

3GPP TSG RAN Rel-19 workshop

RWS-230066

Taipei, June 15 - 16, 2023

Agenda Item: 5

Source: vivo

Title: Work item on further enhanced MUSIM operation in Rel-19

Document for: Discussion

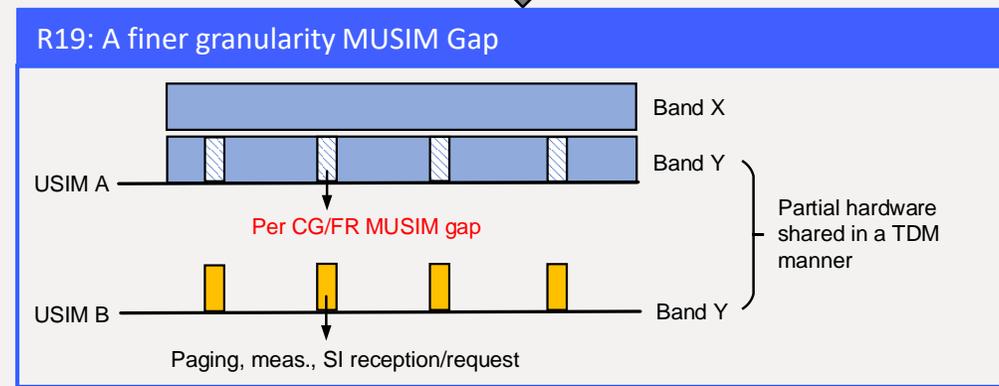
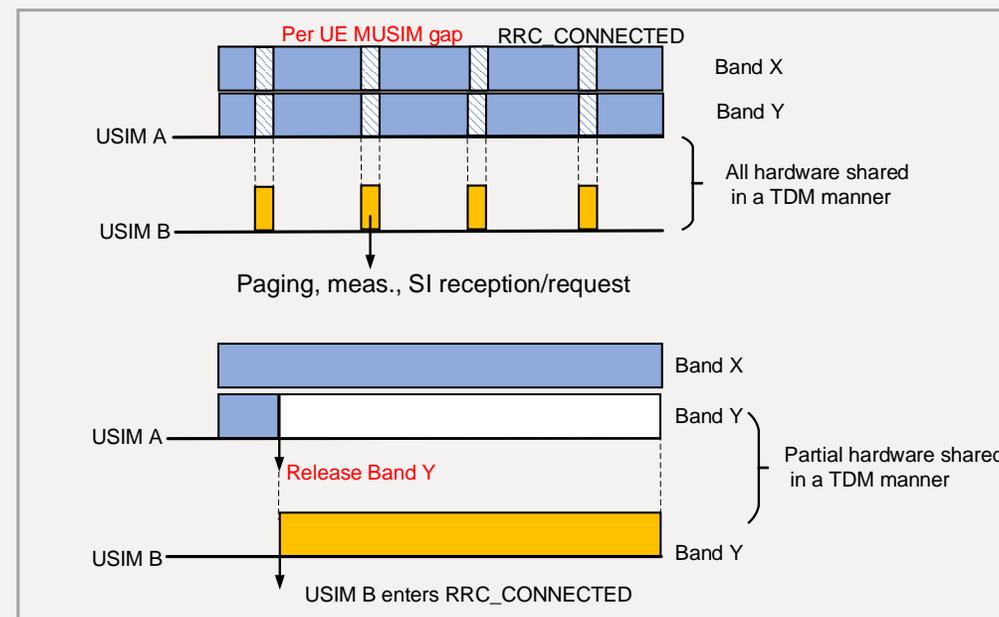
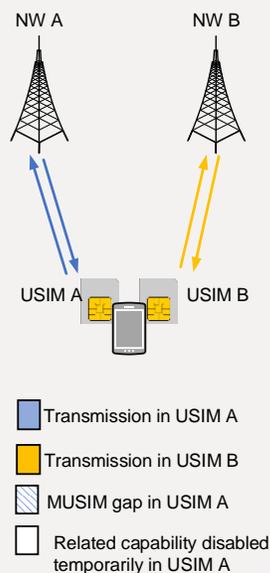
MUSIM-Gap enhancements

Motivation: For the periodic/short time activities in NW B, a finer granularity MUSIM gap in NW A is more suitable:

- R17 per UE MUSIM gap causes data interruption in NW A
- R18 MUSIM capability switching causes the related resources release with data throughput loss in NW A

Potential objectives:

- Specify the request/configuration of a finer granularity MUSIM gap (e.g. per CG, per FR, per CC) [RAN2]
- Specify new RRM requirement for the finer granularity MUSIM gap [RAN4]



MUSIM-Optimization for same operator and RAN sharing

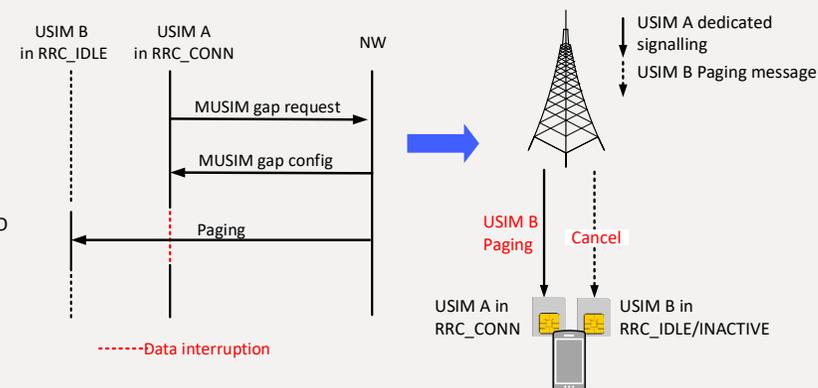
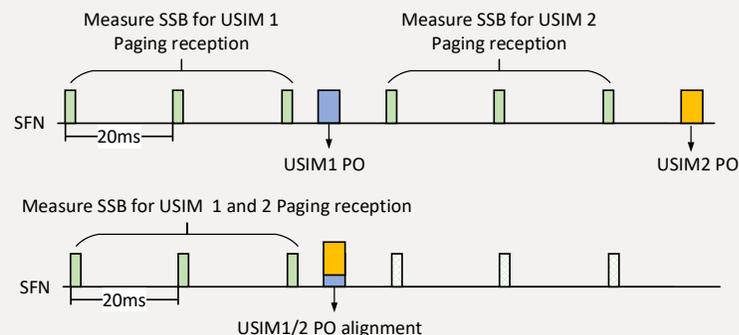
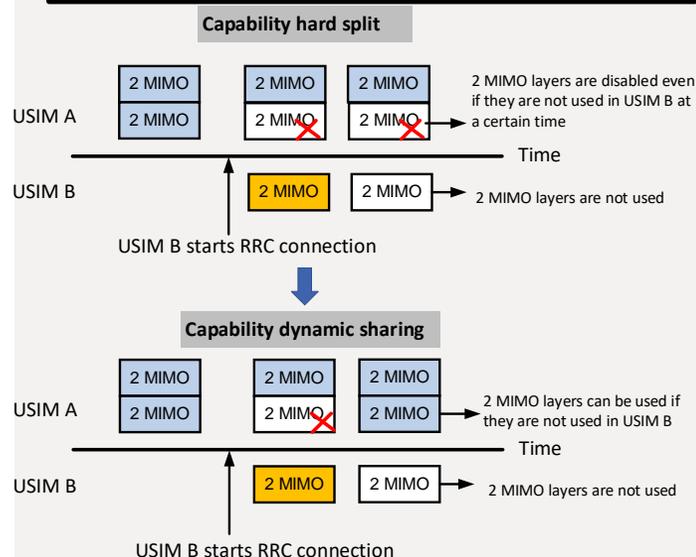
Motivation:

- Based on vivo statistics in China, 34% of dual USIM phones have the USIMs from the same operator. And in case of RAN sharing, the USIMs in the same device from the different operators may be served by the same RAN.
- The performance of both network and UE can be improved if the network knows multiple USIMs are in the same device.

Dynamic capability sharing in both RRC_CONN:
Avoid throughput loss

PO alignment in both RRC_IDLE/INACTIVE:
UE power saving gain: 35%

RRC_CONN+RRC_IDLE: Paging proxy
Avoid unnecessary data interruption in one NW



Potential objectives: The UE reports the association information of multiple USIMs to the network, e.g., to CN or RAN. The coordination of RRC configuration and scheduling between USIMs can be based on the association information. [RAN2/SA2/CT1]

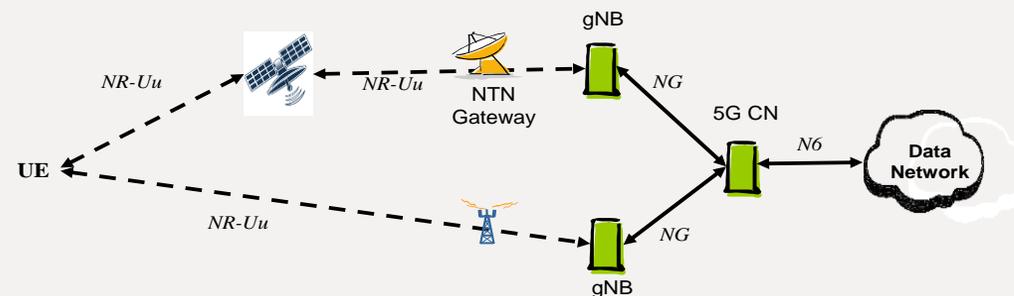
MUSIM-dual steering

Motivation: Dual steering is being discussed in SA1 R19 (SP-220445)

- Dual steering is highly similar to the dual active MUSIM case, i.e., two simultaneous 3GPP accesses for two RAN nodes and no RAN node coordination between two RAN nodes. Thus, dynamic capability change may be also needed in dual steering case.
- SA1 assumes that it will be no RAN impacts if independent hardware/RF are used at the UE. It is not realistic from RAN point of view, i.e., interference between UL and DL at the UE side.

Potential objectives:

- Identify and specify the RAN impacts for dual steering based on the existing MUSIM mechanism [RAN2]



TR 22.841

Objectives: To specify MUSIM enhancements in Rel-19:

- Enhancements of finer granularity (e.g. per CG, per FR, per CC) MUSIM gap:
 - Specify the request/configuration of a finer granularity MUSIM gap [RAN2]
 - Specify new RRM requirement for the finer granularity MUSIM gap [RAN4]
- The optimization for same operator and RAN sharing:
 - Specify UE indicating the association information of multiple USIMs to the network, e.g., to CN or RAN. The coordination of RRC configuration and scheduling between USIMs can be based on the association information. [RAN2/SA2/CT1]
- Identify and specify the RAN impacts for dual steering based on the existing MUSIM mechanism [RAN2]

THANK YOU.

谢谢。