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Sophia Antipolis

OPEN AIR
INTERFACE

Open RAN and OpenAirInterface – the perfect couple

Florian Kaltenberger, Eurecom

What is OpenAirInterface?

- Fully software-defined 3GPP-compliant RAN working with software defined radios (USRP)
  - 4G LTE since 2009
  - 5G NSA since 2020
  - 5G SA about to be released
- Open-source FRAND-friendly license
- Collaborative
  - >20 contributors from >10 organizations

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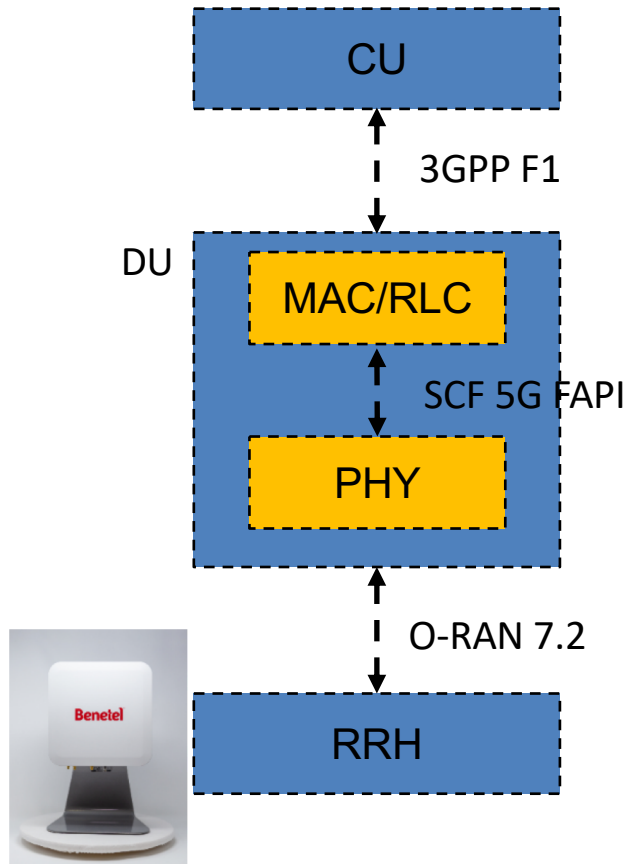
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The OpenAirInterface Software Alliance (OSA)

- Current strategic members

- Many associate members

- Goals:
  - Promote OpenAirInterface and its open-source licensing model
  - Support the community of developers and users through continuous integration
  - Accept donations to maintain engineering support team

OpenAirInterface is O-RAN ready

- F1-C and F1-U
    - Under integration (Q2 2021)
- 5G FAPI
    - today all L1 procedures compliant with SCF 5G FAPI
    - nFAPI under integration (Q2 2021)
- Fronthaul
    - O-RAN 7.2 U-plane done (with Benetel)
    - Interoperability with other RRUs planned for 2H 2021
- E2 interface
    - Initial versions available (Mosaic5G, SD-RAN)
    - Commitment to be compliant

Open Research Topics

- Massive MIMO and open RAN:
  - Making beamforming reliable by intelligently coordinating beams between cells through the RIC
  - Can be especially powerful if combined with URLLC and unlicensed spectrum for Industry 4.0
- Joint communication and RF sensing
  - RF sensing can help RIC to improve decision making (location of users or other information)