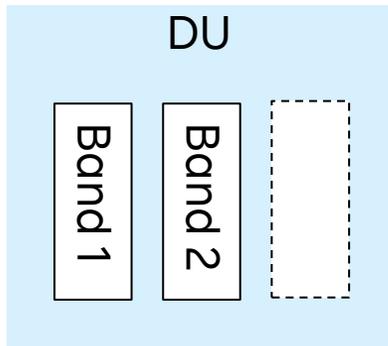


Discussion on inter-DU CA

Rakuten Mobile, Inc.

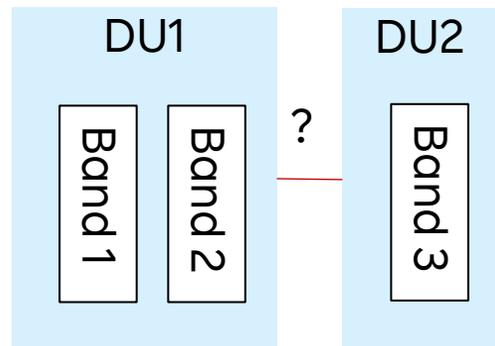
Motivation of inter-DU operation: Current CA restriction

- Carrier aggregation (CA) is possible within bands deployed in the same DU in current specification.
⇒ Restriction when operators think about future extension of the frequency range.
- Although dual connectivity may solve the problem, it requires uplink communication on each cell, leading to the limitation of applicable areas.



Current CA:

To satisfy the single DU constraint for CA, DU is expected to keep redundant resources for future additional bands, which is **not cost efficient**.

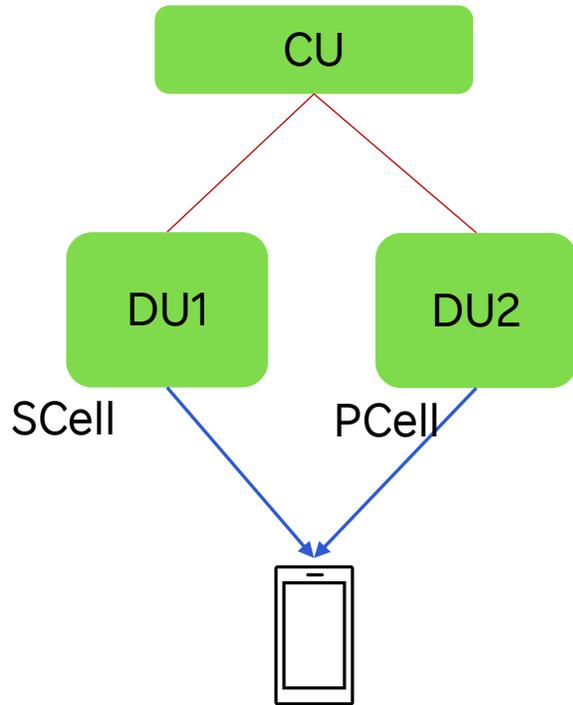


Inter-DU CA:

If multiple DUs can coordinate with each other, from network deployment perspective, operators can realize efficient deployment by optimizing the choice of DUs.

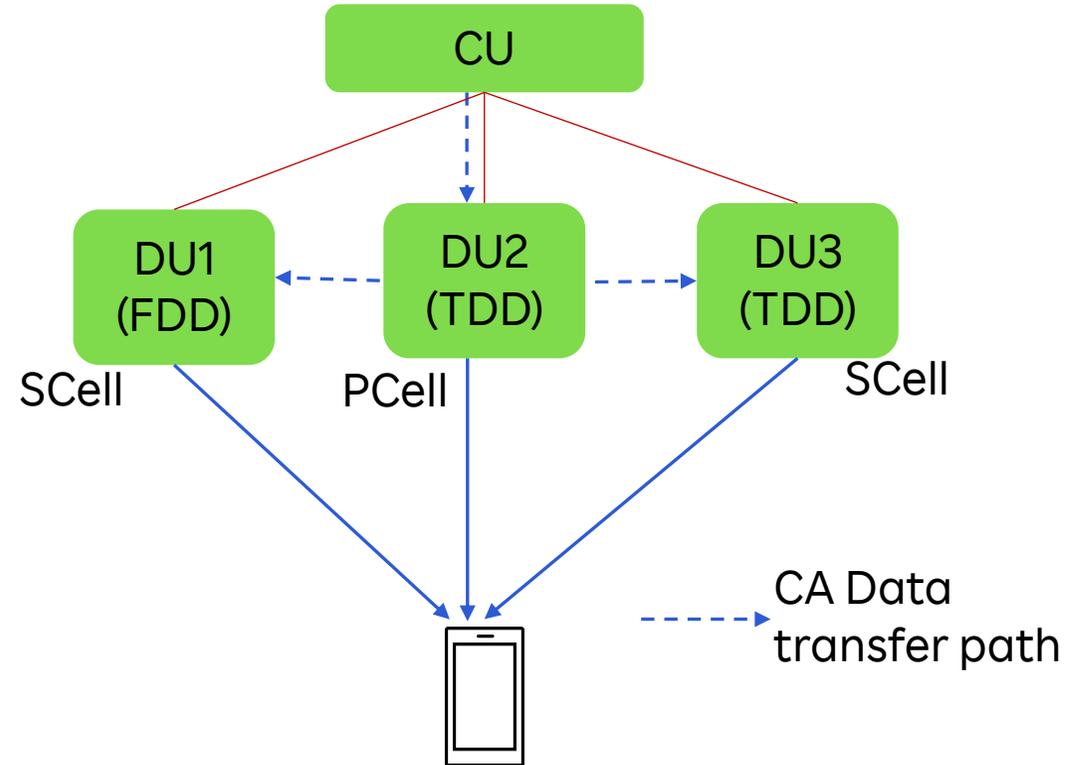
Examples of use cases

■ CA between Co-located DUs



If deployment space allows, flexible addition of carriers for aggregation is possible for operators

■ CA between DUs of same/different duplexing capability



This use case enables operators to include DUs with different duplex support

Proposals

- **To conduct feasibility study of inter-DU coordination to aggregate multiple frequencies**, and to study potential solutions, which mitigate potential degradation due to inter-DU assumption, **in Rel-19**.
- If useful solutions are found, **WI phase should be discussed in Rel-19 or later releases**, depending on time budget situation.
- Potential study areas
 - Evaluation of the inter-DU CA performance
 - Identify potential solutions to realize inter-DU coordination, including possibility of new IF between DUs