

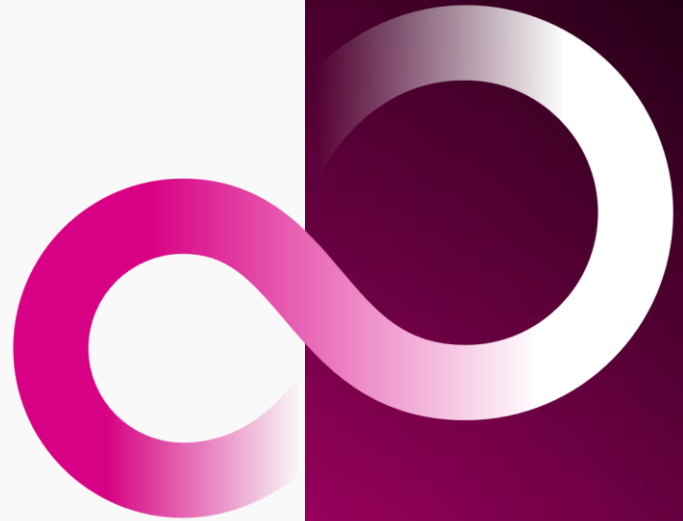
Design and Implementation of an Internship Program Integrating OSS Contribution

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Who am I?

- I'm TOKITA Hiroshi.
- I work in Linux support at Fujitsu.

- I'm take a Zephyr maintainer role, and I'm leveraging that experience to participate in the development of SoDeV.
- Today, I will report on the program I participated in during my long-term internship at Fujitsu, where I took part in open-source software (OSS) development.

Cultural background regarding recruitment in Japanese companies

- Simultaneous recruitment system (新卒一括採用)
 - Graduate hiring in Japan emphasizes uniform hiring and early selection of students.
- Environmental changes
 - demographic shifts
 - talent shortages
 - increasing demand for practical skills.
- As a result, **long-term internships** have started to emerge

- <https://www.nikkei.com/article/DGXZQOUC1620E0W4A610C2000000/>
富士通、長期インターンを10倍の300人に 採用でも加味
Fujitsu Expands Long-Term Internship Program Tenfold to 300 Participants, Linking It to Recruitment
 - An article in Nikkei highlights Fujitsu's long-term internship program as a **notable case**.
 - In particular, the program is described as focusing on **addressing the mismatch between students' expectations** and actual workplace conditions.

- The State of Open Source Japan 2025
<https://www.linuxfoundation.org/research/world-of-open-source-japan-2025>
 - OSS usage is widespread and strategically essential in Japan
 - However, active contribution remains limited
 - Participation is still concentrated among a subset of organizations
- Bridging this gap is a key focus of initiatives such as the AGL OSPO Expert Group
<https://lf-automotivelinux.atlassian.net/wiki/spaces/OSPO/pages/397082627/Publications>

Traditional vs Emerging Trends in Internships FUJITSU

- Under Japan's traditional “simultaneous new graduate hiring” system, about 30% of hires leave within three years. Addressing and improving this situation is one of the major motivations behind this initiative.

Traditional	Emerging Trend
a few days to one week	1 to 3 month, paid internships
Experience-based programs	Hands-on work on real projects
Focused on company introduction and job shadowing	Aimed at reducing post-hire role mismatches

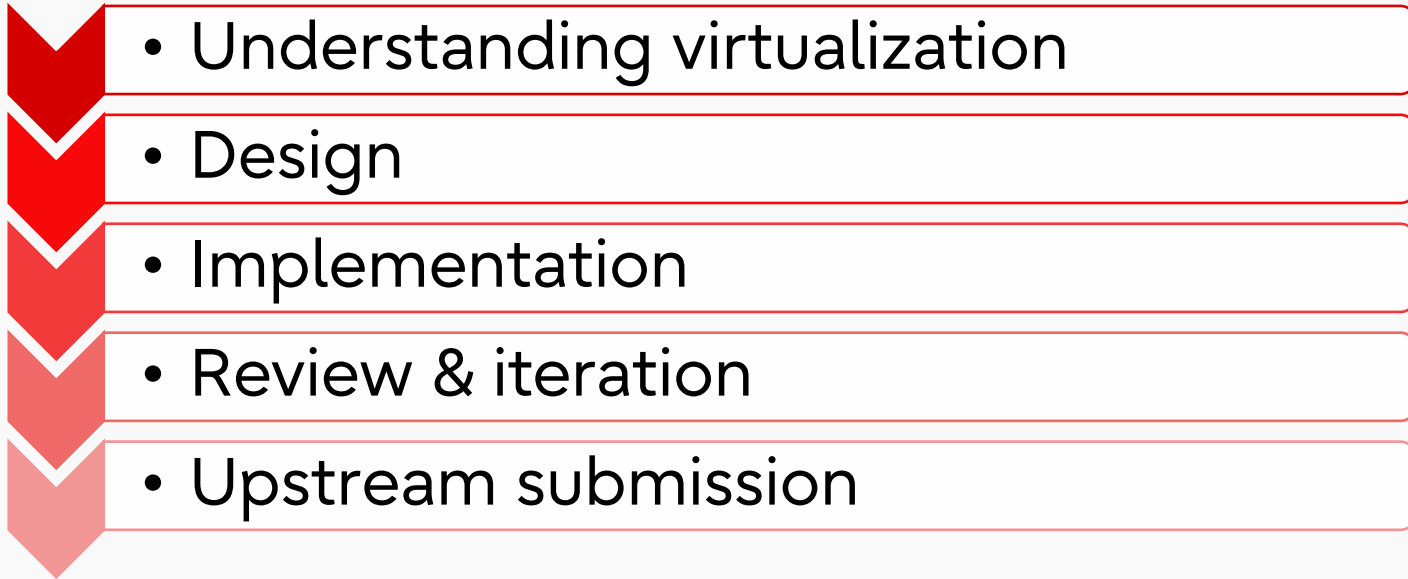
Designing internship program

- I was contacted regarding on GSoC2022 (Zephyr Project #1: Arduino module) [gsoc:2022-gsoc-zephyr \[Wiki\]](#)
- I was able to attend this project like as an observer

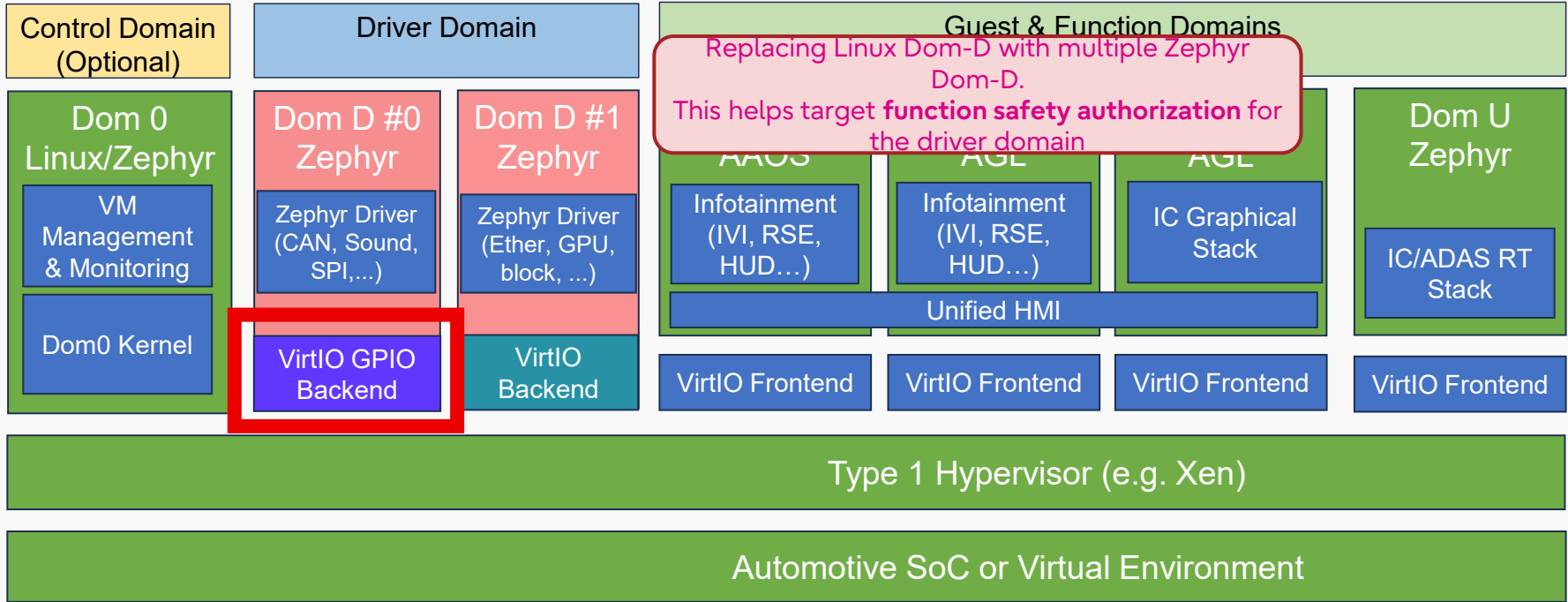
- Define a **clear and measurable goal**
→ Upstream commit submission
- Provide exposure to **real OSS development workflows**
- Enable interaction with **diverse developers beyond the mentor**
- Ensure participants understand the **industry relevance of the project**

Program Structure #1

- Duration: 2 months
- Theme: Developing Zephyr / virtio-gpio backend



Program Structure #2



- The selected task was **technically challenging and non-trivial** for an internship setting
- However,
 - Existing VirtIO framework by mentor
 - Focused task: virtio-gpio functionality
- But, Even so,
 - strong mentor support required

Practice and outcomes

- The patch has been completed and submitted.
<https://github.com/zephyrproject-rtos/zephyr/pull/101491>
 - However, the review process is delayed due to the feature maintainer's circumstances.
- Participants attended and engaged in real community:
 - SoDeV Meeting
 - Open Source Summit Japan
 - Japan Technical Jamboree @Fujitsu
 - Zephyr Project Meetup: Toyosu @Renesas

● Pros

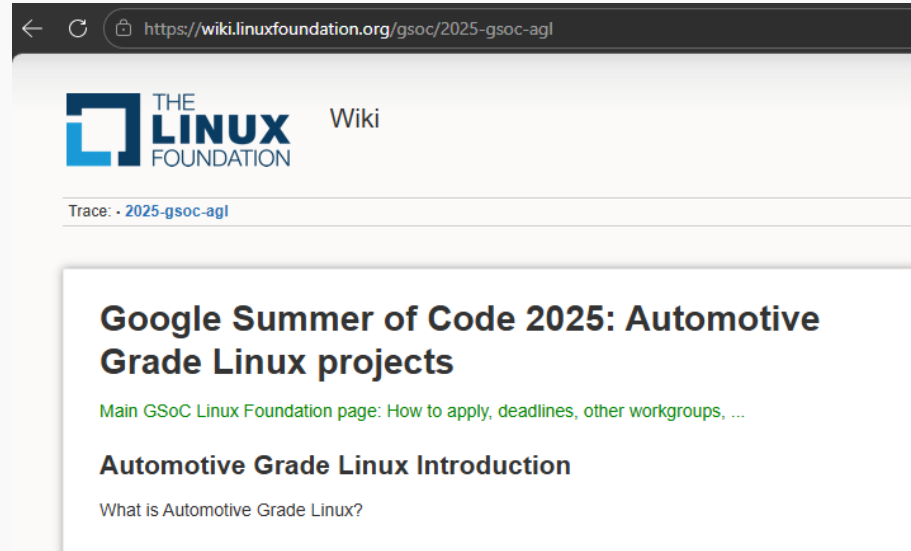
- **Minimal handling of confidential information**
- Participants gained exposure to **cutting-edge challenges in SDV**
- This enabled participants to freely **interact with developers from multiple organizations**, including attending **AGL SoDeV meetings**

● Cons

- **High mentoring cost**
→ Mentors need prior experience with upstream development and community practices
- **Difficulty in task design**
→ Finding tasks that are both appropriate for interns and aligned with OSS project needs can be challenging.
- **Variation in student skill levels**
→ Differences in background introduce uncertainty and risk

- Well-established ecosystem
 - community acceptance and support
- Standardized program structure
- Diverse project ideas
- Upstream by default

AGL is also quite familiar with this program.



Why a Local Program is Matter?

- Language barriers!
- Providing a first touch to open-source development
- Good opportunity to let people know OSS activities within the company

- High mentoring cost
- Requires experienced OSS contributors as mentors
- Difficulty in designing suitable tasks

- Limited capacity within a single organization
 - Since the status of OSS projects is constantly changing, we cannot always provide suitable assignments for interns.

A Federated Approach Across Companies

- Collaborate across companies
- Distribute internship themes
- Share mentoring know-how
- Use OSS communities as a platform

- **Improve hiring accuracy through real OSS contributions**
- **Identify candidates based on actual development performance**
- **Strengthen talent acquisition aligned with OSS-driven development**

**Thank you for
your attentions.**

