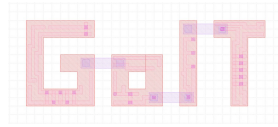


European roadmap on advancement of open-source EDA tools, next steps

Rihards Novickis

14/05/2024



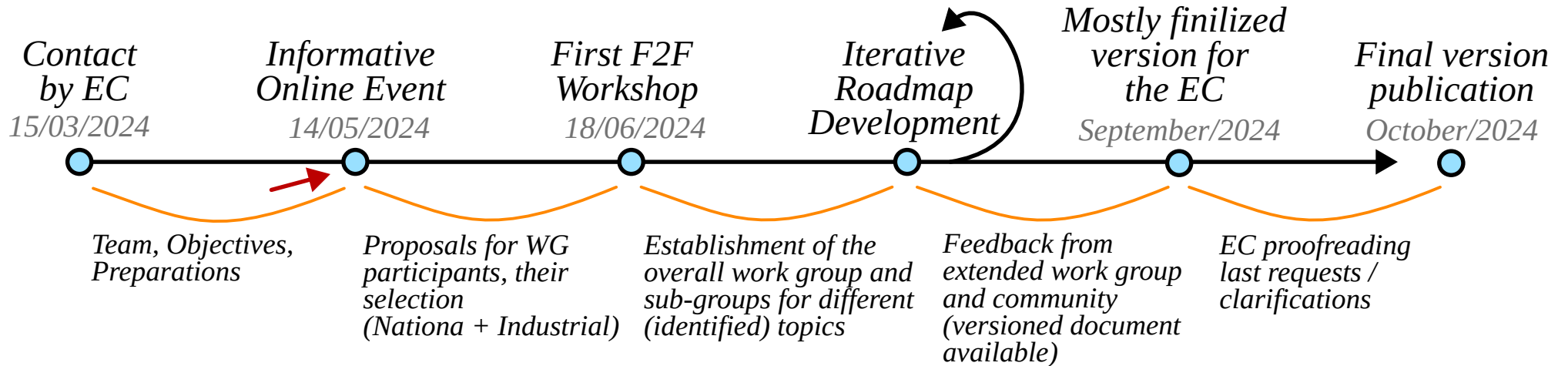
**Funded by
the European Union**

This GoIT project receives support from the European Union's Horizon Europe research and innovation programme and has received funding under grant agreement No 101070660. Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission. Neither the European Union nor the granting authority can be held responsible for them.

Agenda

- Timeline
- F2F workshop in Sorbonne, Paris
- Working groups
- Topics for roadmapping and next discussions

Timeline



F2F Workshop in Sorbonne, Paris

- Save the date: **18th of June, 2024**
- Address: **Paris, Sorbonne University, 4 Place Jussieu**
- Before FSiC2024 conference:
<https://wiki.f-si.org/index.php/FSiC2024>
- Registration for workshop and working group:
<https://ec.europa.eu/eusurvey/runner/88275dc0-9321-bdeb-3d93-83ec342b6353>
- *More information:*
[https://wiki.goit-project.eu/index.php?title=Open-source silicon and EDA workshop 2024](https://wiki.goit-project.eu/index.php?title=Open-source_silicon_and_EDA_workshop_2024)

F2F Workshop in Sorbonne, Paris

- Four sessions (keynote + breakout discussions) devoted to:
 - Industry needs
 - Ecosystem building
 - Technical challenges
 - Funding instruments

Agenda	
9:00 - 10:00	Welcome, coffee
10:00 - 10:15	Introduction
10:15 - 11:30	Session 1: Challenges, requirements and benefits for the industry
11:30 - 12:15	Coffee break
12:15 - 13:30	Session 2: Building self-sustainable ecosystem
13:30 - 14:30	Lunch
14:30 - 15:45	Session 3: Technical challenges
15:45 - 16:30	Coffee break
16:30 - 17:45	Session 4: Financial support
17:45 - 18:15	Conclusion

Working Group

- Aim to evaluate and propose concrete steps for sustainable advancement of open-source EDA tools and ecosystem
- Open to all participants, nonetheless, the size of the active group to be limited (<20 people)
- We aim for a wide representation of different actors:
 - EDA and PDK developers and providers
 - Semiconductor LE, SMEs, Design houses
 - Foundries
 - Open-source community
 - Researchers and educators
 - Policy makers

Working Group

- We invite you to participate in the WG
- Formation process to end after the F2F workshop in Sorbonne
- Work will be carried out through weekly tele-calls and shared workspace
- Please register for the F2F workshop, WG and propose topics for the WG:

<https://ec.europa.eu/eusurvey/runner/88275dc0-9321-bdeb-3d93-83ec342b6353>

Considerations for discussions

Session 1: Challenges, requirements and benefits for the industry

Needs

- Educated, highly skilled staff*
- Proven EDA*
- Proprietary vs Open-source, what is missing?*

Potential

- Cost reduction, e.g. licensing costs, reduced bureaucracy, reusability*
- Increasing quality of open-source silicon IP, PDKs*
- Focus on innovation (e.g. through reusability, stop reinventing the wheel)*
- Potential for reducing time-to-market*
- The relevance of the security aspect*

Strategy

- Should Europe consider free shuttle runs? (like Google)*
- How to transition from propriatry to open-source EDA tools?*

Considerations for discussions

Session 2: *Building self-sustainable ecosystem*

- *Benefits and drawbacks:*
 - *Advantages gained by different stakeholders?*
 - *Universities: costs, access, education*
 - *Large enterprises: costs, lock-in*
 - *Startups: costs, time-to-market/innovation*
 - *Costs for participation in the ecosystem*
- *Mechanisms/Actions*
 - *How to kick-start an ecosystem?*
 - *How to securing development, e.g. for 20 years?*
 - *What are the insentives for industry to participate in open-development?*
 - *Platform for communication, stackoverflow.com for VLSI?*
 - *Missing support/maintanance companies for EDA (e.g., similar to RedHat)*
 - *How politics could influence the ecosystem? (e.g., open-source maintained by competence centres)*
 - *High-quality silicon-proven IP*
 - *How to address the skill shortage?*
 - *What should be the role of open-source in education?*
 - *How education should be changed? (e.g., culture, teach open-source EDA)*
 - *How standardization could facilitate sustainable ecosystem?*
 - *What should be the role of the Design Platform?*

Considerations for discussions

Session 3: Technical challenges

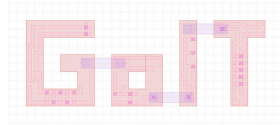
- *Designer's perspective*
- *EDA tool developer perspective*
- *PDK/Foundry perspective*
- *Interfacing/standardization*

Considerations for discussions

Session 4: Financial support

- *How to support ecosystem as a whole?*
 - *Centrally managed funding*
 - *Foundations*
 - *Events*
 - *Tools*
 - *Contests*
- *How to work with interests of different stakeholders?*
- *How to facilitate changes in education system? (e.g., funded tapeouts for students)*
- *Inclusion of industry, hobbyists, SMEs, LEs? (e.g., support for pilot runs)*
- *Incentives to develop open-source silicon-proven (industry standard) IP cores/blocks*
- *Role of Competence Centres in support of tools and IP cores/blocks*
- *What should be the intensity and timeline of public funding?*

Thank you!



Funded by
the European Union