**3GPP TSG RAN WG1 #106bis-e R1-210xxxx**

**e-Meeting, October 11th – 19th, 2021**

**Agenda item:** 8.16

**Source:** WI rapporteur (Qualcomm incorporated)

**Title:** Summary of agreements for LTE based 5G Terrestrial Broadcast

**Document for:** Information

# Introduction

The present document captures the agreements, working assumptions and conclusions for the work item *New Bands and Bandwidth Allocation for LTE based 5G Terrestrial Broadcast* ([*RP-211144*](https://www.3gpp.org/ftp/TSG_RAN/TSG_RAN/TSGR_92e/Docs/RP-211144.zip))

The agreements that are superseded by latter ones are grayed out.

# Summary of agreements

## RAN1#106

Agreement:

For supporting 6/7/8MHz PMCH:

* The bandwidth of CAS (system bandwidth indicated in MIB) is set to 25PRBs (5MHz).
	+ FFS: whether it can be set to 6 and/or 15 PRBs.
* The bandwidth for PMCH ($N\_{RB}^{PMCH})$ is indicated by another parameter in system information if the center frequency of bandwidth for CAS and bandwidth for PMCH is aligned.
	+ FFS: Details

Agreement:

It is supported that the center frequency of system bandwidth and center frequency of PMCH bandwidth are aligned

* FFS: Other cases (non-aligned center frequencies)

Agreement:

For PMCH allocation of 6/7/8 MHz on MBMS-dedicated cells, mapping the MBSFN reference signal to REs is based on the PMCH bandwidth of 6/7/8 MHz instead of .

Agreement:

For PMCH allocation of 6/7/8 MHz on MBMS-dedicated cells, the TBS determination is based on the PMCH bandwidth of 6/7/8 MHz instead of .

Conclusion:

It is RAN1’s understanding that 15kHz SCS is currently supported for MBMS dedicated cells.

* RAN1 to further discuss how to handle 15kHz SCS for 6/7/8 MHz PMCH bandwidth

Agreement:

The following PMCH bandwidth values are supported:

* 8MHz: $N\_{RB}^{PMCH}=40$
* 7MHz: $N\_{RB}^{PMCH}=35$
* 6MHz: $N\_{RB}^{PMCH}=30$

Agreement:

The signalling of PMCH bandwidth is to be selected to be one of the following:

* Alt 1: Per cell
* Alt 2: Per MBSFN area

Agreement:

For CAS bandwidth values, 25PRBs (5MHz) and 15 PRBs (3MHz) are supported.

Conclusion:

Non-aligned PMCH bandwidth and system bandwidth is not supported (this resolves an FFS item in a prior agreement).

Agreement:

For 6/7/8MHz PMCH bandwidth with 15kHz SCS:

* Alt 1: The control region in MBSFN subframes with 15kHz SCS has the same bandwidth as CAS. The UE is not required to process the control region.
* Alt 2: The MBSFN subframes with 15kHz SCS do not have control region.
* Alt 3: The MBSFN subframes with 15 kHz SCS have a control region but its content is not defined

Agreement:

The signaling of PMCH bandwidth is per MBSFN area.

Agreement:

The UE is not required to process the control region in MBSFN subframes for 6/7/8MHz PMCH bandwidth with 15kHz SCS

* Note: This does not preclude future removal of the control region after completion of this WI.
* Note: The agreement is made with the intention to capture the agreement with minimal impact to the specifications.

## RAN1#106bis

**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

# UE features and RRC parameters

The latest RRC parameter list is in [R1-2108688](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_106-e/Docs/R1-2108688.zip).

**Agreement (RAN1#106b) (UE features)**

The agreements listed in Section 6 of R1-2109912 are endorsed.