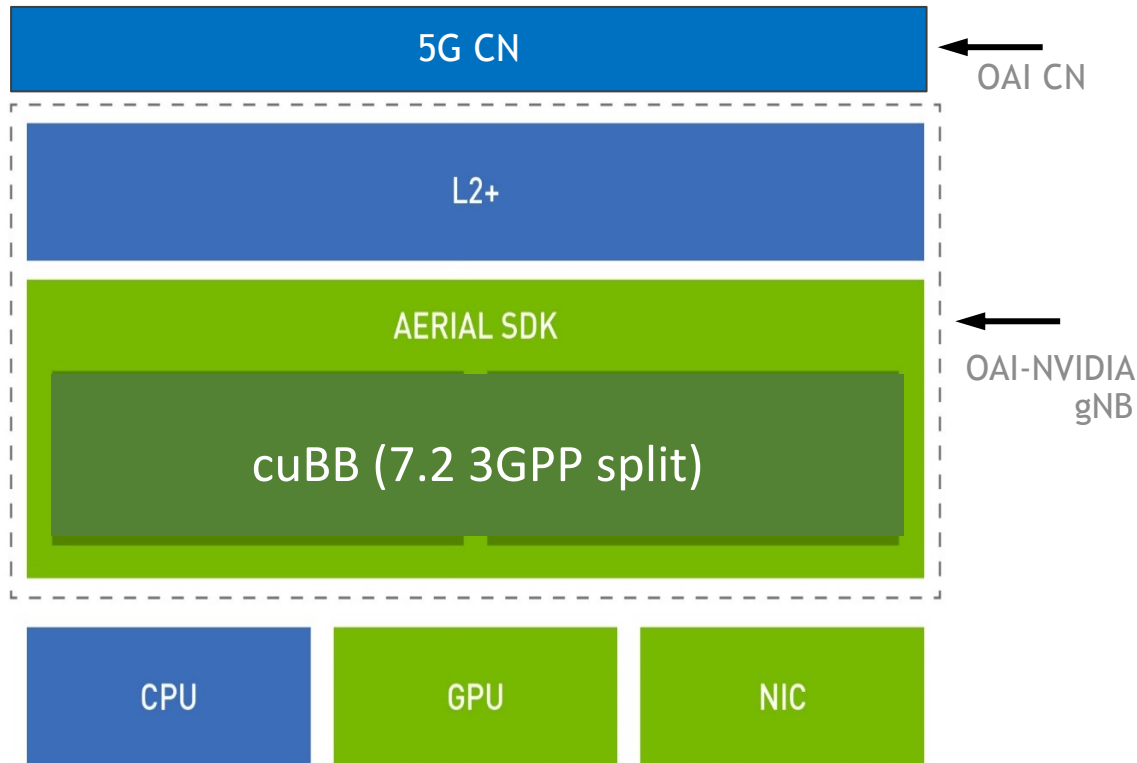


# Demonstrating 5G Virtual RAN with NVIDIA Aerial SDK and OAI



Florian Kaltenberger, Ruben Silva, Luis Pereira (OpenAirInterface)  
Nicholas Hedberg (NVIDIA)

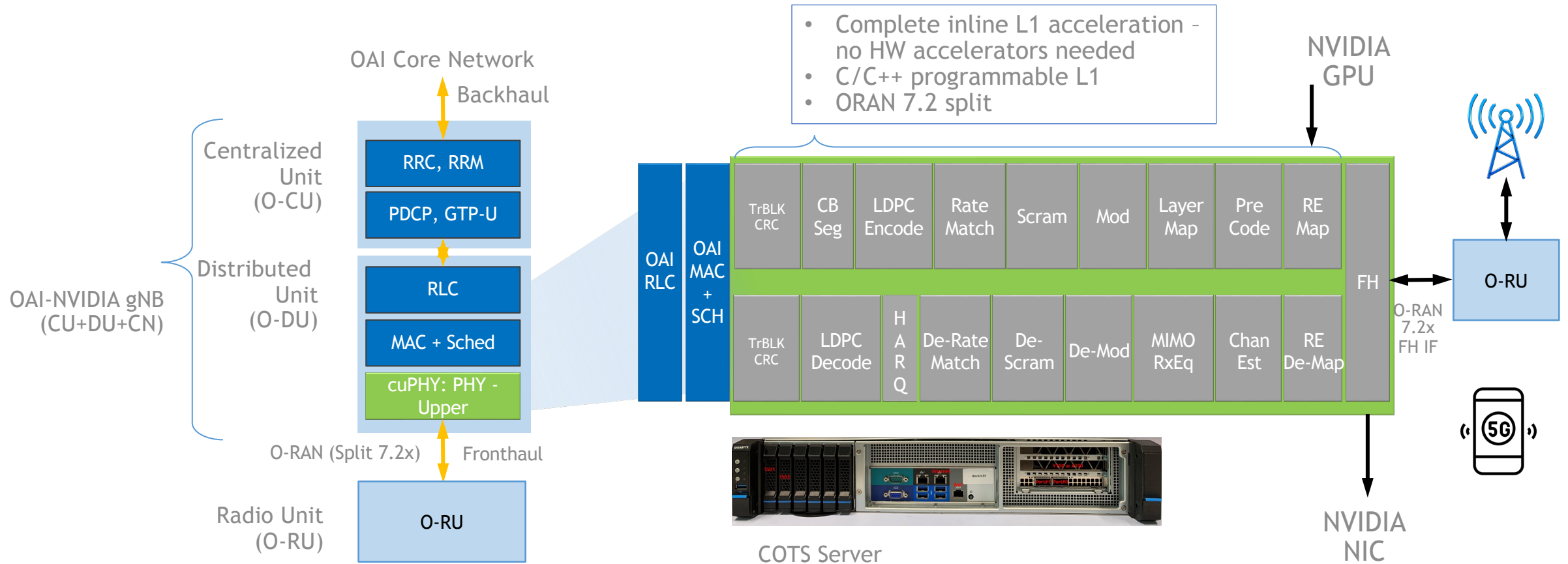
# INTRODUCING NVIDIA AERIAL SDK



- NVIDIA Aerial™ Accelerated 5G Virtual Radio Access Networks (vRAN)
- Interoperable in ORAN 7.2 configuration with commercial RUs and UEs
- COTS Server hosted GPU, CPU, NIC
- Software defined and containerized workload
- Complete access to C/C++ source code for algorithm development and optimization



# NVIDIA AND OAI INTEGRATED 5G NETWORK



- Complete inline L1 acceleration - no HW accelerators needed
- C/C++ programmable L1
- ORAN 7.2 split

- ORAN 7.2x FH IF with eCPRI
- SyncE, G.8273.2 Slave/GM Clock



# Demo Configuration

Features	Current release	Next release
Frequency range	FR1	
Subcarrier spacing	30kHz	
Bandwidth	100MHz	
TDD config	DDDSU	
DL layer	2	4
UL layers	1	2
Number of cells	1	3