OSC-OAI COLLABORATION

O-CU   O-DU-HIGH   O-DU-LOW

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Why of the Collaboration

See Boston workshop presentation

O-RAN Stack Reference Design – From Specs to Architecture to Implementation
by Ganesh Shenbagaraman

Overarching purpose

Enable reference design of the RAN stack as per O-RAN architecture within the two communities OSC and OAI

Interop OAI O-CU and OSC O-DU-high

- There is no open source implementation available in OSC – thus bring OAI O-CU to interoperate with OSC O-DU-high

Interop OAI O-DU-low and OSC O-DU-high

- On the O-DU side, today there is one implementation of O-DU-low is available in OSC (Intel FlexRAN). The purpose is the provide another interchangeable option in the shape of OAI O-DU-low, and thus provide and end to end open source implementation to enable the community in a meaningful way

Scope of the Integration

OAI O-CU and OSC O-DU-high

- F1 interface was developed in OSC using an ASN1 compiler from Nokia
- Basic interoperability with OAI O-CU and OSC O-DU-high was achieved in OSC Taiwan lab: they have something basic working
- OAI F1 is quite mature and setup req and response will be easy to get working according to Robert – F1 work was also done using simulators

OSC O-DU-high and OAI O-DU low

- O-DU-high has 222.10.02 release of FAPI (version that comes with Intel FlexRAN
  - https://github.com/intel/FlexRAN
- OAI also implements version SCF222.10.02
  - https://gitlab.eurecom.fr/oai/openairinterface5g/-/tree/Aerial_Integration?ref_type=heads
- OAI L1 is working today OTA with third-party O-RU – it also has L1 simulators
  - before any OTA testing the idea is to work with simulators
- OAI Core Network to be used to enable the end to end and COTS UE connectivity

Launching the Activity

Initial setting and labs

- Start with integration in the OAI lab
- OSC/Radisys team will bring the O-DU-high
- Start working with the simulators
- Later replicate in other labs (Bedminster and others)

Other topics for discussion

- O-DU-high and O-DU-low interoperate with old FAPI versions. It would be beneficial to update to v6/v7 versions
  - O-RAN OSC/SCF/OAI implementation proposed to be provided as stage-3 reference implementation in OAI
  - Examine possibility of this project being supported by O-RAN OSC, SCF and OAI organizations