Towards the Integration of OSC O-DU with OpenAirInterface

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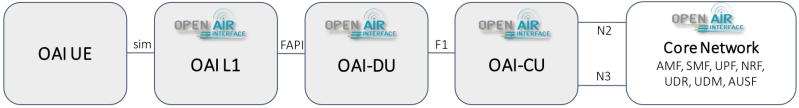
Context

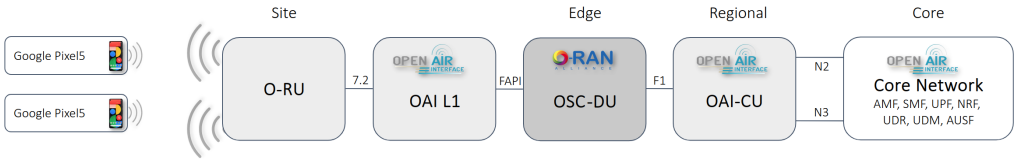
- OSC has no (open-source) O-CU – uses binary stub provided by Radisys
- OSC has no (open-source) L1 – need to use Intel FlexRAN/L1 binary
- Desirable to set up end-to-end system with OSC O-DU

OpenAirInterface

- OAI has full-stack L1/O-DU-low, O-DU-high, and O-CU
- Implements F1 split between O-DU and O-CU
  - e.g., interoperable with Accelleran CU
- Implements (n)FAPI split between L1 and O-DU
  - e.g., interoperable with Nvidia Aerial platform



Stated end-goal

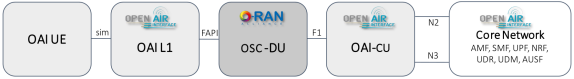


- Commercial O-RU on 7.2 FRonthaul
- 100 MHz, MIMO
- Multiple UEs
- …

Milestones

1. End-to-end simulation with OAI UE and OAI-DU – simulated RF

2. Replace OAI-DU-high with OSC-DU-high



3. Integrate commercial O-RU through 7.2 Fronthaul and COTS UE

Demo

- End-to-end connection with OAI UE and OAI gNB
- gNB is split into O-DU-low, O-DU-high, O-CU (nFAPI, F1)
- Ping test