ELISA
Enabling Linux in Safety Applications

WORKSHOP

ELISA Workshop
Munich, Germany

November 18-20, 2025
Co-hosted with Red Hat

Research questions and publication directions of Aerospace WG

Introduction

Talk given by:

- Martin Halle, Hamburg University of Technology, Germany
- Aero-WG Co-Chair

Topic about findings in Aero-WG that could lead to insights through White-Papers.

→Seeking for **serious experts and contributors** *across ELISA* to support!

- See: https://github.com/elisa-tech/wg-aerospace

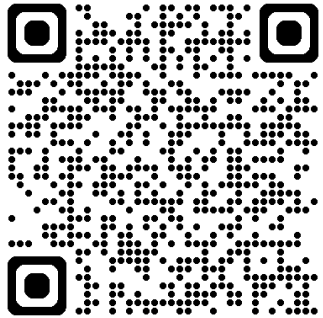
Paper Idea #1: Survey paper on Linux for Aerospace

Content:

- Literature review, *limited to Aerospace (Civil/Military)* and…
- …its specific needs.
- Usually more “restricted nature”.
- Survey papers tends to have *a lot of literature references* usually.

Vote on:

https://github.com/elisa-tech/wg-aerospace/discussions/94



ELISA Enabling Linux in Safety Applications

WORKSHOP

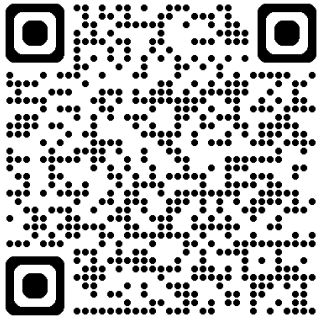
Paper Idea #2: Survey paper on Linux in Space

Content:

- Literature review, *limited to Space (Manned/Unmanned)* and…
- …its specific needs, esp. defined through missions.
- More “Open Source nature”
- Survey papers tends to have *a lot of literature references* usually.

Vote on:

https://github.com/elisa-tech/wg-aerospace/discussions/100



ELISA Enabling Linux in Safety Applications

WORKSHOP

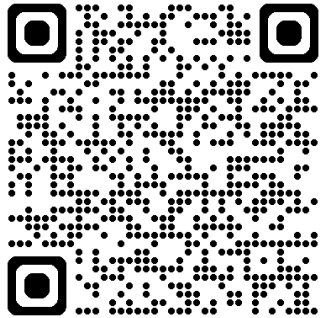
Paper Idea #3: Comparison between Space and Aerospace

Content:

- Follow-up of Idea #1 and Idea #2 towards:
- Needs, regulations, certification for the use of Linux and compare these!
- This may or may not include Idea #4 and/or Idea #5

Vote on:

https://github.com/elisa-tech/wg-aerospace/discussions/101



ELISA Enabling Linux in Safety Applications

WORKSHOP

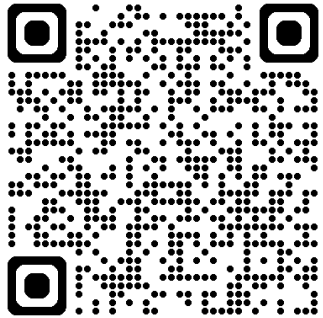
Paper Idea #4: Regulation needs and desires

Content:

- Regulation needs and desires and its effect on Linux in Space/Aerospace:
- Compare between the two domains and regulation standards,
- Explain the effect it would have on using Linux
- Answer: Can we achieve a common platform for both domains?

Vote on:

https://github.com/elisa-tech/wg-aerospace/discussions/102



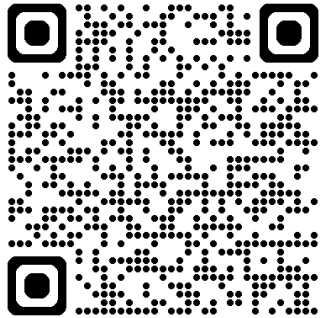
Paper Idea #5: Building a platform / use-case

Content:

- First steps in building a platform / use-case to show:
- The capabilities of Linux in Space/Aerospace towards:
- S/W and H/W concepts
- Tools and methods, development platform, V&V, add-on-tooling

Vote on:

https://github.com/elisa-tech/wg-aerospace/discussions/103



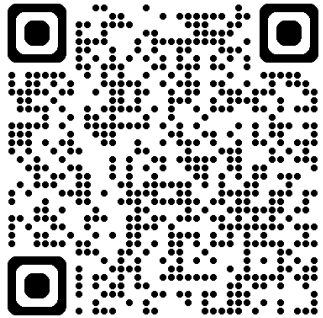
Paper Idea #6: Defining and setting up the use-case

Content are the experiences towards:

- Software-Stack (e.g. using Co-Pilot, OGMA and alike)
- Integration Stack (native, container-based (QEMU)…)
- Development stack, CI/CD, automation
- Shared development / demo-environment for (international) collaboration

Vote on:

https://github.com/elisa-tech/wg-aerospace/discussions/105



ELISA Enabling Linux in Safety Applications

WORKSHOP

Way forward

- Vote on the respective topics on ELISA Github if...
  - You seriously want to consribute
  - Are an expert in that topic
  - Can spend time to contribute continously
- This will…
  - Priorise the topics and
  - Form expert teams
- Paper contribution meetings will take place at least once a month
- Distributed environment to write papers is available (Overleaf or Github)

Licensing of Workshop Results

All work created during the workshop is licensed under Creative Commons Attribution 4.0 International (CC-BY-4.0) [https://creativecommons.org/licenses/by/4.0/] by default, or under another suitable open-source license, e.g., GPL-2.0 for kernel code contributions.

You are free to:

- Share — copy and redistribute the material in any medium or format
- Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

Thank you!
Please *contribute*! ☺