

# Ericsson Trace Compass update



Matthew Khouzam

# Agenda

- Recap of Ericsson's involvement with the project
- The team
- The tracing ecosystem
  - Trace Compass
  - ~~Their~~ Trace VSCode Extension
  - CDT-Cloud!
- Future work
  - Roadmap
  - Where can you help?
- Thank you
- Cool story, time permitting.



# No Change!



The goal of this talk is **STILL** to explain where we are coming from to explain our decision making process

Ericsson has been an industrial partner in the research project for over 12 years

We develop and use tools such as LTTng and Trace Compass in the company to solve timing issues and hard to debug problems

Ericsson contributes to and maintains Trace Compass

The Montreal Team has been closely collaborating with the academic and industrial partners. Austin team is ramped up!

We are working towards having the entire team working at their peak efficiency.



# About The Team (May 2022)



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Bernd Hufmann – Technical Lead

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Patrick Tasse – Employee (Internal Lead)

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Marco Miller – Open Source developer, internal Scrum Master (Linux Lead)

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Hoang Pham – FTrace + UI (FE+BE)

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Elena Giovannetti – Director

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Georges Bourret – Line Manager

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David Bainbridge – Strategic Product Manager

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Matthew Khouzam – Digital Product Owner

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Austin +Sweden teams – Developing internal use cases in open-source way

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# The Ericsson Tracing Ecosystem (no change)



- At Ericsson we have very intricate products offered to the public
- At a high level we trace many individual components
- One of the goals of Trace Compass is to provide a unified troubleshooting experience
- **This did not change, there are just more users and more use cases.**

Traces

# Trace Compass



- 8.3 Released, 9.0 Released
- Removal of deprecated items
- Uplift to SWTChart 0.14 (fixes a few issues)
- Progress mainline incubator flame chart
- Security fixes
- Tech Debt reduction
- Efforts to mainline incubator flame chart

# Trace Compass Incubator

- **Docker!**
- **ROS 2!**
- In and Out improvements
- Many user fixes
- Tech Debt reduction
- Performance measurements

**Bold** are external contributions from people attending, thank you!



# Eclipse CDT Cloud Trace Compass



- Place where contributions are welcome:
  - Full tracing example, like tracevizlab but for an IDE.
  - Expected flow:
    - Write code
    - Launch with tracing
    - Visualize trace
- PS: for new members, have you done tracevizlab's tutorials? 100% worth it!

<https://github.com/dorsal-lab/Tracevizlab>

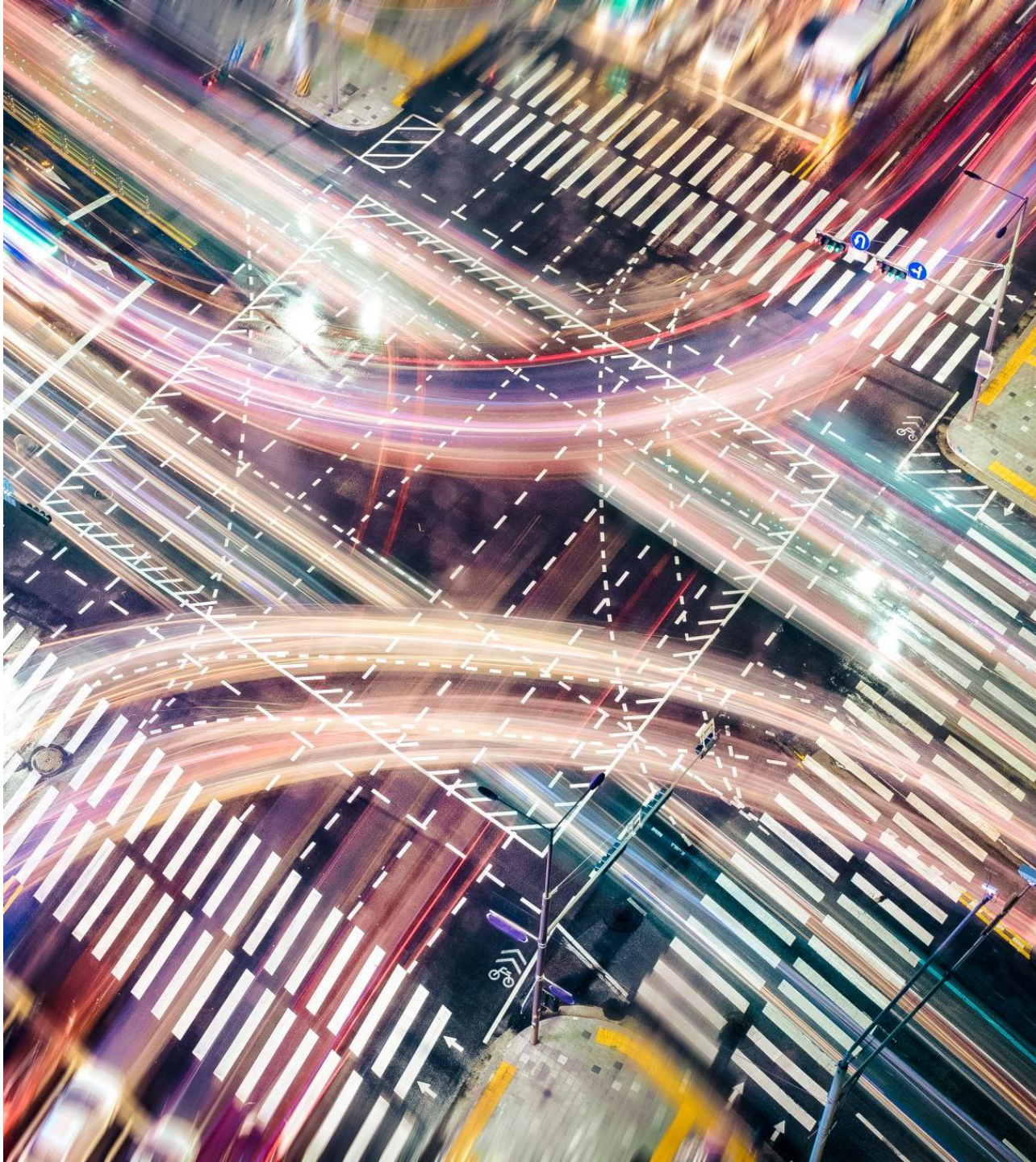


# TC Cloud Frontend



- Most improvements are UX related as Theia is a UI shim over Trace Compass's core logic.
- Highlights:
  - Overview view – Merged (Hoang)
  - Time Range Widget – Merged (Will in Austin)
  - Technical debt reductions (Making the implementation match the documentation)
  - Performance improvements
  - Uplift to latest Theia
  - Security fixes

# Future Work





# Move to VSCode

- End goal: Theia Standalone.
- Decouple Theia releases from Trace Compass Frontend releases
- Access VSCode users.
- But Theia should be better (detachable windows and community)
- Work on this started in ~2023 Should arrive to MVP soonish
- Facing license/compliance issues:
  - VSCode Marketplace
  - OpenVSX
  - FOSS VSCode Remote alternative (Typefox)



# Road Map



- Be a good Ericsson Citizen – Ongoing
- Software Compliance – We want to use FOSS in Ericsson!
- Expand community – Poly committers?
- Expand internal community
- Open-Source Activity and Leadership (General) - Ongoing
- Trace Compass Releases (Eclipse) - Ongoing
- Open-Source Features to support internal implementation of trace viewer (Theia) - Ongoing
- Continue to support internal hardware team
- Continue to support internal Linux teams
- CTF2 Support (scoped in instead of session rotations)



# Trace Compass



- Internal Support – Ongoing
- Work on customizing the trace server from the client – Ongoing
- **Performance improvement – On demand**

# Web Based Front End



- Open-Source Features to support of internal trace format (Theia) - Ongoing
- Biggest change: Become a VSCode extension.
- VSCode MVP - Ongoing
- Migration to VSCode plug-in - Ongoing
- Time Graph-End Filtering – Ongoing
- Back-End Filtering – In Design
- **Performance Improvements – Done! 16x speedup / draw**

# Questions and Answers about YOUR projects.



I will supply some if there are none

# Philosophically, what is the difference between an XY Plot and a Gantt chart?





# Any data science techniques we can use?



Outliers

The "background noise" is useful too!

# Where can you help?

Drop a review, a bug or a feature request

Fix a bug, especially if it helps you and is not in our interest

Share use cases

We have limited bandwidth, we would appreciate code contributions

# Thank You



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Code Contributors

Issue Reporters

Designers

Community Maintainers

Enthusiasts

Steak Holders

