:17560
bash:17569
gnome-terminal:8038
Xorg:1513
lttng-consumerd:17558
lttng-sessiond:17534
compiz:2388

THE TMF COMMUNITY

TMF/LTTng hack-a-thon

Tomorrow, 9:30

REFERENCES

- http://lttng.org/eclipse
- http://wiki.eclipse.org/index.php/Linux_Tools_Project/LTTng2/User_Guide

- Mailing list
  - linuxtools-dev@eclipse.org

- IRC
  - #lttng on OFTC
  - #eclipse-linux on Freenode

QUESTIONS?