

Support of sync NR-NR DC in Rel-15

Agenda Item: 9.3.1

Document for: Discussion and Decision

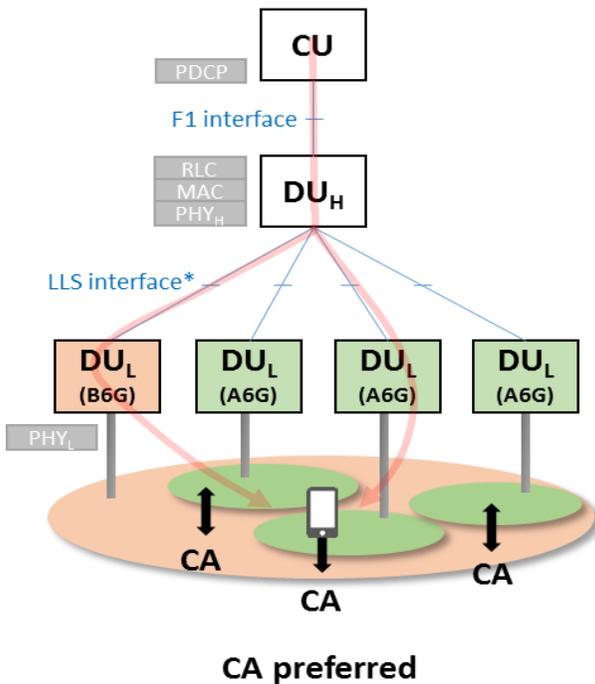
June 2018

Source: KT, KDDI, LGU+, SKT, Samsung

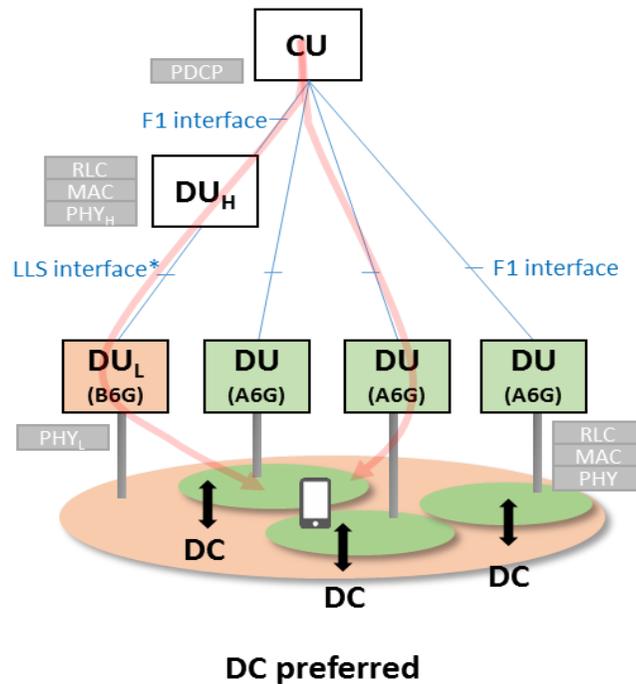
Support of sync NR-NR DC in Rel-15 late drop

- Deployment scenarios

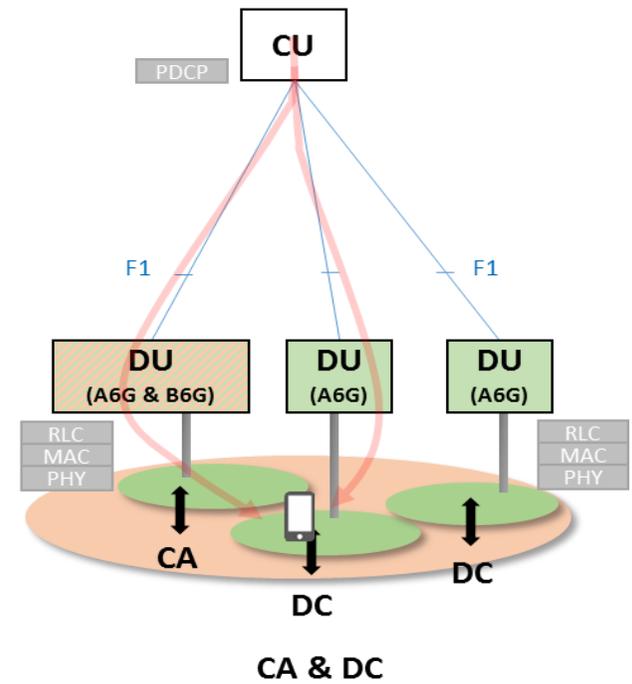
Case 1. DU centralized



Case 2. B6G DU_H centralized and A6G DU distributed



Case 3. DU distributed



- To support CA, high capacity fronthaul to be required for not collocated case.
 - Higher-capacity and low-latency (< 100 us) fronthaul is required
 - Multi-vendor support is not easy due to proprietary interface
- NR-NR DC is required considering a variety of deployment scenarios

Support of sync NR-NR DC in Rel-15 late drop

- We support inclusion of NR-NR DC in Rel-15 late drop with the following limitations
 - Standalone only
 - Sync only
 - DC across FR1-FR2 only (from RAN4 requirement perspective)
- Expected specification impacts in RAN WGs
 - RAN1: no or minimal impact expected (reuse of EN-DC or CA functions)
 - RAN2: to minimize the amount of work, use the same L2 architecture and RRC procedures as EN-DC cases
 - RAN3: no or minimal impact on Xn/NG interface on top of what is needed for NG-ENDC and NEDC
 - RAN4: UE RF requirements and RRM requirements for can be defined based on the requirements for NR SA and EN-DC

Sync NR-NR DC: RAN2 details

| To do list (from the last RAN plenary) | Way-forward |
|---|---|
| Control plane architecture | Follow the same principle of EN-DC |
| QoS flow handling between MN and SN | Have already been discussed to some extent. Can live with the simplest solution |
| SCG configuration handling in Inactive state | Not essential. Can be treated as best effort |
| Security aspects | Follow the same principle of EN-DC |
| Measurement for SCG management | |
| Measurement and gap coordination | |
| UE capability coordination | |

Sync NR-NR DC: RAN4 details

- RAN4 endorsed band combinations for NR-NR DC in R4-1804053

| Combinations | | Contact company | Other supporting companies |
|--------------|-------------|-----------------|----------------------------|
| FR1 NR band | FR2 NR band | | |
| n77 | n257 | KDDI | KT, SKT, Samsung |
| n78 | n257 | KDDI | KT, SKT, Samsung |
| n79 | n257 | KDDI | KT, SKT, Samsung |

- RAN4 further agreed to create the basket WI for NR-NR DC in R4-1806031 pending the decision of introducing NR-NR DC in late drop

| WI Title | Example |
|--|---|
| NR Inter-band CA/DC for 2 bands DL with up to 2 bands UL | Any type of NR CA/DC for 2 bands DL with 2 bands UL including any type of NR intra band CA except for intra non-contiguous 2UL (DL, UL)=(n1A-n3A, n1A or n3A or n1A-n3A) (DL, UL)=(n1C-n3A, n1A or n1C or n1A-n3A or n1C-n3A) |