

5G Transformation with Open Source

2020 ONF Spotlight Series

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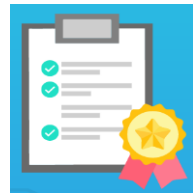


Commoditization +
3GPP Technologies +
OpenSource +
OpenAPI

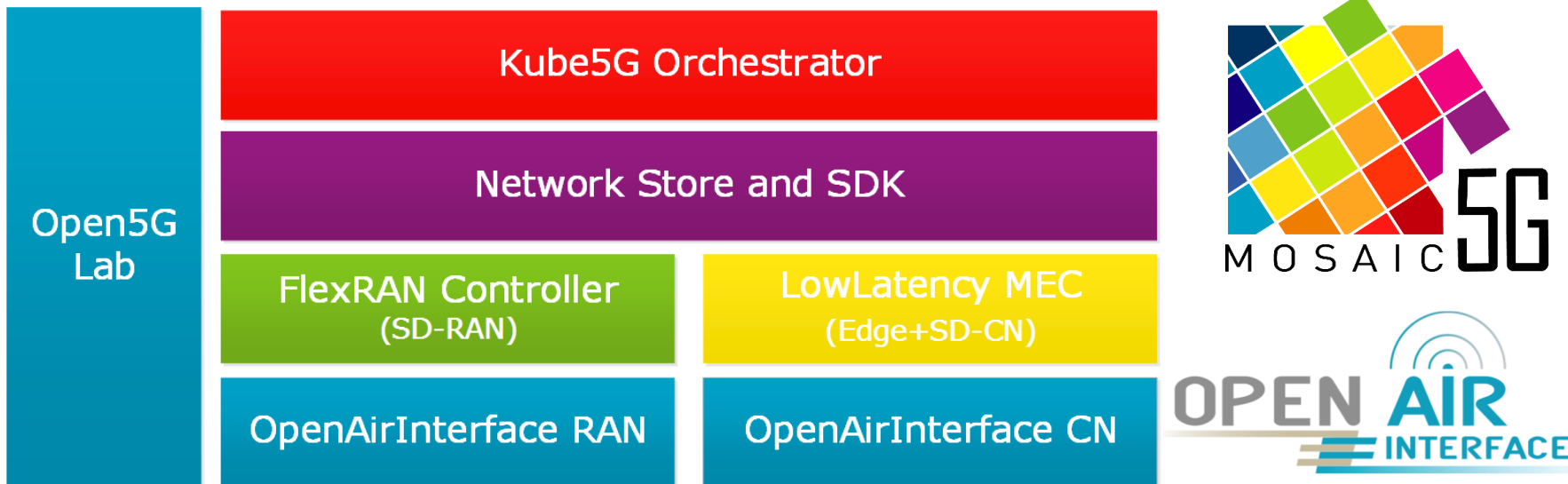
*OpenAirInterface Software Alliance (OSA) Launched in 2014 as an
endowment fund (French “Fonds de Dotation”)*

OpenAirInterface (OAI)

Reference R&D platforms +
Community +
Standardization +
Licensing Model +
Openness



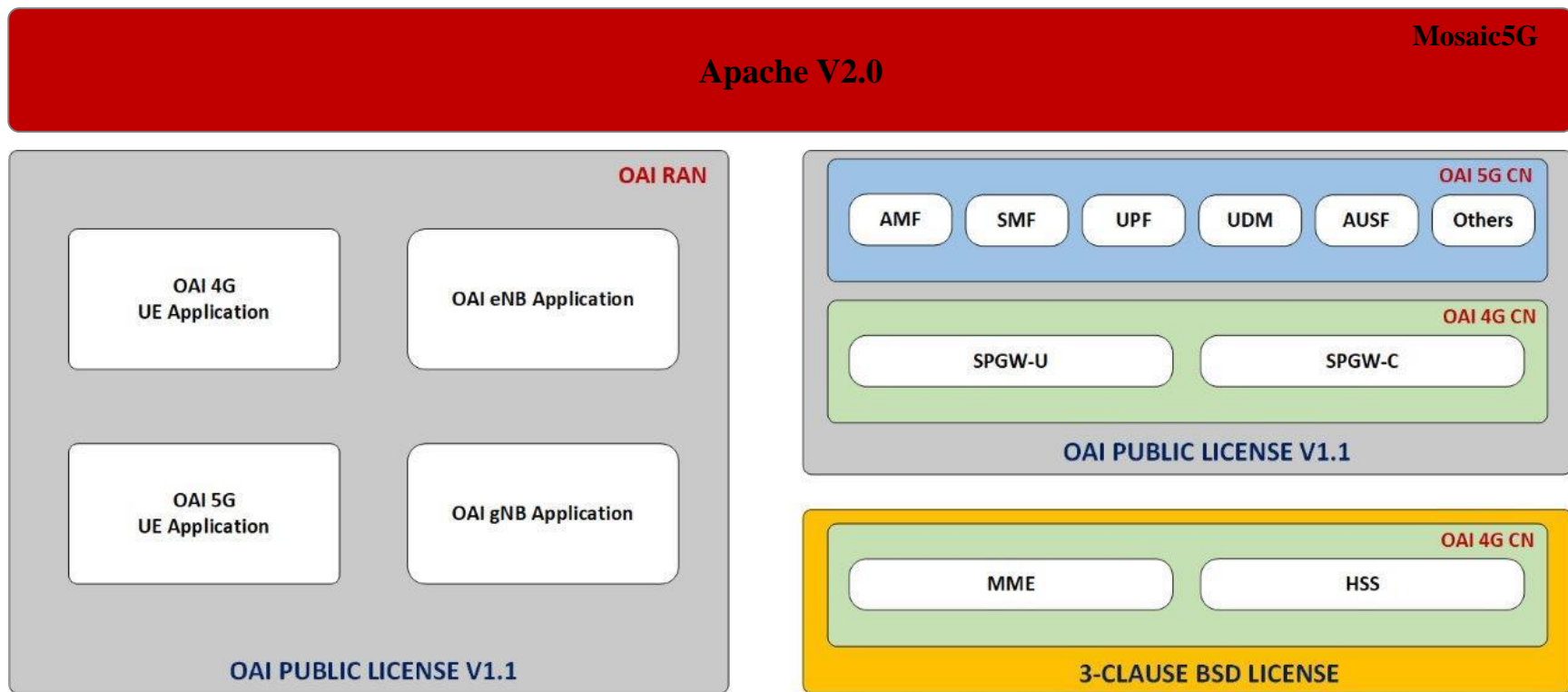
OAI Objectives



OAI public license 1.1 (4G+5G RAN, 5GCN, SPGW-C, SPGW-U)
 3-Clause BSD License (4G MME & HSS)
 Apache V2.0 Public License (Mosaic5G)

OAI Stack & License

FRAND-type of License for open-source in 5G



OAI Public License 1.1

FRAND-type of License for open-source in 5G

1. Reference implementation
2. Open-source community
3. 3GPP Contribution



1. Feasibility and Validation
2. Reproducibility
3. Technology Transfer

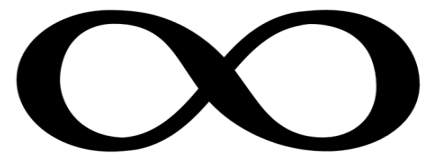
- (a) Allow 3GPP members to contribute to open-source and still retain IPR benefits
- (b) Compatible with both R&D and commercial prototyping use

OAI Public License 1.1

Open-source and Standardization



Fast innovation & development phase of new technologies



Retain long-term stability & interoperability



Clear need for open-source for 5G

- (a) Lower the entry barrier
- (b) Reduce TCO and improve accessibility and reuse
- (c) Common R&D framework for innovation

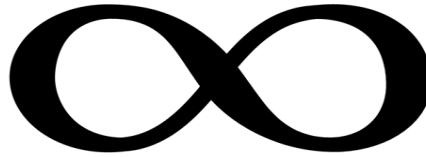
OSA and Standard

RAN WhiteBOX

Consortium-led Alliance

Operator-led Alliance

OpenAirInterface



O-RAN

- (1) Specifying APIs and interfaces
- (2) open source NF & commodity HW when possible
- (3) Enabling RAN virtualization and RAN intelligence

OSA and O-RAN



Platforms for Advanced
Wireless Research



FOUNDING MEMBER



STRATEGIC MEMBERS

NOKIA Bell Labs



INTERDIGITAL.

Qualcomm



OSA Members



Red Hat

ASSOCIATE MEMBERS

65+

blackned 


ULAK
HABERLEŞME A.Ş.

 **Developing Solutions**
PERFORMANCE TESTING EXPERTS

BenetelTM


Rebaca

 **创智联恒**
INNOGENCE TECHNOLOGY

OSA Members

2020

R15 NSA FR1
+Scheduler
+CI/CD



2021

R16 SA FR1,
FR2
+Beamforming
+nFAPI/Split
+CI/CD



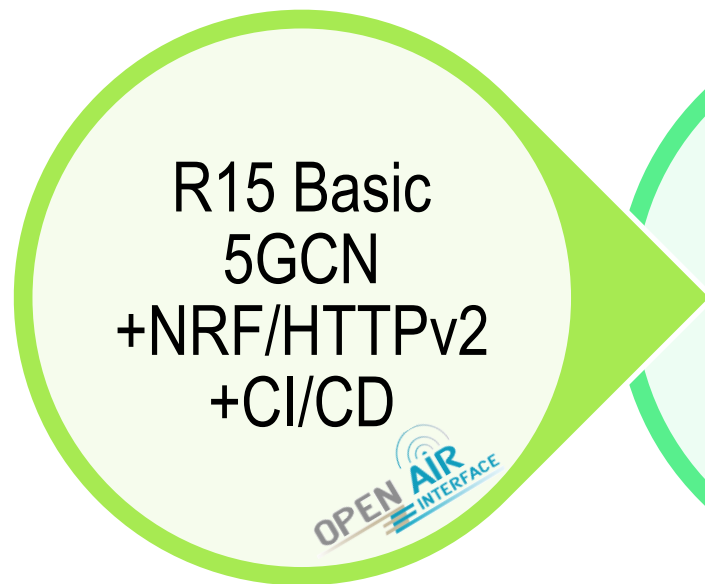
2022

R17 SA/NSA
+MassiveMIMO
+RIC/E2
+CI/CD

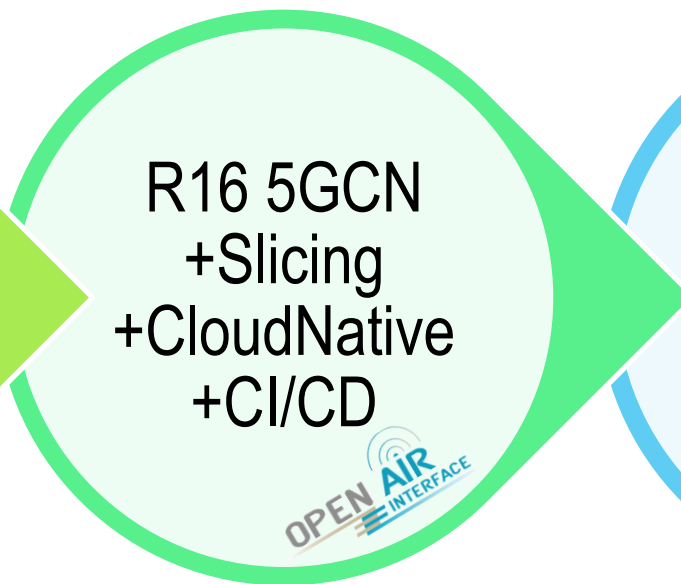


OSA RAN Project RoadMap

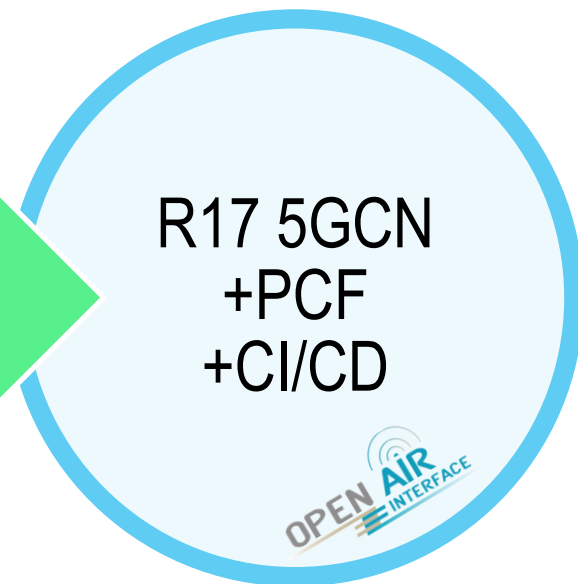
2020



2021



2022



OSA CN Project RoadMap

Leading 4G/5G opensource initiative

Fast innovation with advanced
cutting edge 4G/5G software
platforms and services

All based on opensource technologies!

OpenAirInterface

OSA strives to foster cross-community
collaboration to create and sustain
disruptive technologies in
5G era and beyond

Join US!

Final Word

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OPENAIRINTERFACE.ORG

5G Alliance for Democratizing Wireless Innovation

