**3GPP TSG-RAN WG1 Meeting #105-eR1-210xxxx**

**e-Meeting, 10th – 27th May 2021**

**Title:** [Draft] LS on RAN1 agreements on RAN2-led features for RedCap

**Response to:**

**Release:** Rel-17

**Work Item:** Support of reduced capability NR devices (NR\_redcap-Core)

**Source:** NTT DOCOMO, INC. [to be RAN1]

**To:** RAN2

**Cc:**

**Contact person:** Shinya Kumagai, shinya.kumagai (at) docomo-lab.com

**Send any reply LS to:** 3GPP Liaisons Coordinator, mailto:3GPPLiaison@etsi.org

**Attachments:**

# 1 Overall description

RAN1 discussed RAN1 aspects on RAN2-led features for RedCap and agreed to send RAN2-related agreements/working assumptions/conclusions to RAN2 to facilitate their work on RAN2-led features for RedCap. RAN1 respectfully asks RAN2 to take the agreements/working assumptions/conclusions into account in their further work on RAN2-led features for RedCap and provide feedback, if any.

Followings are the agreements/working assumptions/conclusion on RAN1 aspects on RAN2-led features for RedCap made in RAN1#105-e meeting:

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| Working assumption:* For 4-step RACH, support the early indication of RedCap UEs at least in Msg1.
	+ The early indication in Msg1 can be configured to be enabled/disabled
		- FFS How to support enable/disable the early indication
	+ FFS details e.g.:
		- separate initial UL BWP
		- separate PRACH resource
		- PRACH preamble partitioning
	+ FFS the possibility of supporting Msg3 for the early indication

Agreement: (if the above working assumption is confirmed)* Early indication of RedCap UEs in Msg1 can be enabled/disabled via SIB

Agreement:* Support 2-step RACH for RedCap UEs as an optional feature
	+ FFS details of early indication in MsgA, e.g.:
		- Separation of 2-step RACH resources or MsgA preambles
		- Separation of initial UL BWP
		- Using a new indication in MsgA PUSCH part
	+ Note: Discussion on 4-step RACH for early indication should be prioritised

**Working assumption:*** RedCap UE type is defined based on one of the following options
	+ Option 2: Only include the reduced capabilities that the network needs to know during initial access, if any.
	+ Option 4: The corresponding minimum set of the reduced capabilities that one RedCap UE type shall mandatorily support
	+ FFS: details of the set of reduced capabilities

**Conclusion:*** RAN1 postpones the discussion on constraining of reduced capabilities, and if deemed necessary, RAN1 can come back
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For reference, RAN1 also agreed following RAN2-related agreement/conclusion in RAN1#105-e meeting:

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| **Agreement:**For UE capability signalling, the number of Rx branches for RedCap is implicitly indicated by thecorresponding capabilityparameter *maxNumberMIMO-LayersPDSCH* in the existing UE capability framework.* Detailed signalling is up to RAN2

**Conclusion*** No consensus to support early identification of the number of Rx branches in Msg1/Msg3/MsgA for Redcap UE in Rel-17
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# 2 Actions

**To RAN2:**

**ACTION:** RAN1 respectfully asks RAN2 to take the above into account in their further work on RAN2-led features for RedCap and provide feedback, if any.

# 3 Dates of next TSG-RAN WG1 meetings

TSG-RAN WG1 Meeting #106-e 16th – 27th August 2021 Online

TSG-RAN WG1 Meeting #106bis-e 11th – 19th October 2021 Online