**3GPP T****SG-RAN WG2 Meeting #115-e R2-210xxxx**

**E-meeting, 9th – 27th August 2021**

**Agenda item:**8.1.3.3

**Source:** Huawei, HiSilicon

**Title:** [Pre115-e][004][MBS] Summary 8.1.3.3 L3 Centric Other

**Document for:** Discussion and Decision

# 1 Introduction

This contribution aims at providing a summary of contributions submitted to AI 8.1.3.3 which covers miscelanous L3 centric aspects of MBS design, e.g. MCCH contents and details, general RRC aspects, BWP. The following 16 contributions are summarized:

1. R2-2107014, Discussion on beam sweeping transmission for delivery mode 2, OPPO
2. R2-2107038, Discussion on MCCH Contents and General RRC Aspects, CATT, CBN
3. R2-2107052, MCCH Configuration, MediaTek Inc.
4. R2-2107236, MCCH Contents and RRC Aspects for MBS, Samsung
5. R2-2107341, MCCH contents for NR MBS, ZTE, Sanechips
6. R2-2107366, RRC issues of multicast session, Spreadtrum Communications
7. R2-2107529, Configurations for MRB and scheduling via MCCH in DM2, Futurewei
8. R2-2107531, Handling MBS during conditional handover, Futurewei
9. R2-2107546, NR MBS control signalling aspects for UEs in different RRC states, Qualcomm Inc
10. R2-2107579, MBS reception in CONNECTED state, Apple
11. R2-2107691, Miscellaneous Aspects of MBS Provisioning, Nokia, Nokia Shanghai Bell
12. R2-2108036, MBS related configuration for delivery mode 2, CHENGDU TD TECH LTD.
13. R2-2108049, MBS BWP UE capability and MBS resources, Sony
14. R2-2108084, Other aspects for MBS, Ericsson
15. R2-2108203, MCCH acquisition in RRC\_CONNECTED state, Huawei, HiSilicon
16. R2-2108456, Details for MCCH design, Intel Corporation

# 2 Summary for other in L3 Centric

## 2.1 Broadcast

### 2.1.1 MCCH information

In LTE SC-PTM, the SC-MCCH information (i.e. information transmitted in *SCPTMConfiguration* message sent over SC-MCCH) provides the list of ongoing MBMS sessions transmitted via SC-MRB and, for each MBMS session, the associated G-RNTI and scheduling information. In particular, for each SC-MTCH, the scheduling information provided on SC-MCCH includes:

- **SC-MTCH scheduling cycle**;

- **SC-MTCH on-duration**: duration in downlink subframes that the UE waits for, after waking up from DRX, to receive PDCCHs. If the UE successfully decodes a PDCCH indicating the DL-SCH to which this SC-MTCH is mapped, the UE stays awake and starts the inactivity timer;

- **SC-MTCH inactivity-timer**: duration in downlink subframes that the UE waits to successfully decode a PDCCH, from the last successful decoding of a PDCCH indicating the DL-SCH to which this SC-MTCH is mapped, failing which it re-enters DRX. The UE shall restart the inactivity timer following a single successful decoding of a PDCCH.

For NR MBS, as agreed in RAN2#114, MCCH contents should include information about broadcast sessions such as G-RNTI, MBS session ID as well as scheduling information for MTCH (e.g. search space, DRX). L1 parameters that need to be included in MCCH are pending further RAN1 progress and input. In the “Running\_CR\_for\_MBS\_in\_NR”, the *MBSBroadcastConfiguration* message is defined to contain the control information applicable for MBS broadcast services, wherein the IE *MBS-SessionInfoList* provides the list of ongoing MBS sessions transmitted via BRB and, for each MBS session, the associated G-RNTI and scheduling information. Comapred with the SC-MCCH information, MCCH information in NR includes NR specific information for MRB configuration (e.g., IE *brb-list-r17*).

***MBS-SessionInfoList* information element**

-- ASN1START

MBS-SessionInfoList-r17 ::= SEQUENCE (SIZE (0.. maxNrofMBS-Sessions-r17)) OF MBS-SessionInfo-r17

MBS-SessionInfo-r17 ::= SEQUENCE {

mbsSessionId-r17 MBSSessionId-r17,

g-RNTI-r17 RNTI-Value,

brb-list-r17 BRB-list-r17,

mtch-SchedulingInfo-r17 MTCH-SchedulingInfo-r17 OPTIONAL -- NEED S

}

-- Editor’s note: FFS whether mtch-SchedulingInfo is provided in MBS-SessionInfo IE or another place (e.g. depending whether the DRX configuration can be common for multiple MBS sessions).

MBSSessionInfo-r17 ::= SEQUENCE {

tmgi-r17 TMGI-r17,

sessionId-r17 OCTET STRING (SIZE (1)) OPTIONAL

-- Editor’s note: FFS whether sessionId is used in NR MBS.

}

BRB-list ::= SEQUENCE (SIZE (1..maxNrofMRB-Broadcast-r17)) OF BRB-Info-r17

BRB-Info-r17 ::= SEQUENCE {

pdcp-Config-r17 BRB-PDCP-Config-r17,

rlc-Config-r17 BRB-RLC-Config-r17,

...

}

BRB-PDCP-Config-r17 ::= SEQUENCE {

pdcp-SN-SizeDL ENUMERATED {len12bits, len18bits},

headerCompression CHOICE {

notUsed NULL,

rohc SEQUENCE {

maxCID INTEGER (1..16383) DEFAULT 15,

profiles SEQUENCE {

profile0x0001 BOOLEAN,

profile0x0002 BOOLEAN,

profile0x0003 BOOLEAN,

profile0x0004 BOOLEAN,

profile0x0006 BOOLEAN,

profile0x0101 BOOLEAN,

profile0x0102 BOOLEAN,

profile0x0103 BOOLEAN,

profile0x0104 BOOLEAN

}

}

}

BRB-RLC-Config-r17 ::= SEQUENCE {

logicalChannelIdentity LogicalChannelIdentity,

sn-FieldLength SN-FieldLengthUM,

t-Reassembly T-Reassembly

}

-- Editor’s note: FFS which PDCP and RLC parameters are configurable and which are specified in section 9.1.1.

TMGI-r17 ::= SEQUENCE {

plmn-Id-r7 CHOICE {

plmn-Index-r17 INTEGER (1..maxPLMN),

explicitValue-r17 PLMN-Identity

},

serviceId-r17 OCTET STRING (SIZE (3))

}

-- Editor’s note: FFS whether TMGI definition from LTE is reused.

-- ASN1STOP

Contributions [2][3][5][7][12] proposed to add additional information for MRB configuration in the MCCH information, but the opinions on detailed parameters are diverse. For example, in the aspect of SDAP configuration, contribution [2] proposed not to include SDAP configuration in MCCH information, since for MBS (including broadcast session), SDAP layer is not needed at UE side. However, contribution [3][7] proposed to add MBS SDAP configuration in MCCH control information, since in NR the MBS SDAP and PDCP are configured in RAN. There are also other MCCH information discussed in above contributions, which are summarized as follows

* TMGI is used independently [2] or together with session ID [7] to identify a broadcast session
* Whether to include RB ID [5]
* Whether SDAP/PDCP/RLC configuration is needed in the *brb-list-r17* [3][7][12] or not [2]
* Add MBS SPS configuration [3]
* Add CFR related parameters [3]

**Rapporteur’s Summary:**

From the information proposed in the contributions, CFR related parameters should be decided by RAN1 first and there is already a relevant open issue captured in the running RRC CR and RRC open issues list [17]:

|  |  |  |
| --- | --- | --- |
| FFS what physical layer configuration parameters are included in the *mbs-SessionInfoList,* if any. | Section 5.x.3.3 and potentially other places in the CR. | Resolve after receiving layer 1 parameters list from RAN1. |

Whether MBS SPS configuration is included depends on whether it is agreed to apply it to MBS broadcast which is not agreed by RAN1 so far.

With respect to RB ID, in the current RRC CR, there was no need to introduce this parameter as it is not used in any procedure. Hence, such parameter can be added once the need to introduce it is identified.

Therefore, the rapporteur believes, at the moment the following aspects need to be decided by RAN2, but since there is no consensus on this aspect, the following is proposed:

**Proposal RAN2 should discuss whether:**

* **TMGI is sufficient to identify MBS session or session ID parameter is required in addition (LS to SA2 should be considered)**
* **Whether/which SDAP, PDCP, RLC parameters need to be included in broadcast radio bearer configuration**

### 2.1.2 MBS specific SIB (SIB20-like SIBx)

For NR MBS, as agreed in RAN2#114, MBS specific SIB is defined to carry MCCH configuration. As shown in the “Running\_CR\_for\_MBS\_in\_NR”, the MBS specific SIB, i.e., SIBx contains the information required to acquire the MCCH configuration for MBS broadcast. Specially, *mcch-ModificationPeriod* defines periodically appearing boundaries, i.e. radio frames for which SFN mod *mcch-ModificationPeriod* = 0. Only at modification period boundaries, change of MCCH information may occur. During the modification period, *mcch-RepetitionPeriodAndOffset* is used to derive SFN for MCCH transmission via SFN mod repetition period length = offset of the repetition period. During the derived MCCH transmission SFN, *mcch—WindowStartSlot* and *mcch—WindowDuration* are used to further indicate starting slot and duration in which MCCH are scheduled.

***SIBx* information element**

-- ASN1START

SIBx-r17 ::= SEQUENCE {

mcch-Config-r17 MCCH-Config-r17,

lateNonCriticalExtension OCTET STRING OPTIONAL,

...

}

MCCH-Config-r17 ::= SEQUENCE {

mcch-RepetitionPeriodAndOffset-r17 MCCH-RepetitionPeriodAndOffset-r17,

mcch—WindowStartSlot-r17 INTEGER (0..79),

mcch—WindowDuration-r17 ENUMERATED {sl2, sl4, sl8, sl10, sl20, sl40,sl80, sl160} OPTIONAL, -- NEED S

mcch-ModificationPeriod-r17 ENUMERATED {rf2, rf4, rf8, rf16, rf32, rf64, rf128, rf256,

rf512, rf1024, r2048, rf4096, rf8192, rf16384, rf32768, rf65536}

}

MCCH-RepetitionPeriodAndOffset-r17 ::= CHOICE {

rf1-r17 INTEGER(0),

rf2-r17 INTEGER(0..1),

rf4-r17 INTEGER(0..3),

rf8-r17 INTEGER(0..7),

rf16-r17 INTEGER(0..15),

rf32-r17 INTEGER(0..31),

rf64-r17 INTEGER(0..63),

rf128-r17 INTEGER(0..127),

rf256-r17 INTEGER(0..255)

}

Contributions [2][3][12] had discussed contents included in SIBx. Besides above information, additional NR specific information is also proposed to be included in the new SIBx, e.g., CFR configuration for MCCH scheduling [2][3], CORESETs/search spaces for the MCCH monitoring [12].

**Rapporteur’s Summary:**

It is true that some PHY layer parameters may need to be included in the MBS specific SIB. However, since these are discussed by RAN1, RAN2 can wait for RAN1 to provide L1 parameters list for MBS before discussing those.

**Therefore, no proposal is made at the moment.**

### 2.1.3 BWP operation

In the previous RAN1#105-e meetings, the following agreements regarding BWP aspect for NR MBS had been agreed.

|  |
| --- |
| **RAN1#105-e agreements:**   * For broadcast reception, RRC\_IDLE/RRC\_INACTIVE UEs can use a configured/defined CFR with the same size as the initial BWP, where the initial BWP has the same frequency resources as CORESET0 (i.e., Case A), to receive GC-PDCCH/PDSCH carrying MCCH.   + Note: GC-PDCCH/PDSCH transmission within a narrower portion of the Initial BWP (where the initial BWP has the same frequency resources as CORESET0) is possible by implementation via appropriate scheduling. |

Contributions [2][10][12][13] discuss MBS related BWP issues. Some proposals are provided from the perspective of CFR cases in RAN1 while some other proposals are about including the CFR configuration for MCCH scheduling in the MBS specific SIB.

**Rapporteur’s Summary:**

It is the rapporteur’s understanding that BWP related issues are strongly related to RAN1 and RAN1 is still discussing further options. It is also understood that once the relevant agreements are made by RAN1, L1 parameters list for MBS will be provided to RAN2. Thus, RAN2 should wait for a further outcome of the MBS common frequency resources related discussion in RAN2 before implementing the details in the RRC CR.

No proposal is made.

### 2.1.4 Dedicated signalling for MCCH configuration

As discussed in the email discussion “[AT114-e][039][MBS] MCCH and MCCH change notification”, UE might be configured with a dedicated BWP not overlapping with MCCH while the UE is in RRC CONNECTED state. Since there was no agreement on this issue achieved in the email discussion, there was the following decision in RAN2#114-e meeting: “Postpone the discussion on whether dedicated MCCH configuration is required until RAN1 makes progress on BWP/CFR for MCCH.”

As agreed in RAN1#105-e meeting, for broadcast reception, RRC\_IDLE/RRC\_INACTIVE UEs can use a configured/defined CFR with the same size as the initial BWP, where the initial BWP has the same frequency resources as CORESET0 (i.e., Case A), to receive GC-PDCCH/PDSCH carrying MCCH.

Contribution [15][16] have made proposals on the dedicated signalling for MCCH configuration. In contribution [16], it is assumed that there is no motivation to configure a UE receiving MBS a dedicated BWP not overlapping with MCCH as currently RAN1 assumes that both MCCH and MTCH are in the initial BWP. However, in contribution [15], the authors think the situation with the MCCH is equivalent to SIB/Paging reception in RRC\_CONNECTED state where the network can either configure the UE with a common search space to monitor SI/Paging on the dedicated BWP or provide system information through dedicated signalling using the RRCReconfiguration message. Furthermore, [15] indicates that having a possibility to provide MCCH in dedicated signalling is useful for service continuity during handover.

**Rapporteur’s Summary:**

It is the rapporteur’s understanding that the usefulness of introducing MCCH provisioning with dedicated signalling depends on whether MCCH can be provided in a BWP different than MTCH, which is still pending further RAN1 discussions. Therefore, the following is proposed:

**Proposal If RAN1 agrees MTCH can be provided within a BWP not overlapping with BWP where MCCH is provided, MCCH configuration via dedicated signalling will be supported.**

### 2.1.5 Area specific MCCH

As discussed in previous meetings, one issue is whether MCCH can be area specific, similar to area specific SIB introduced in Rel-15. Contributions [2][9][16] have provided proposals on the area specific MCCH. Specifically, contribution [2] proposed to support the area specific PTM configuration (e.g. in MCCH), considering the use of area specific PTM configuration can help to ensure better service continuity during mobility. However, contribution [16] proposed to not consider area specific MCCH, since there is increased overhead, unclear benefit, and potential issues, e.g. having to update MBS SIB frequently due MCCH version change or limiting how fast MCCH contents can be changed. On the other hand, in contribution [9] both area specific and cell specific NR MCCH configuration is supported as configuration choice. The benefits that are mentioned include signalling overhead reduction and UE power consumption gains.

**Rapporteur’s Summary:**

Companies have different views on whether introduction of area specific MCCH is justified. It is also still unclear what the exact contents of MCCH are, e.g. neighbouring cell information is still discussed, which may impact this discussion. Therefore, the following is proposed:

**Proposal RAN2 discusses whether area specific MCCH is supported once MCCH contents are clarified.**

### 2.1.6 On demand MCCH

Contributions [2][9][16] discuss whether to support on-demand MCCH. Contribution [16] think on-demand MCCH is important to reduce network overhead, and it can be network configuration choice to transmit MCCH either by using broadcast mode or on demand. However, contribution [2] indicates the overhead savings will be limited compared to UP resource consumption while there are disadvantages in terms of extra latency for service setup time, extra interruption during cell reselection, extra interaction with network for broadcast session. [9] also proposes not to support on-demand MCCH due to similar reasons.

**Rapporteur’s Summary:**

Based on the companies’ contributions, it seems that the benefits of on-demand MCCH are limited while there are numerous disadvantages, i.e. latency for service setup time, extra service interruption and network interaction. Therefore, the following is proposed:

**Proposal On-demand MCCH is not supported in Rel-17.**

### 2.1.9 MII content

In LTE SC-PTM, the CONNECTED UE could indicate the following information via the MBMSInterestIndication:

* mbms-FreqList-r11 (a list of frequencies): MBS frequency(ies) of interest
* mbms-Priority-r11 (1bit per UE): Reception priority between MBS reception and unicast reception
* mbms-Services-r13 (a list of TMGI(s)): MBS service(es) of interest

For mbms-FreqList-r11, the frequency is determined when the SAI of the frequency in the SIB matches the SAI in the USD. For mbms-Priority-r11, the priority between MBS reception and unicast reception is indicated when the UE is not able to receive MBS bearer and unicast bearer simultaneously due to the limited UE processing capability. For mbms-Services-r13, the MBMS service ID (i.e. TMGI) is indicated as a supplement information to mbms-FreqList-r11. The TMGI is determined when the SAI of the TMGI in USD matches the SAI in SIB.

During RAN2#113-e meeting, the following agreements on MII were made:

* Assume that MBS Interest Indication is supported for UEs in connected mode for Broadcast service (assume that as usual there is no mandatory network requirement, network action is up to network).
* MBS Interest Indication is NOT supported for UEs in idle/inactive mode for NR MBS delivery mode 2.

Contributions [10][11][13] have made proposals on the contents of MII. Some proposals are provided considering reusing the LTE MII content [10][13] while some other proposals are about including *DedicatedSIBRequest* of MBS-related SIBs as an MII [11].

**Rapporteur’s Summary:**

Since both contents and the message to be used for MII were discussed as part of an e-mail as summarized in [18], no proposal is made within this summary on these aspects.

### 2.1.10 Others

#### 2.1.10.1 DC and CA

Contribution [11] considers MII enhancements for Dual Connectivity scenario and proposes that for MBS in DC, MN can poll for interest indication regardless of whether MBS-related SIB is provisioned.

Contribution [2] proposes that in the case of carrier aggregation (CA), MBS can be supported on Scell, which is to be confirmed by RAN1.

**Rapporteur’s Summary:**

No proposal is made for neither of the issues. For delivery on SCell, this aspects needs to be discussed by RAN1 while MII enhancements for DC scenario seem to be of low priority at the moment as the baseline mechanism, which is still to be discussed, can be applied to both standalone and DC scenarios.

No proposal is made.

#### 2.1.10.2 Counting for Multicast and broadcast service

Contribution [11] considers the counting for multicast and broadcast service. Since MBS Interest Indication is not supported for UEs in idle/inactive mode for NR MBS delivery mode 2, it proposes PDCCH order addressed to G-RNTI triggers preamble transmission from all UEs receiving that service.

**Rapporteur’s Summary:**

For the moment, it is SA2 assumption that broadcast service area is preconfigured and signalled from CN to RAN. It is then rapporteur’s understanding that counting mechanisms are non-essential enhancements which can be discussed later, if time allows.

No proposal is made.

#### 2.1.10.3 Beam sweeping transmission

During RAN2#113bis-e meeting, the following decisions have been made on the MCCH beam sweeping transmission.

* R2 assumes PDCCH occasions for MCCH search space are associated with SSBs in a pre-defined manner so that the UE can receive MCCH scheduling on PDCCH occasions according to its detected SSB.
* R2 assumes, In case searchSpace#0 is configured for MCCH (if allowed, pending RAN1 decision), the mapping between PDCCH occasions and SSBs is the same as for SIB1.
* R2 assumes that If common search space other than searchSpace#0 is configured for MCCH (if allowed, pending RAN1 decision), the PDCCH monitoring occasions for MCCH message which are not overlapping with UL symbols are sequentially numbered from one in the MCCH transmission window and mapped to SSBs using the similar rule as defined for OSI in TS 38.331.

These agreements are captured in Section 5.x.1.2 MCCH scheduling in “Running\_CR\_for\_MBS\_in\_NR”.

#### 5.x.1.2 MCCH scheduling

The MCCH information (i.e. information transmitted in messages sent over MCCH) is transmitted periodically, using a configurable repetition period and within a configured transmission window. MCCH transmissions (and the associated radio resources and MCS) are indicated via the PDCCH addressed to MCCH-RNTI. PDCCH monitoring occasion(s) for MCCH transmission are determined according to the common search space indicated by *mcch-Searchspace* configured for MCCH. If *mcch-Searchspace* is set to zero, PDCCH monitoring occasions for MCCH message reception in the MCCH transmission window are the same as PDCCH monitoring occasions for *SIB1* where the mapping between PDCCH monitoring occasions and SSBs is specified in TS 38.213[13]. If *mcch-Searchspace* is not set to zero, PDCCH monitoring occasions for MCCH message are determined based on search space indicated by *mcch-Searchspace*. PDCCH monitoring occasions for MCCH message which are not overlapping with UL symbols (determined according to *tdd-UL-DL-ConfigurationCommon*) are sequentially numbered from one in the MCCH transmission window. The [x×N+K]th PDCCH monitoring occasion for MCCH message in MCCH transmission window corresponds to the Kth transmitted SSB, where x = 0, 1, ...X-1, K = 1, 2, …N, N is the number of actual transmitted SSBs determined according to *ssb-PositionsInBurst* in *SIB1* and X is equal to CEIL(number of PDCCH monitoring occasions in MCCH transmission window/N). The actual transmitted SSBs are sequentially numbered from one in ascending order of their SSB indexes. The UE assumes that, in the MCCH transmisson window, PDCCH for an MCCH message is transmitted in at least one PDCCH monitoring occasion corresponding to each transmitted SSB and thus the selection of SSB for the reception MCCH messages is up to UE implementation.

Editor’s note: FFS whether to keep MCCH-RNTI name or use another one.

Editor’s note: FFS where MCCH search space parameter is configured.

Contribution [1] discuss some further issues related to beam sweeping for both MCCH and MTCH.

**Rapporteur’s Summary:**

Rapporteur believes that the MCCH part as already captured in the running CR is correct and according to the agreements. It seem there are no additional issues to consider for MCCH beam sweeping. With respect to beam sweeping related to MTCH, it is rapporteur’s understanding this aspect is discussed by RAN1 and hence there is no need to discuss this topic in RAN2.

No proposal is made.

## 2.2 Multicast

### 2.2.1 Unified Access Control and establishment cause for MBS

Contributions [2][4][6][9] discuss the impact of MBS on UAC and on connection establishment. Some papers just discuss the applicability of UAC to MBS while others propose some enhancements e.g. MBS specific Access Categories. Some papers also propose to introduce MBS specific establishment cause(s). The rationale given for these enhancements is for the gNB to have a possibility to control MBS multicast related access attempts separately from legacy access attempts as well as to allow the gNB to distinguish MBS access attempts from legacy access attempts and also potentially the priority of the MBS access attempt.

**Rapporteur’s Summary:**

It seems legacy UAC and establishment cause can be reused directly for MBS, but some companies see the benefit of introducing MBS specific enhancements in these areas. Based on this, the following is proposed:

**Proposal RAN2 to discuss whether MBS specific Access Categories and/or establishment cause(s) need to be specified.**

### 2.2.2 Others

#### 2.2.2.1 RRC reconfiguration after group notification

Another issue related to group notification is after group notification, there can be a large group of UEs in connected mode that needs to be reconfigured instantaneously. Contribution [14] propose RAN2 to consider optimized group notification in connected mode in a later release.

**Rapporteur’s Summary:**

Rapporteur thinks issues related to group notification are under the scope of AI 8.1.3.2. Also, the contribution itself proposes not to address this issue in this release. Hence, no proposal is made.

No proposal is made.

#### 2.2.2.2 RRC state issue

Contribution [6] proposes that UEs that joined the multicast session can be switched to inactive state or idle state by gNB when the multicast session is deactivated.

**Rapporteur’s Summary:**

Rapporteur thinks that it is a common understanding that UEs that joined the multicast session can be switched to inactive state or idle state when there is no data. This can be achieved by network implementation. Hence, no proposal is made.

No proposal is made.

#### 2.2.2.3 MBS service continuity during CHO

Contribution [8] proposes MBS service continuity should also be supported during CHO in Rel-17.

**Rapporteur’s Summary:**

Rapporteur’s understanding is that CHO may be applicable to MBS with no or minimal specifications impact. However, this issue is not urgent and can be discussed at a later point in time. Hence, no proposal is made at this time.

No proposal is made.

# 3 Conclusion

Based on the summary provided in this document, the following proposals are made:

**Proposal 1. RAN2 should discuss whether:**

**• TMGI is sufficient to identify MBS session or session ID parameter is required in addition (LS to SA2 should be considered)**

**• Whether/which SDAP, PDCP, RLC parameters need to be included in broadcast radio bearer configuration**

**Proposal 2. If RAN1 agrees MTCH can be provided within a BWP not overlapping with BWP where MCCH is provided, MCCH configuration via dedicated signalling will be supported.**

**Proposal 3. RAN2 discusses whether area specific MCCH is supported once MCCH contents are clarified.**

**Proposal 4. On-demand MCCH is not supported in Rel-17.**

**Proposal 6. RAN2 to discuss whether MBS specific Access Categories and/or establishment cause(s) need to be specified.**

# References

1. R2-2107014, Discussion on beam sweeping transmission for delivery mode 2, OPPO
2. R2-2107038, Discussion on MCCH Contents and General RRC Aspects, CATT, CBN
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8. R2-2107531, Handling MBS during conditional handover, Futurewei
9. R2-2107546, NR MBS control signalling aspects for UEs in different RRC states, Qualcomm Inc
10. R2-2107579, MBS reception in CONNECTED state, Apple
11. R2-2107691, Miscellaneous Aspects of MBS Provisioning, Nokia, Nokia Shanghai Bell
12. R2-2108036, MBS related configuration for delivery mode 2, CHENGDU TD TECH LTD.
13. R2-2108049, MBS BWP UE capability and MBS resources, Sony
14. R2-2108084, Other aspects for MBS, Ericsson
15. R2-2108203, MCCH acquisition in RRC\_CONNECTED state, Huawei, HiSilicon
16. R2-2108456, Details for MCCH design, Intel Corporation
17. R2-2108204, Summary of e-mail discussion “[Post114-e][074][MBS] RRC running CR” and RRC open issues list, Huawei, HiSilicon
18. R2-2108799, Summary of [Post114-e][073][MBS] Service continuity for Delivery Mode 2 (Xiaomi), Xiaomi Communications