3GPP TSG-RAN WG4 Meeting #100-e [draft]R4-2115645

Electronic Meeting, 16th– 27th Aug, 2021

**Agenda Item: 9.17.2**

**Source: Samsung**

**Title: WF on RF impact for Rel-17 eIAB**

**Document for: Approval**

# Introduction

This Way forward contains the agreement and issues for further discussion on RF impact due to Rel-17 IAB enhancement based on 1st round summary in [1].

# Way forward

**Simultaneous operation of IAB-node’s child and parent links**

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| **Agreement:**No RF requirement impact identified on Rel-17 IAB simultaneous operation including MT TX/DU RX and MT RX/DU TX.**Way forward:** RAN4 RF specification impact due to Simultaneous MT TX/DU TX for FDM operation* No RF requirement impact for MT TX/DU TX simultaneous operation in FDM mode except below points
	+ FFS on whether exception on unwanted emission or restriction on scenario can be addressed in core spec, conformance spec or TR.
		- Candidate exception on unwanted emission: absolute ACLR is not applied for power controlled link
		- Candidate restriction on scenario: FDM operation with shared beam case is assumed/considered for the same class and/or similar power capability between IAB-DU and IAB-MT only in RAN4 spec.
* Further study on conformance testing detail on this case is not precluded in perf. part such as testability, test coverage and test configuration

RAN4 RF specification impact due to Simultaneous MT RX/DU RX for FDM operation* No RF requirement impact for MT RX/DU RX simultaneous operation in FDM mode based on proper power control, which can ensure such operation mode will not assumed for scenario beyond legacy requirement.
* Further study on conformance testing detail on this case is not precluded in perf. part such as testability, test coverage and test configuration
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**Timing enhancement**

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| **Way forward:**Timing error between IAB-DU and IAB-MT transmission within one node for timing case#6:* Timing error between IAB-DU and IAB-MT simultaneous transmission is to be considered as new dedicated RAN4 requirement
	+ Option 1: In RF clause
	+ Option 2: In RRM clause
* Take 3us as starting point for maximum Timing error between IAB-DU and IAB-MT simultaneous transmission
	+ To review this value if improvement needed dependent on RAN1 agreement

Timing error between parent IAB-DU and child node IAB-DU transmission:* It is acknowledged that for shared hardware architecture, the parent IAB node can tolerate the maximum 3 us timing error uncertainty between its child IAB node and its own DL timing
	+ This has already been covered in Rel-16 cell phase synch requirement and can be ensured in legacy release.
	+ No RAN4 requirement impact is expected due to this currently.
	+ This can be reviewed if update needed due to further agreement in RAN1

Others* It’s suggested not to continue the discussion on RAN1 Alt 1 and also sync source issue within this RAN4 meeting.
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# Reference

[1] R4-2115606, Email discussion summary for [100-e][316] NR\_eIAB

# Discussion

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| Company  | Comments |
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