**3GPP TSG-RAN WG4 Meeting #102-eR4-220xxxx**

**Electronic Meeting, 21 February – 3 March, 2022**

**Title: LS on R17 NR MG enhancements – Pre-configured MG**

**Response to:**

**Release:** Release 17

**Work Item:** NR\_MG\_enh-Core

**Source:** RAN4

**To:** RAN2

**Cc:**

**Contact Person:**

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**Attachments: -**

**1. Overall Description:**

RAN4 would like to inform RAN2 that RAN4 has reached the following conclusions related to Pre-configured MG during RAN4#102-e.

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For signalling-based Pre-configured MG activation and deactivation under CA:

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| * An additional ON/OFF indication for each SCell is needed to indicate the Pre-configured MG status when the SCell is de-activated.
* For per-UE Pre-configured MG,
	+ the UE determines that the Pre-configured MG is ON (activated) if the Pre-configured MG status indication for the active DL BWP for any of the activated CCs is ON, or if the additional status indication for any of the deactivated SCCs is ON,
	+ otherwise, the UE determines that the Pre-configured MG is OFF (deactivated)
* For per-FR Pre-configured MG,
	+ the UE determines that the Pre-configured MG is ON (activated) if the Pre-configured MG status indication for the active DL BWP for any of the activated CCs is ON, or if the additional status indication for any of the deactivated SCCs in the corresponding FR is ON,
	+ otherwise, the UE determines that the Pre-configured MG is OFF (deactivated)
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For PRS measurements within measurement gaps when a Pre-configured MG is provided by the network:

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| * RAN4 considers that a Pre-configured MG that is not always ON (activated) as determined from the signalling provided by the network, or if no such signalling is provided (i.e. autonomous rules are applied to determine the status of the Pre-configured MG), is not sufficient to perform PRS measurements.
* In the above scenario, the UE will inform the network that it needs measurement gaps to perform PRS measurements by initiating the existing LocationMeasurementIndication procedure.
* RAN4 understands that for signalling based Pre-configured MG activation and deactivation, the network may decide to update the signalling of the activation/deactivation status of the Pre-configured MG so that it is always activated (regardless of active DL BWPs and SCell activation status) or to configure a legacy MG. If neither action is taken by the network, PRS measurement requirements may not apply if the Pre-configured MG is deactivated. RAN4 will continue to discuss how to handle the above scenario for autonomous rule based Pre-configured MG activation and deactivation.
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RAN4 respectfully asks RAN2 to take the above information into account and define signalling support for signalling-based Pre-configured MG activation and deactivation.

**2. Actions:**

**To RAN2:**

RAN4 respectfully asks RAN2 to take the above information into account and define signalling support for the signalling-based Pre-configured MG activation and deactivation.

**3. Date of Next TSG-RAN4 Meetings:**

RAN WG4 Meeting #103-e May 16 – May 27, 2022 Electronic Meeting

RAN WG4 Meeting #104 August 22 – August 26, 2022 Toulouse, France