



Open5G Lab
*Ecosystem of opensource
platforms for open wireless
innovation*

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A bit about Eurecom



- A private non-profit research and teaching institute
 - **Location:** Sophia Antipolis Technopole, French Riviera
 - **Main areas:** Communications Systems, Digital Security, Data Science, Embedded Systems
 - **Affiliations:** Telecom ParisTech/SUDParis/Bretagne, TUM, POLITO, Aalto Helsinki, NTNU Trondheim, Chalmers, CTU Prague.
 - **Industrial members:** Orange, Monaco Telecom, BMW, SAP, STMicroelectronics, Symantec, IABG.
- 150 permanent employees, 126 scientists (25 professors, 26 engineers, 75 PhD. students)
- Combination of applied and fundamental research

Open5G Lab



- Ecosystem of **open-source platforms** and usecases for fast and open wireless innovations
 - Common R&D and prototyping framework for proof-of-concept designs
- Experimentally-driven **network systems research**
- **Bring idea into life** through experimentation and prototyping
- **Forum of discussions** from business innovation to communication network
- **Technology transfer and collaboration** with industry and academia
- **Liaison** with standardization bodies and 5G European/International initiative

Open5G Lab@Eurecom



Open5G Lab
(Campus SophiaTech)



Mosaic-5G Service Lab
(NFV, SDN, MEC, Cloud)

OpenAirInterface CN Lab

OpenAirInterface RAN Lab

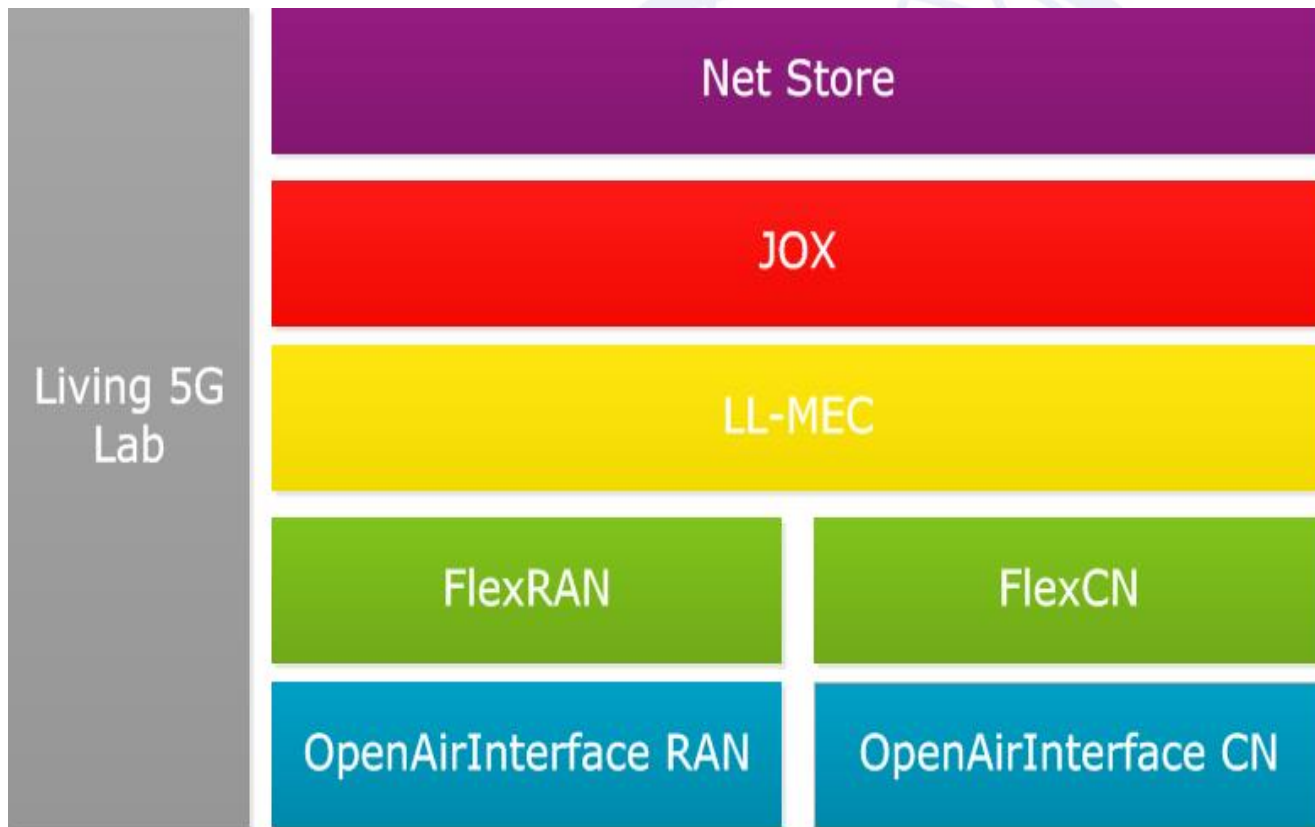
Testbed Lab

- Small-Scale
- Controlled
- Indoor
- E2E

Living Lab

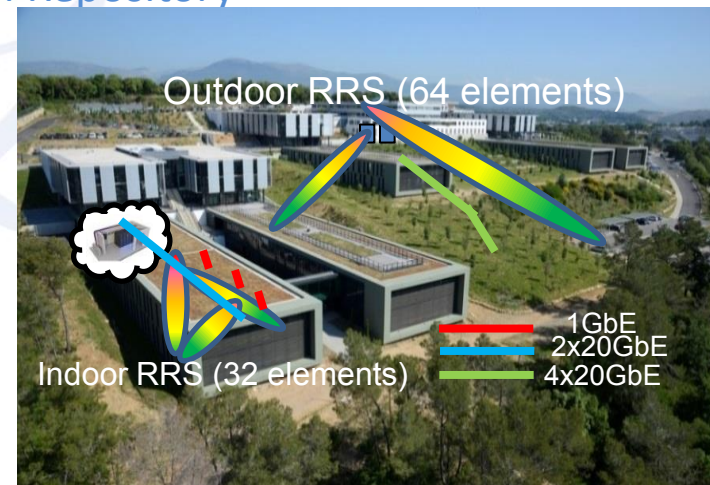
- Medium-Scale
- Indoor/Outdoor
- Realistic
- E2E

Open5G Lab Platforms



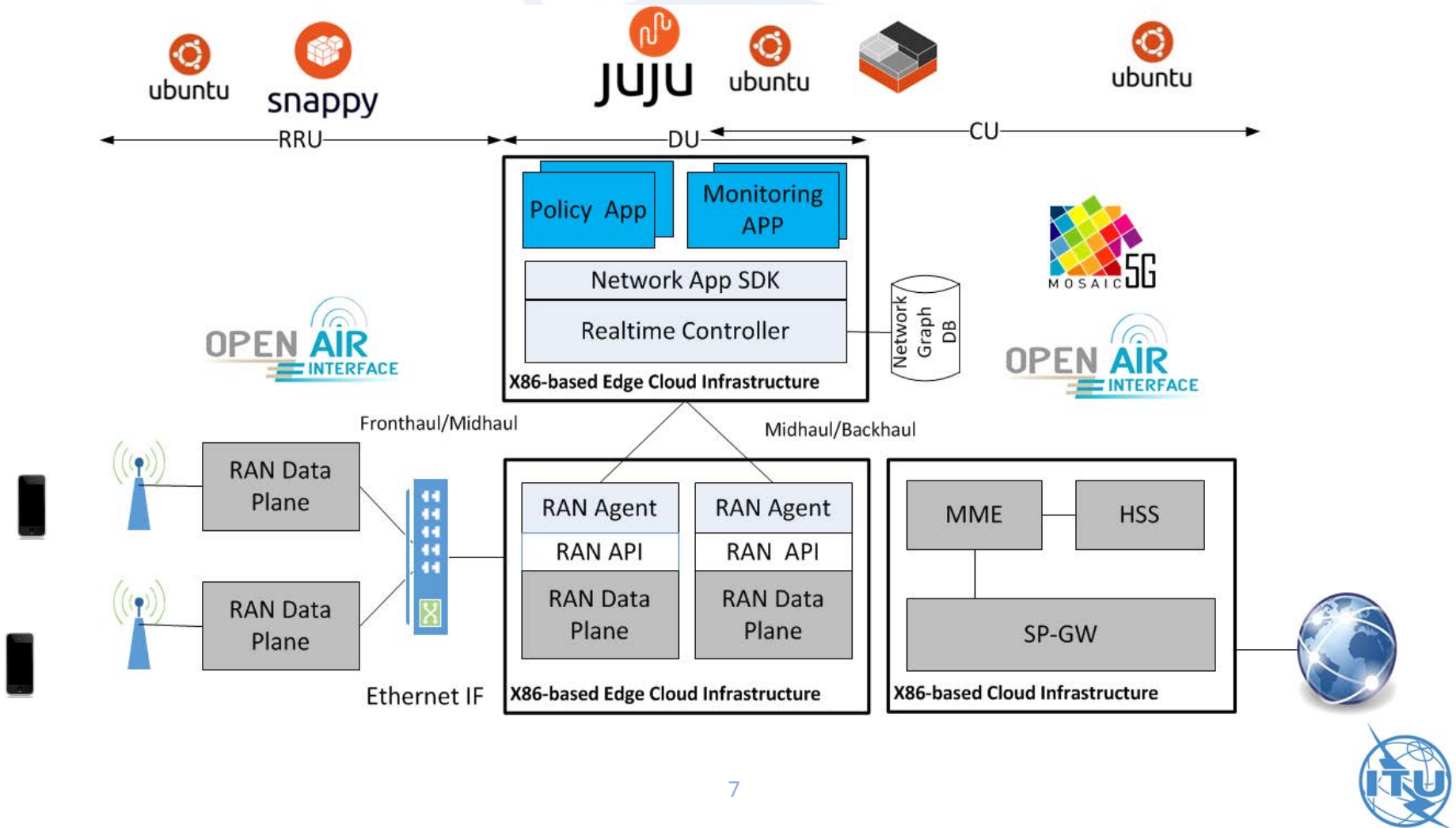
Open5G Lab

- **OpenAirInterface** : SW/HW platforms
 - 4G/5G RAN : subset of LTE Rel 10 and 14 (NB-IOT), 5G NR Access layer (2018)
 - UE, eNB, RRU, DU, and CU
 - 4G CN : subset of rel 10
 - MME, x-GW (C and D-plane separation, OVS), HSS
- **Mosaic-5G** : Software platforms
 - FlexRAN and FlexCN: A Flexible & Programmable SD-RAN and SD-CN Platforms
 - LL-MEC: A Low Latency SDN-based MEC Platform
 - JoX: Juju-based service orchestration core
 - Net Store: Network control application distribution Repository
- **Open5G Living Lab**: Realistic testbed
 - Flexible small-to-medium scale experimentations
 - Controlled/lab (TRL4)
 - Uncontrolled/realistic (TRL-6-7)
 - End-to-end
 - Remotely accessible testbed
 - Indoor and outdoor, TDD and FDD,

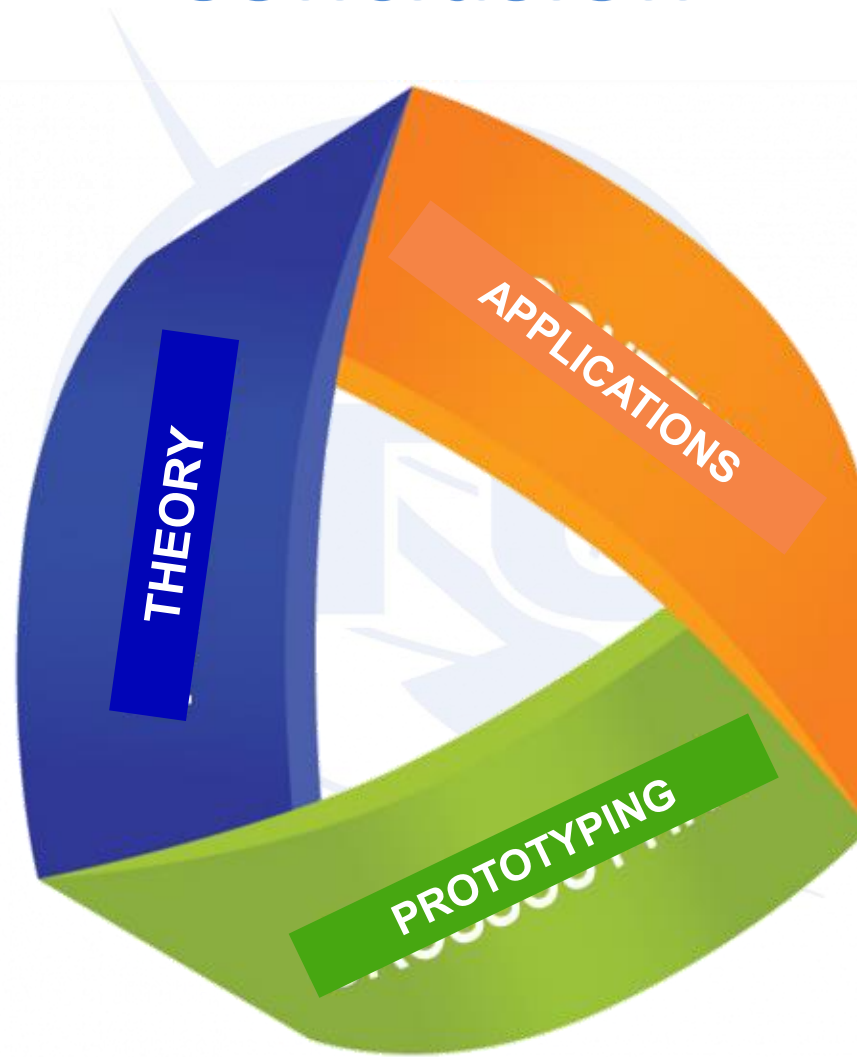


Demo Today:

Experience Live Software-defined RAN slicing



Conclusion



Contact Information

- OpenAirInterface :
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- Mosaic-5G
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