3GPP TSG RAN WG1 #107-e R1-211XXXX

e-Meeting, November 11th – 19th, 2021

**Title: DRAFT LS on MCCH change notification**

**Response to: R1-2104165 (R2-2104639) LS on broadcast session delivery and MCCH design**

**Release: Rel-17**

**Work Item: NR\_MBS**

**Source:** **BBC [RAN1]**

**To:** **RAN2**

**Cc:**

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

# 1 Overall description

RAN1 would like to thank RAN2 for the LS R1-2104165 (R2-2104639) on broadcast session delivery and MCCH design, and the LS R1-2106410 (R2-2106544) on update for MCCH design. The following is the RAN1 response for the question listed in R1-2104165 (R2-2104639) on details of the RNTI and DCI design for carrying MCCH change notifications.

**Question:** Details of the RNTI and DCI design for carrying MCCH change notifications.

**RAN1 answer:**

Regarding MCCH change notification, RAN1 has made the following agreements:

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| Agreement:  For RRC\_IDLE/RRC\_INACTIVE UEs, for broadcast reception, study the following alternatives for MCCH change notification indication due to session start:   * Alt 1: Define a dedicated RNTI to scramble the CRC of a DCI indicating a MCCH change notification; * Alt 2: Use of a field in a DCI format scheduling a MCCH without a dedicated RNTI for MCCH change notification;   Other solutions are not precluded and it is also not precluded whether to support both Alt1 and Alt2.  Conclusion:  It is up to RAN2 to decide the specific contents of the MCCH change notification, e.g, whether notification only informs about session start, whether or not notification also informs about session modification/stop or whether or not the notification informs about any other information.  Agreement:  Study and reach an agreement by RAN1#106b-e on whether Alt1 and Alt2 for MCCH change notification indication can accommodate at least 2 bits for the notification of MCCH configuration changes due to a session start and the notification of MCCH configuration changes of an ongoing session (including session stop).  Working assumption:  Alt 2 (from previous agreement) is supported for broadcast reception with RRC\_IDLE/RRC\_INACTIVE UEs for the notification of MCCH configuration changes.   * Send an LS to RAN2 with the mechanism agreed in RAN1   **Agreement**  Confirm the working assumption made at RAN1#106bis-e:  Working assumption:  Alt 2 (from previous agreement) is supported for broadcast reception with RRC\_IDLE/RRC\_INACTIVE UEs for the notification of MCCH configuration changes.   * Send an LS to RAN2 with the mechanism agreed in RAN1 |

During RAN1#107-e meeting, RAN1 discussed further aspects on bit toggling for each of the bits indicating MCCH configuration changes. With bit toggling the information of the change indication lies in the change of the bit value rather than the absolute value.

The bit for MBS session activation is thus toggled each time a new MBS session is activated. If the initial value is e.g. ‘0’, this means that at the first MCCH PDCCH DCI in a Modification Period the UE will check whether the bit value has changed. If the UE detects that the value has changed to ‘1’ this implies that one MBS session is activated, and the UE will find out more by investigating the MCCH content. This bit value of ’1’ is retained in all MCCH PDCCH DCIs until there is a new MBS session activation to be notified to the UE, in which case the bit value changes back to ‘0’ and stays like that until a new change occurs etc.

The bit for change of MCCH content would work in the same way, i.e. the UE would check the first MCCH PDCCH DCI in each Modification Period whether the second bit has changed and, if so, would further investigate the MCCH content. If none of the bits are toggled, the UE can safely ignore the MCCH PDCCH until the start of the next Modification Period.

RAN1 confirms that it is up to RAN2 to decide whether bit toggling for the MCCH configuration changes is adopted or not.

# 2 Actions

**To: RAN2**

**ACTION:** RAN1 respectfully asks RAN2 to take the above information into account.

# 3 Dates of next TSG RAN WG1 meetings

TSG RAN WG1 Meeting #107bis-e 17th Jan – 25th Jan, 2022 E-meeting

TSG RAN WG1 Meeting #108-e 21st Feb – 3rd Mar, 2022 E-meeting