

3GPP TSG RAN WG1 #106bis-e

R1-2110542

e-Meeting, October 11th – 19th, 2021

Agenda item: 8.16.1

Source: Moderator (Qualcomm incorporated)

Title: Summary of [106bis-e-LTE-5G-Terr-Bcast-01]

Document for: Discussion / Decision

1 Background

The following contributions have been submitted to RAN1#106b-e:

- **R1-2108857 TP on PMCH allocation and corresponding MBSFN reference signals**
ZTE
- **R1-2109178 PMCH allocation of 6/7/8MHz** **Qualcomm Incorporated**
- **R1-2110371 Flexible PMCH bandwidth allocation for the 15KHz subcarrier spacing**
Huawei, HiSilicon

Contributions x8857 and x0317 present how to capture previous agreements in the specification.

Contribution x9178 discusses how to handle the ROM interest indication.

2 Specification changes

Both x8857 and x0317 provide input on how to capture previous agreements in the specification. The moderator does not see the need to discuss these two contributions in detail, since the specification editors will provide drafts after RAN1#106b-e. The specification editors can take the input in these two contributions into account when preparing the drafts.

Proposed conclusion 2.1: The input in R1-2108857 and R1-2110371 can be taken into account by specification editors when drafting the editor CRs

Feedback Form 1: Comments on proposed conclusion 2.1

1 – Huawei Technologies Sweden AB it is fine
2 – ZTE Corporation Regarding the change to OFDM signal generation in 36.211 for PMCH of 6/7/8MHz, we may need an explicit agreement to confirm whether this change is needed or not since this part has not been discussed previously. The corresponding change is in our Text Proposal #3 for Section 6.12 in TS36.211 . Regarding other TPs, we are ok to leave it editors.
3 – Qualcomm Incorporated We think the TP#3 is also obvious given the rest of the agreements (otherwise nothing would work), but we are OK to have a conclusion on that. Let me propose it in a new version.
4 – Huawei Technologies Sweden AB We also think it should be a nature change to be handled by editor.

Based on the discussion above, we can consider endorsing the following conclusion (that the OFDM baseband signal generation shall use the PMCH bandwidth for the PMCH symbols):

Proposed conclusion 2.2: The OFDM signal generation (Subclause 6.12 in TS 36.211) is modified by replacing N_{RB}^{DL} with N_{RB}^{PMCH} for the PMCH symbols belonging to MBSFN areas with *pmch-Bandwidth* configured.

Feedback Form 2: Comments on proposed conclusion 2.2

1 – Huawei Technologies Sweden AB if it is obvious, no technical reason to disagree with it, but strictly it should be handled by editor.
2 – ZTE Corporation We support this proposed conclusion.

3 ROM interest indication

x9178 proposes that, for ROM interest indication, we do not introduce new codepoints for 6/7/8MHz, but instead report / use the 10MHz values.

Proposal 3.1: For the purpose of ROM MBMS interest indication, if the UE receives a 6/7/8MHz PMCH, for the corresponding serving cell:

- The UE reports a bandwidth of 10MHz (*mbms-Bandwidth* = n50)
- The UE assumes $B_c=10\text{MHz}$

Feedback Form 3: Comments on proposal 3.1

<p>1 – Huawei Technologies Sweden AB</p> <p>One question for discussion: regarding this ROM MBMS interest indication, does this proposal have spec impact? If any, which spec it affect, 213 or others?</p>
<p>2 – ZTE Corporation</p> <p>Ok with this proposal.</p>
<p>3 – Qualcomm Incorporated</p> <p>To Huawei, we think an statement in 213 saying that the UE applies 10MHz would be enough.</p>
<p>4 – Huawei Technologies Sweden AB</p> <p>to QC, I meant the wording in 213 has been quite generic by B_c representing the bandwidth of the serving cell. What is the additional spec change?</p> <ul style="list-style-type: none">- B_c is the bandwidth (in MHz) of the c-th serving cell.
<p>5 – Qualcomm Incorporated</p> <p>Right, so it would say something like "B_c is the bandwidth (in MHz) of the c-th serving cell. If the UE is receiving PMCH from an MBSFN area configured with <i>PMCH-Bandwidth</i>, $B_c = 10\text{MHz}$."</p>
<p>6 – Huawei Technologies Sweden AB</p> <p>To QC, I am not quite sure about this change to 213 whehter it is necessarily needed or can be caputred other ways but I assume it can be discussed later when draft spec is available. Regarding this proposal iterself, I agree with its intention and this technical reason.</p>

4 Conclusions

The following has been endorsed as a result of the email discussion:

Conclusion:

The input in R1-2108857 and R1-2110371 can be taken into account by specification editors when drafting the editor CRs

Conclusion:

The OFDM signal generation (Subclause 6.12 in TS 36.211) is modified by replacing N_{RB}^{DL} with N_{RB}^{PMCH} for the PMCH symbols belonging to MBSFN areas with pmch-Bandwidth configured.

Agreement:

For the purpose of ROM MBMS interest indication, if the UE receives a 6/7/8MHz PMCH, for the corresponding serving cell:

The UE reports a bandwidth of 10MHz (*mbms-Bandwidth* = n50) The UE assumes Bc=10MHz