vivo

3GPP TSG RAN Rel-18 workshop RWS-210165

Electronic Meeting, June 28 - July 2, 2021

Further CADC enhancements in Rel-18

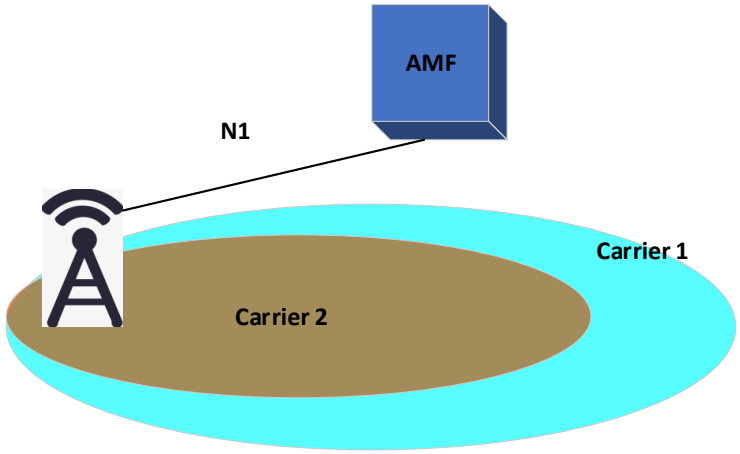
Source: vivo

Document for: Discussion & Decision

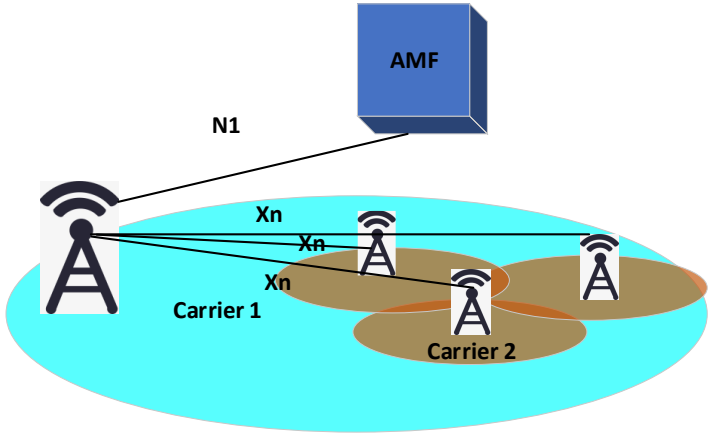
Agenda Item: 4.1

NR deployment for Multiple carrier

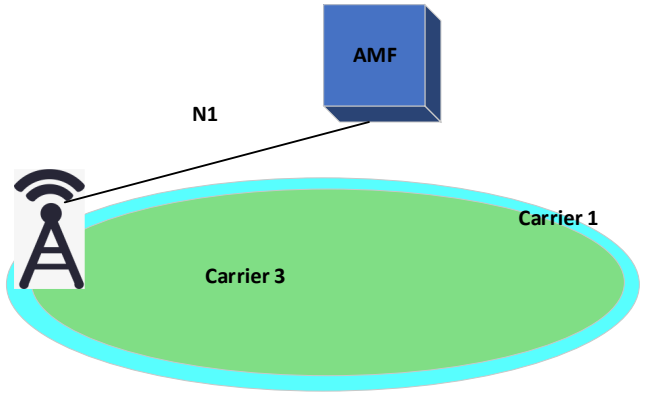
Co-location and non-colocation



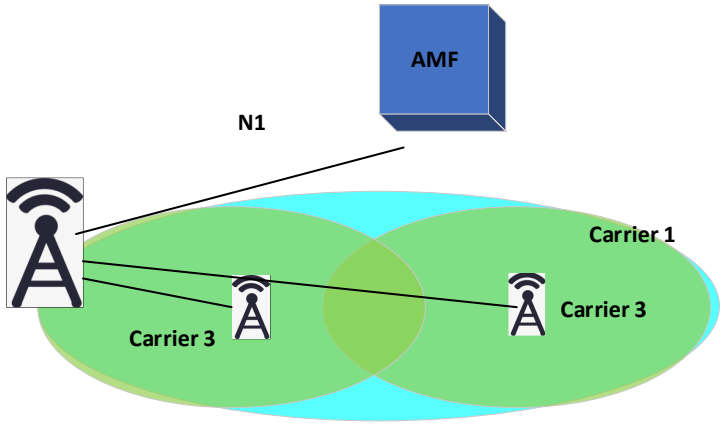
Co-location and different coverage Case1



Non-co-location and different coverage Case2



Co-location and same coverage Case3

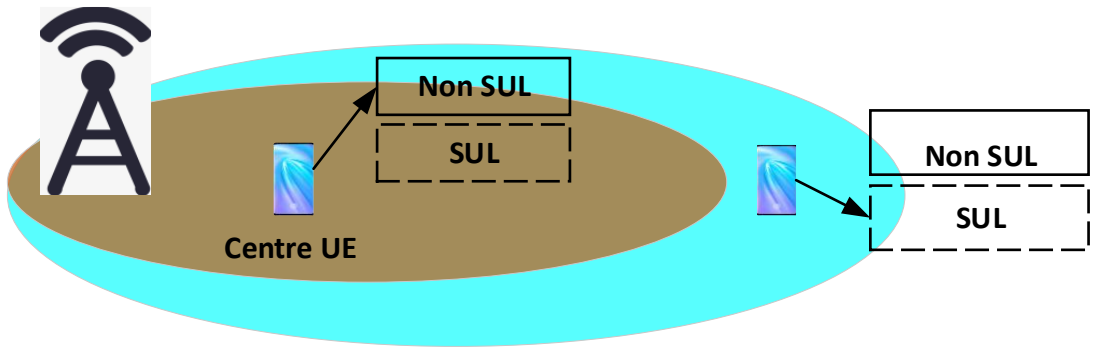


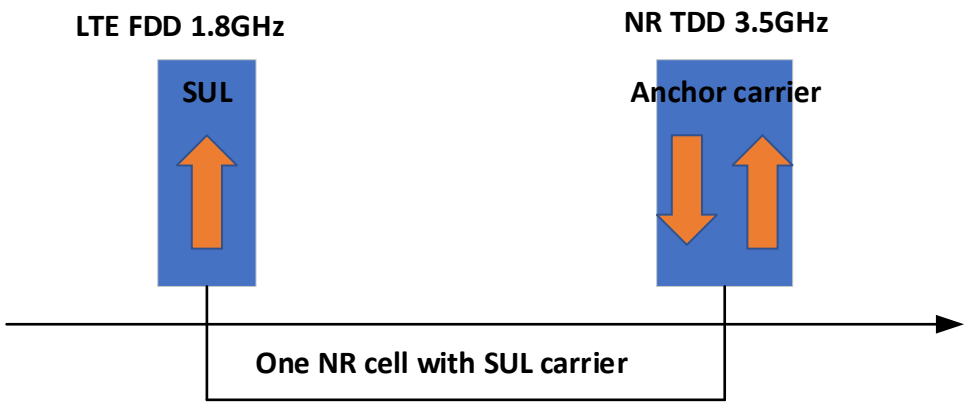
Non-Co-location and same coverage Case4

Observation1: there may be different co-location and non co-location deployment for Multiple Carrier

Flexibility aggregation for Multiple carrier

SUL in NR and Diverse Spectrum in NR





Observation2: Existing SUL Can only be used in co-location deployment for Multiple Carrier

Observation3: SUL carrier and Non-SUL carrier have to be one Cell for both idle UE and RRC connection UE

Observation4: Scattered narrow band in NR is hard to be used for idle UE e.g. sending SIBx.

Proposal1: SUL-Like Coverage enhancement for Non co-location deployment should be studied.

Proposal2: Anchor carrier can be introduced for idle UE, only SIBx transmission in anchor carrier.

MRDC

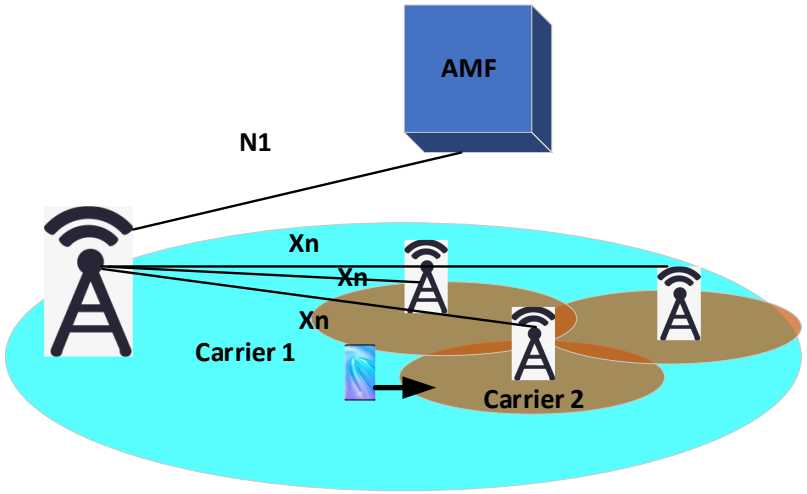
Multi-cell scheduling

- Background
  - RAN1 work on two-cell PDSCH scheduling via a single DCI for specification support in Rel-17 DSS is stopped due to Rel-17 WID scope only focusing on two DL carriers within FR1, RAN1 did not study the potential benefits for more than 2 carriers for both UL and DL within FR1 and FR2.
  - There is a potential to further improve NR DL/UL capacity or resolve scheduling limit in CA due to BD/CE budget in some specific scenarios, e.g., in higher frequency, in intra-band CA, by using the feature of single DCI scheduling multiple DL/UL transmission

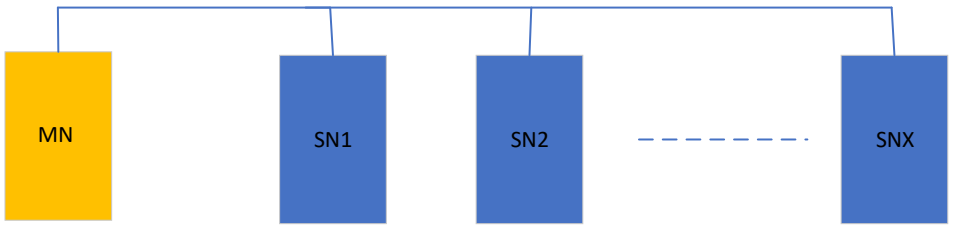
- Proposal3: Study, and if agreed specify PDCCH of P(S)Cell/SCell scheduling PDSCH/PUSCH on multiple cells using a single DCI within FR1 and FR2

Fast activation

Fast SN switching/activation



Move among small Cells



Multi-SN is configured for the UE

Observation1: always RRC reconfiguration for SN change is low efficiency for MR-DC in small cell case

Proposal4: Fast SN Switching/activation should be study when Multi-SN can be configured for the UE.

Note1: Only two TX transmissions are allowed at same time

CA/DC enhancement in R18

Scope

- Improved multi-carrier operation
  - Study SUL-like initial Access for non-co-location deployment for idle UE
  - Study to introduce anchor carrier to Scattered narrow band usage in NR for idle UE.
  - Study, and if agreed specify PDCCH of P(S)Cell/SCell scheduling PDSCH/PUSCH on multiple cells using a single DCI for FR1 and FR2
- Fast SN switching/activation
  - Study Fast SN switching/activation when Multi-SN can be configured for the UE
  - Note1: Only two TX transmissions are allowed at same time

THANK YOU.
谢谢。