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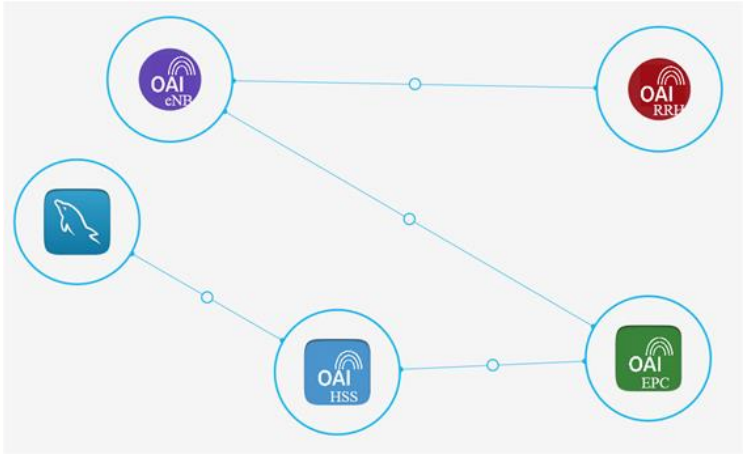
MOSAIC-5G

OPEN AIR INTERFACE



Towards RAN Slicing in 5G

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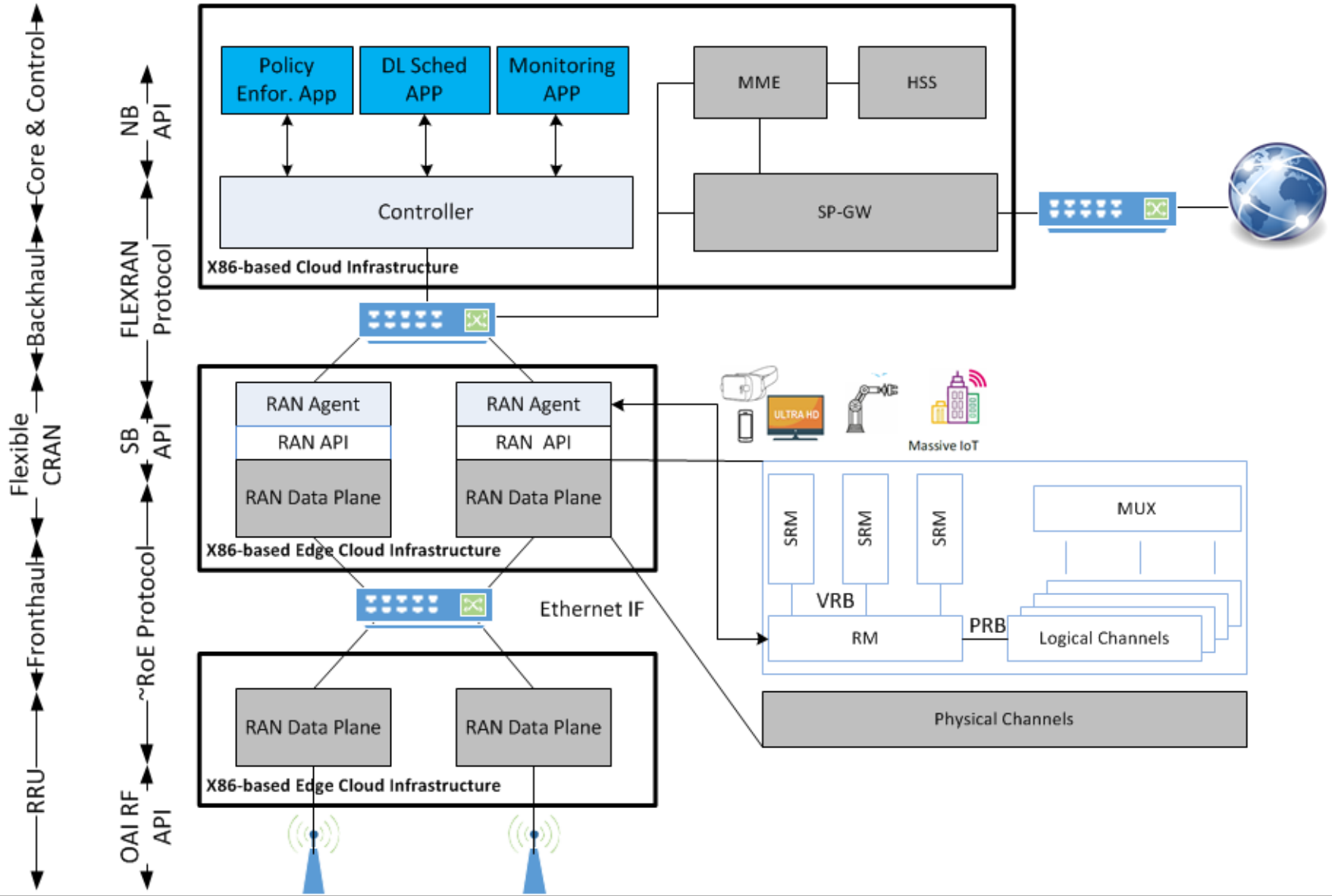
Coherent 5G! PAGODA

European Commission

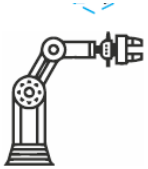
ITU Workshop, Geneva, Switzerland, 6 Dec. 2016

Demo Setup

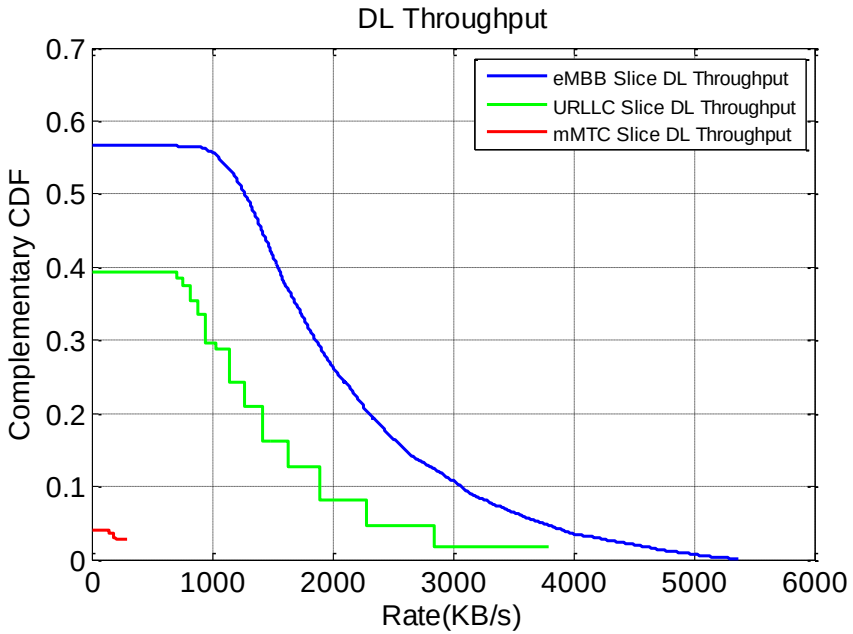

Flexible CRAN
Core & Control
Backhaul
Fronthaul
RRU
NB API
FLEXRAN Protocol
SB API
~RoE Protocol
OAI RF API
Policy Enfor. App
DL Sched APP
Monitoring APP
Controller
X86-based Cloud Infrastructure
MME
HSS
SP-GW
RAN Agent
RAN API
RAN Data Plane
RAN Agent
RAN API
RAN Data Plane
X86-based Edge Cloud Infrastructure
Ethernet IF
RAN Data Plane
RAN Data Plane
X86-based Edge Cloud Infrastructure
ULTRA HD
Massive IoT
SRM
SRM
SRM
MUX
VRB
RM
PRB
Logical Channels
Physical Channels

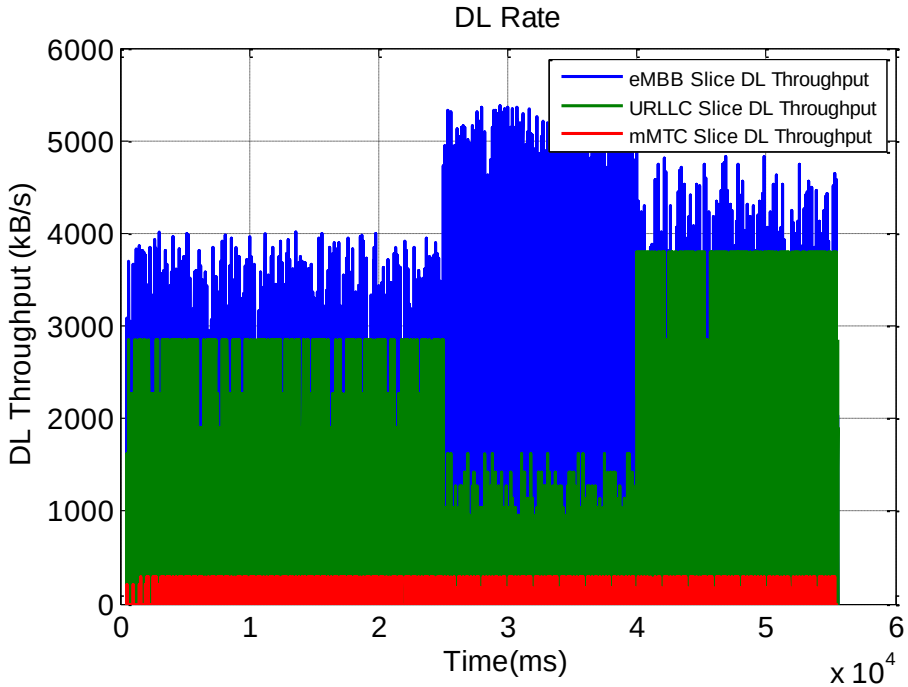
RAN Slicing and Sharing Sample Results

- **3 slices:**
  - Slice-specific scheduling
  - Dynamic Slice Resource management
    - Enforce different policies over time



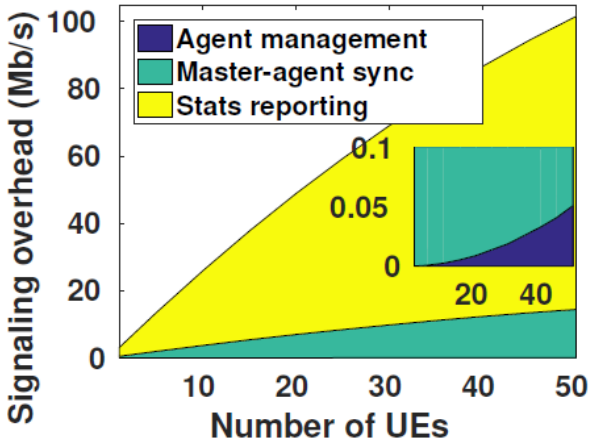
Massive IoT



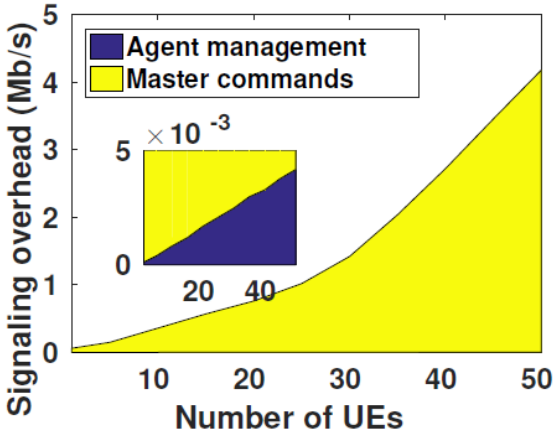


Backhaul Control Channel Requirements Measurement Results

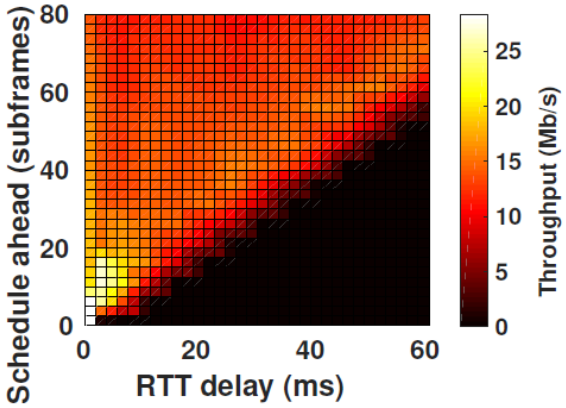
Agent-to-controller



Controller-to-agent



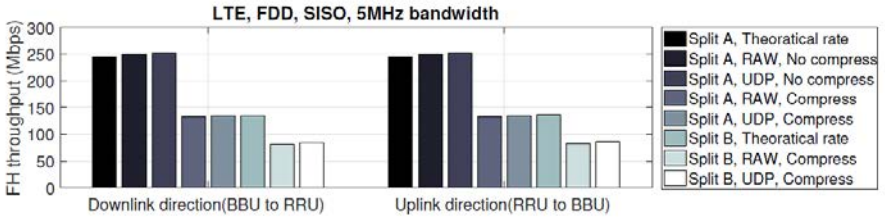
Control-channel-latency

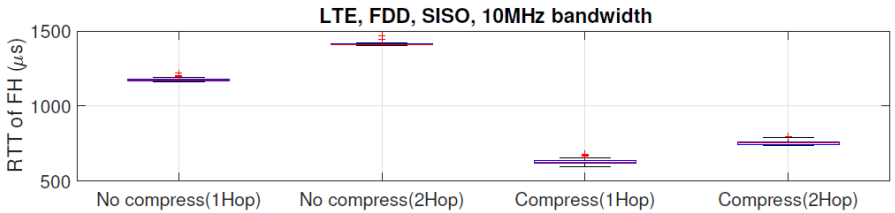


- **Realtime Control requires low-latency high capacity backhaul**

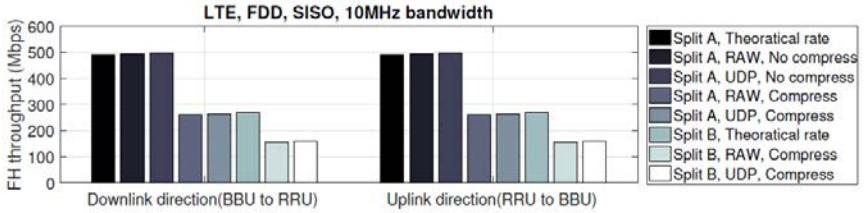
Fronthaul Requirements Measurement results

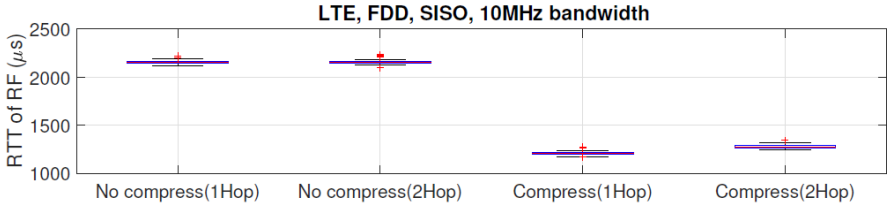
5MHZ, SISO, FDD





10MHZ, SISO, FDD

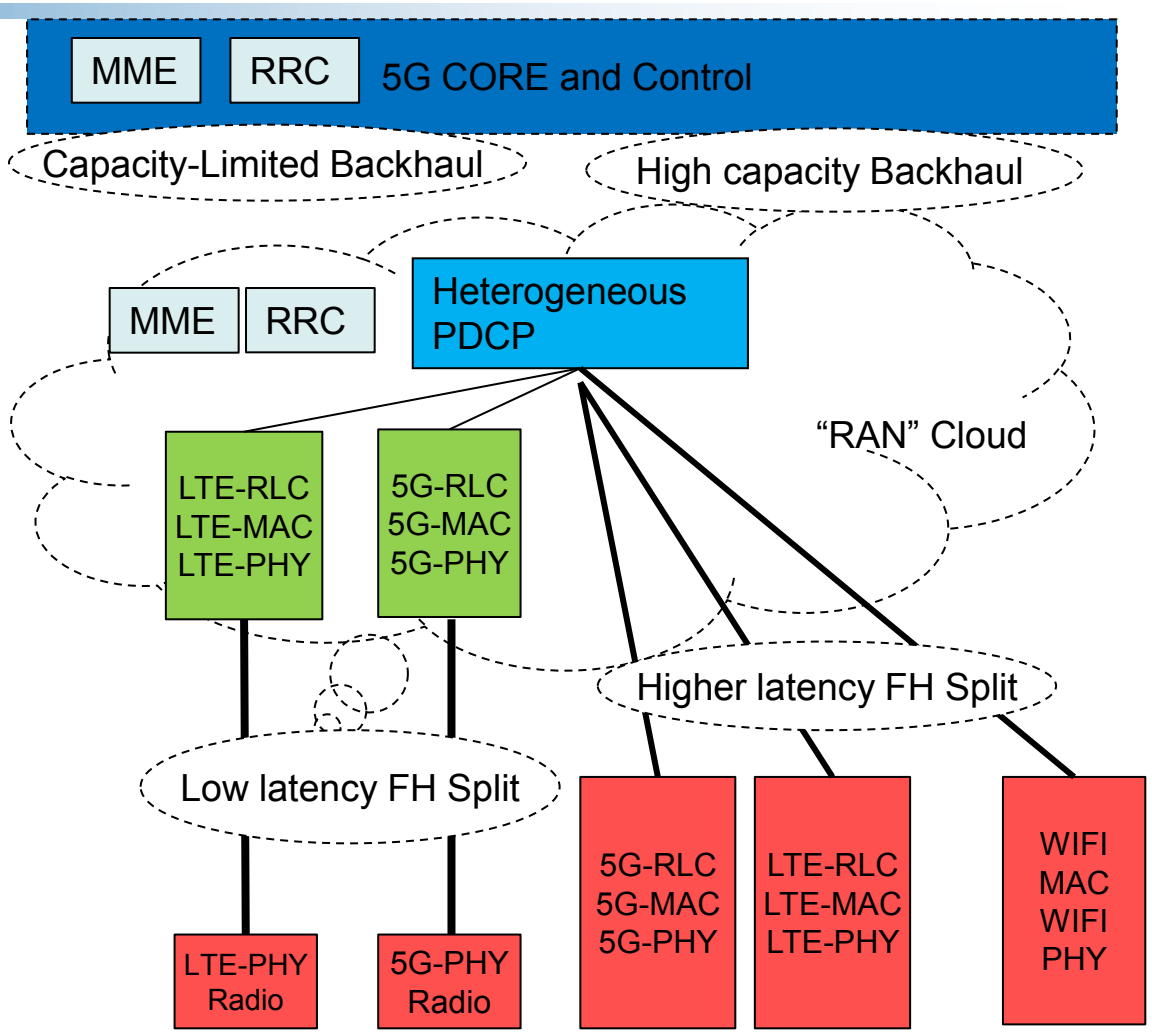




- **Fronthaul capacity depends on man factors**
  - Split, compression, protocol, BW, #RE/UE/RRU, #Antenna/Sectors, #CC

Converged Flexhaul for 5G

- **Tow type of xhaul**
  - Low latency
  - High latency
- **Various topologies**
  - multi-tier – flat
  - Mesh – tree
- **Switching vs routing**
  - Aggregation
  - Distribution
- **Data-plane accelerations**
  - DPDK, NETMAP



Want to know more about RAN slicing demo?

Please feel free to come and checkout the demo