**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 to RAN2 to facilitate their work on RAN2-led features for RedCap. RAN1 respectfully asks RAN2 to take the agreements into account in their further work on RAN2-led features for RedCap. RAN1 would also like to ask RAN2 to comment on the feasibility of the RAN1 working assumptions, and whether RAN2 has any other input on these matters.

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 agreements 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. RAN1 would also like to ask RAN2 to comment on the feasibility of the RAN1 working assumptions, and whether RAN2 has any other input on these matters.

# 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