

O-RAN Class

Week 6

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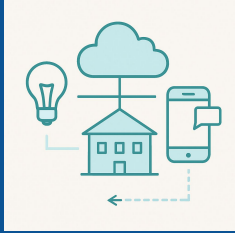
Hasini Nandyala



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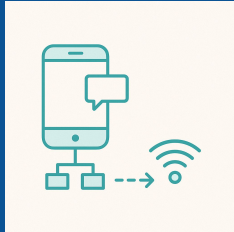
O-RAN Alliance: Working Groups



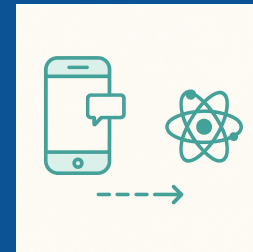
Architecture and Use Cases



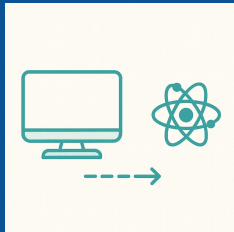
Non-Real-Time RIC & A1 Interface



Near-Real-Time RIC & E2 Interface



Open Fronthaul



Security

The Role of other industry consortia in the Open RAN landscape.

Telecom Infra Project (TIP)

- Founded by Facebook (Meta) in 2016 to accelerate innovation in telecom infrastructure.
- Focus on Open RAN
- Lab Support
- Blueprints & Reference Designs
- Bridges Gap
- Complement to O-RAN Alliance
- Other Consortia:
 - Open Networking Foundation (ONF)
 - Linux Foundation's LF Networking
 - 5G Open Innovation Lab



Image

Source: <https://moniem-tech.com/2021/04/06/industry-alliances-and-organizations-3gpp-o-ran-and-tip/>

The Role of other industry consortia in the Open RAN landscape.

3GPP

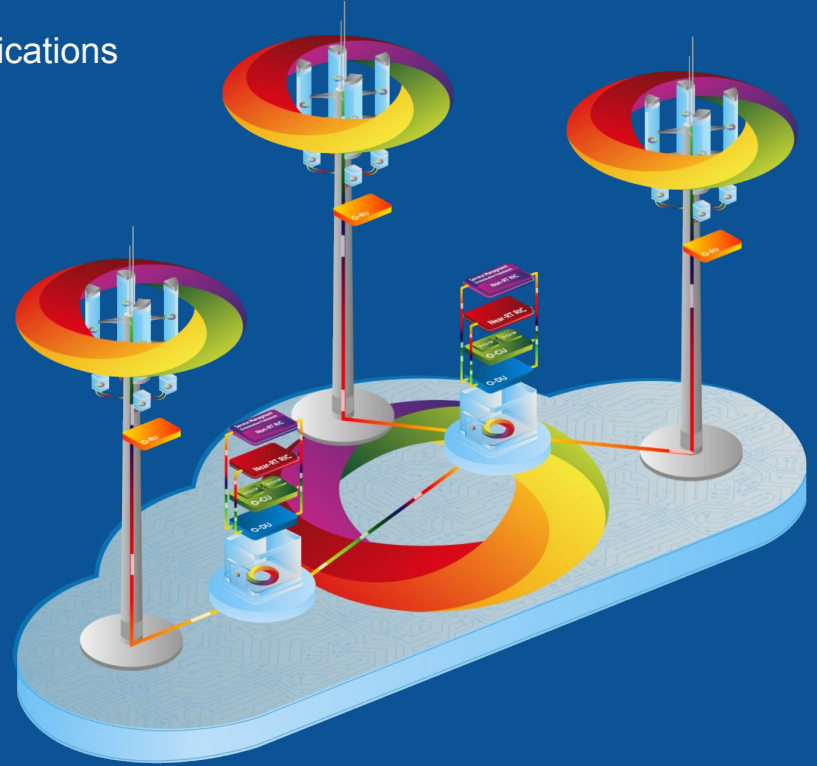
- Develops standards and protocols for telecom
- Responsible for several O-RAN interfaces
- O-RAN Alliance conforms to 3GPP standards



O-RAN's Evolving Standards

O-RAN Alliance releases frequent updates to standards/specifications

- Working Group 1 specifications in the last year: 4
- Working group 2 specifications in the last year: 16



Importance of Open Source

- **Accelerates progress**
- **Cost Effective**
- **Increased Accessibility**



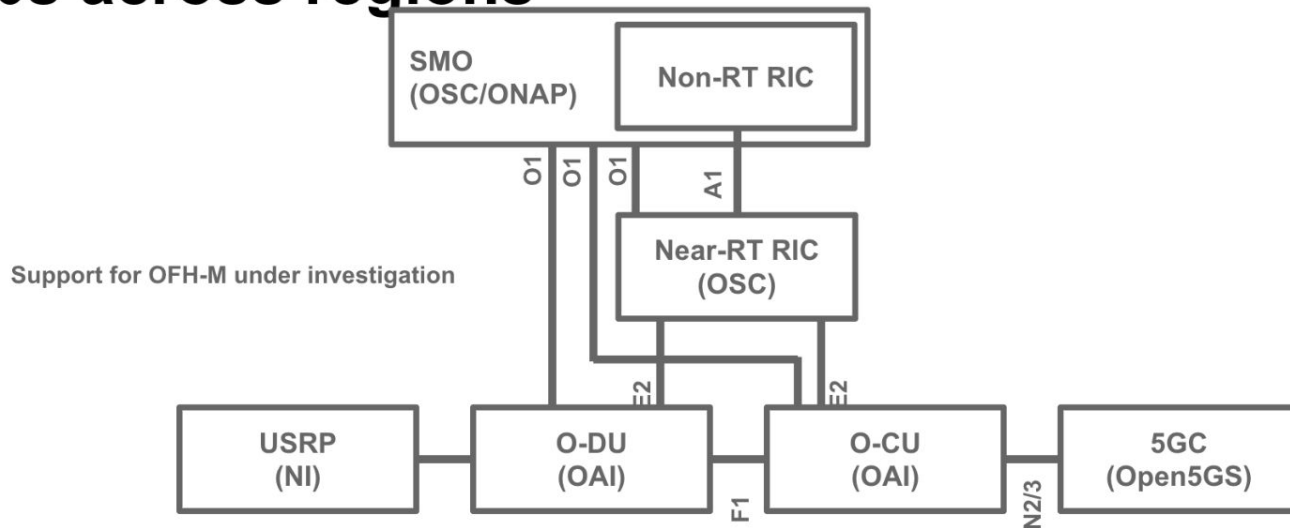
O-RAN Software Community

Importance of Open Source

- Open Source project designed for building 5G/LTE networks
- Maintains documentation featuring guides and instructions
- Open GitHub repository



Early iteration of “Super Wireless RAN BluePrint”(simplified); a few labs across regions



Importance of Open Source



- French non-profit organization
- Focus on Open Source Software/Hardware
- OAM (Operations And Maintenance) project group implements O-RAN interfaces

srsRAN

- What is srsRAN?
- Key Features
- Deployment Modes
- Use Cases
- Why It Matters in O-RAN

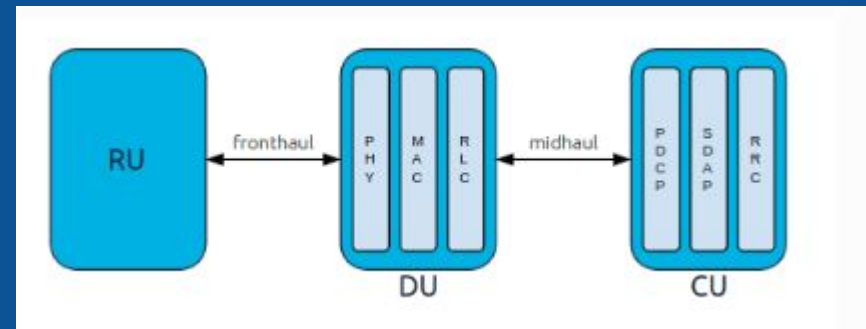


Image Source: <https://github.com/srsran>

Image Source: https://docs.srsran.com/projects/project/en/latest/knowledge_base/source/oran_gnb/source/index.html

Thank you!

Questions?
