OpenAirInterface F1 demo

Robert Schmidt

May 26, 2023
What is the F1 split?

Higher latency/throughput requirements, better coordination
Why F1 split?

- TR 38.801 is study item:
  - *split architecture (between central and distributed units) allows for coordination for performance features, load management, real-time performance optimization, and enables NFV/SDN*
  - *Configurable functional splits enables adaptation to various use cases, such as variable latency on transport*

- From TR 38.801 (2016–2017) for split option 2 (i.e., F1):
  - *allow traffic aggregation from NR and E-UTRA transmission points to be centralized*
  - *should be the most straightforward option to standardize*

- Real-time requirements in DU, but not in CU
- Other splits already defined: (n)FAPI, 7.2/eCPRI/IF4p5
Demo: F1 split

- Core is sabox, gNB split into CU and DU with USRP b205-mini
- Same performance as with “monolithic” deployment, i.e., 90 Mbps in DL, 10 Mbps in UL
- The RAN hands-on instructions have a section to reproduce this with RFsim!