FUJITSU achievements with OAI 5G

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FUJITSU’s activities with OAI

- Commercialization with OAI
  - Induced CI in order to improve quality
  - Feedback from Load Test, Field Test
  - Added LTE functionalities
    - Successfully shipped to customers

- Participation to 5G development
  - Attach through with COTS-UE
  - Development of SA upper layer
5G SA Development

**FUJITSU’s development**
- NGAP
- RRC(gNB/nrUE)
- ITTI simulator
- F1-C

**Integration**
- OAI nrUE connection with Simulator
- COTS-UE connection
- Provided bug fix patches

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**Implementation Diagram**

- **5GC**
  - N2 (NGAP)
  - N3
  - SDAP
  - RRC
  - gNB CU
  - PDCP
  - RLC
  - MAC
  - PHY

- **NR-UE**
  - 5G-NAS
  - IP
  - SDAP
  - RRC
  - PDCP
  - RLC
  - MAC
  - PHY

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**Network Diagram**

- free5GC
- OAI gNB
- USRP B210
- Huawei mate 30
Video Clip of COTS-UE in 5G SA

5GC console

OAIgNB console

Phone screen
Further efforts on 5G

- RRC message extension
  - Re-establishment
  - Paging
  - Release

- Stability improvement
  - Repetitive massive test of Attach/Detach
  - Multiple UE
  - Inter-Operability-Test with various UEs

- Connectivity test with COTS-UE
  - SA connection
  - NSA connection
OMNI (Open Mobile Network Infra)

- Meta-community covering all major mobile-network OSS
- Exchanging various information and networking among engineers

- Number of members: 269 persons (as of June 14, 2021)

Activities

- Networking and Info Exchange
- Info Exchange and Discussion
- Training of OSS Activities
OMNI’s goal

Challenges of mobile-network OSS community in Japan

1. No place of information exchange and/or discussion beyond each OSS community
2. Barriers to entry due to lack of easy place to ask questions or consult
3. Psychological barriers to information in English

OMNI will

- Address and resolve these 3 challenges
- Boost building co-creation relationship (ecosystem) among mobile-network OSS developers / users
OAI introduction in OMNI community

- OAI PR
  - Introduce OAI and provide the latest info at Meetup
  - Information sharing in Slack
  - Provide Hands-on session

OAI introduction at Meetup

Hands-on session
Thank you!!

- Thank you all SA develop members
  - Eurecom, Opencells, Allbesmart, BUPT
- Lot of trouble with merging, but we were able to make attach
- There are still some problems, but let’s co-work to complete Release

- Message
  - I told you the mobile network community in Japan. I always feel their high expectation for OAI.
  - We still need to work harder to increase software quality.
shaping tomorrow with you