3GPP TSG RAN Meeting #101
Bangalore, India, September 11-15, 2023
Agenda Item: 8A.2.3

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Consideration on NR Rel-19 Duplex Evolution

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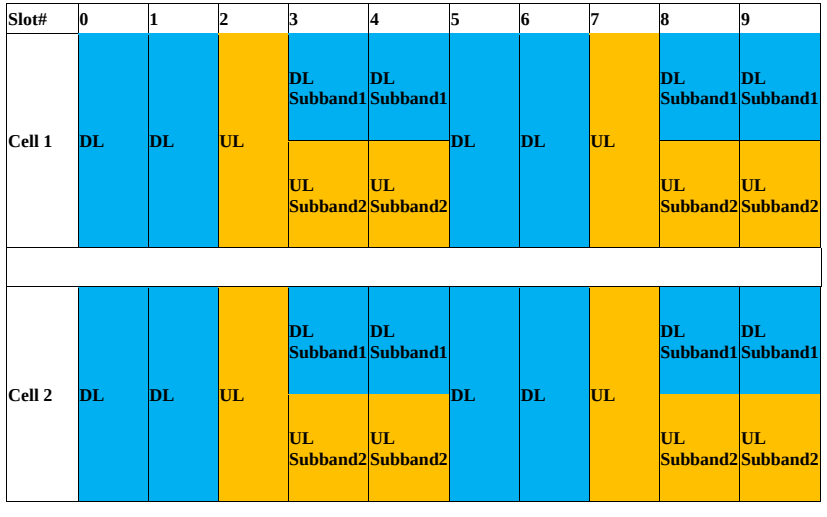
Consideration on Rel-19 Duplex Evolution(1/4)

❑ Motivation

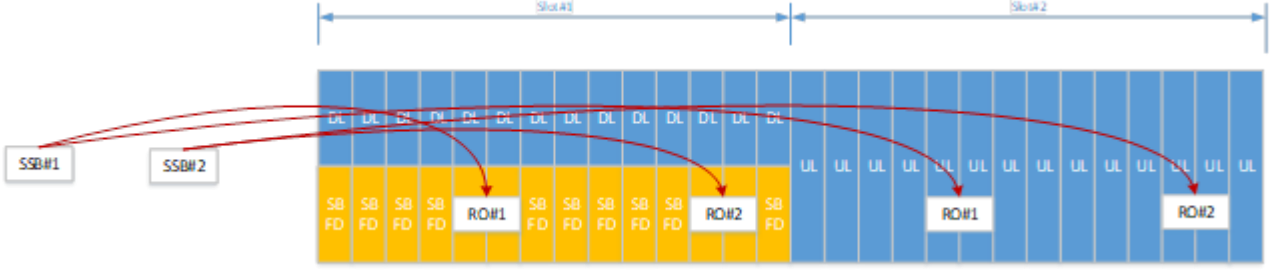
- NR duplex feasibility including both SBFD and dynamic/flexible TDD have sufficiently been studied/evaluated in Rel-18.(Refer to TR 38.858)
- Evaluation results of SBFD in Rel-18 shows the benefit of enhancing UL coverage，increasing UL throughput and reducing UL latency especially in indoor scenario.
- A following-up WI is naturally expected to enable NR duplex feature in Rel-19



Consideration on Rel-19 Duplex Evolution(2/4)

❑ Motivation

- Random access can potentially reduce the random access latency, reduce the PRACH collision probability and/or improve the coverage of PRACH and Msg3. although evaluation were not fully implemented in RAN1. So it is better to enable random access feature for SBFD in Rel-19



Consideration on Rel-19 Duplex Evolution(3/4)

❑ Proposals

- TDD Full Duplex feature should be enabled and considered as Rel-19 WI project, some specified items as follows:
  - ✓ Specify signaling and procedure for SBFD operation with TDD carrier at least in Connection state
  - ✓ Specify SBFD resource allocation , UL/DL transmission and reception behaviors in SBFD symbols for half-duplex Ues and full duplex gNB
  - ✓ Specify enhancement physical layer channels/signals and related procedures for SBFD symbols
  - ✓ Specify inter-gNB inter/intra-subband CLI handling schemes for SBFD and dynamic/flexible TDD

Consideration on Rel-19 Duplex Evolution(4/4)

❑ Proposals(Cont’d)

- TDD Full Duplex feature should be enabled and considered as Rel-19 WI project, some specified items as follows:
  - ✓ Specify enhancement physical layer channels/signals and related procedures on random access for SBFD symbols in connection state/inactive state/idle state

THANKS