

RustIEC: fourth user group meeting

Slides will be available at <https://en.rustiec.be/2024-06-05-user-committee.html> and <https://nl.rustiec.be/2024-06-05-gebruikersgroep.html> with the following credentials:

rustiec
RustIsAwesome!

Attendance:

Jorn Lapon (KU Leuven), Stein Volckaert (KU Leuven), Jeroen Gardyn (KU Leuven, Computer Science), Hans Mortier (Barco), Kris Steenhaut (VUB), Robrecht Dewaele (Verhaert), Geoffroy Sion (OTIV), Ruben Mechelick (KU Leuven), Bart De Vos (Verhaert), Emiel Van Severen (OTIV), Jakob Bickles (OTIV), Lisa Garcia (KU Leuven), Robin Taerlamain (KU Leuven), Pieter Smet (KU Leuven), Bryan Coulier (KU Leuven), Jonas Tollenaere (KU Leuven), Michael Allwright (Allwright), Jurgen Vandendriessche (Lumency), Ruben De Smet (VUB), Thibaut Vandervelden (VUB), Luca Gattobigio (LSEC), Tanguy Mezzano (OTIV), Andrew Wagner (OTIV), Alicia Andries (KU Leuven).

Online: Bram Baert (Quicksand), Steven Vanden Brande (OTN Systems/Belden), Stein Heselmans (OTN Systems/Belden)

Agenda

12:00 Project Progress Overview (*Ruben De Smet*)

12:05 Kernel Development in Rust (*Alicia Andries*)

12:20 Embedded Frameworks and Operating Systems (*Thibaut Vandervelden*)

12:40 Rust WASM/WASI (*Michael Allwright*)

13:00 How Rust Boosts Confidence and Productivity (*Jeroen Gardyn*)

13:20 Discussion, Wrap-Up, and Next Steps (*Ruben De Smet*)

Kernel development in Rust (Alicia Andries)

Alicia presented on kernel development in Rust, focusing on current tools, challenges, and best practices. The presentation generated minimal questions, indicating interest but no immediate concerns.

Embedded Frameworks and Operating Systems (Thibaut Vandervelden)

Thibaut's presentation covered Rust frameworks for embedded systems, with a particular focus on *Embassy* and *RTIC*.

• Q&A:

- *Luca Gattobigio*: What is the overhead comparison between *Embassy* and *RTIC*?
- *Michael Allwright*: Can *Redox OS* be considered an embedded OS?

Rust WASM/WASI (Michael Allwright)

Michael explored the potential for using Rust in WebAssembly (WASM) and WebAssembly System Interface (WASI) environments.

Q&A:

- *KU Leuven Student*: Is there support for WASM in Docker?
- *Jorn Lapon*: Is Rust for WASM production-ready?
- *Verhaert*: What are the minimum requirements for IoT applications? (WAMR: ~80 kB)

How Rust Boosts Confidence and Productivity (Jeroen Gardyn)

Jeroen shared his experiences as an algorithm developer, detailing how Rust enhances productivity, confidence, and code reliability.

Discussion and workshops

Use Cases: The discussion covered potential areas where Rust could be applied effectively in user projects.

Poll/Survey: Ruben announced an upcoming poll to assess the impact of Rust and RustIEC within participants' organizations.

New company: OTIV joined the consortium

1:1 contacts: A request to talk to specific companies. OTN Systems is interested in a discussion.

Final Event: A closing event will be planned in conjunction with a Rust Meetup.