3GPP TSG-RAN WG2 #112-e draftR2-20XXXX

Electronic meeting, 2nd – 13th November 2020

Agenda Item: 8.16

Source: Rapporteur (T-Mobile USA)

Title: Summary of [AT112-e][033][NR17] Introduction of 35 and 45 MHz channel Bandwidths (T-Mobile US)

Document for: Discussion, Decision

# Introduction

The document summarizes the following offline discussion:

* [AT112-e][033][NR17] Introduction of 35 and 45 MHz channel Bandwidths (T-Mobile US)

 Scope: Treat R2-2010133.

 Intended outcome: Approved LS out

 Deadline: Final: Wed Nov 11

# Delegate contact information

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| --- | --- |
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# Discussion

At RAN2#111 [1] several companies commented that RAN2 needed to wait for an LS from RAN4 before developing signalling to support 35 and 45 MHz channel bandwidth.

Two significant issues were raised during the RAN2#111 offline discussion and during a subsequent offline discussion chaired by T-Mobile. One of the main issues is which release to enable signalling for 35 and 45 MHz and the other is how to treat the case when 35 or MHz increases the maximum channel bandwidth supported by an existing NR band.

Given that RAN2 and RAN4 only have one more meeting to complete this WID it is important for RAN2 to clarify the information needed to complete the signalling.

Below is the main body of the LS :

It is RAN2’s understanding that RAN4 is considering three possible ways to introduce 35 and 45 MHz channel bandwidths into the standard:

* + Option 1: The support of 35 MHz and 45 MHz is from Rel-17 onwards
	+ Option 2: 35 MHz and 45 MHz is optional support from Rel-15
	+ Option 3: Release independence shall be discussed case by case per band and bandwidths.

RAN2 has discussed option 2 and option 3 and has determined that signaling can support either option beginning with Release 15.

**Action:** RAN2 requests RAN4 to provide which option RAN4 agrees to pursue.

Another issue that impacts signaling design is when the largest channel bandwidth supported for a frequency band is increased due the introduction of 35 and 45 MHz channel bandwidths. In some cases, the UE only indicates the largest channel bandwidth supported for a frequency band and the network assumes the UE supports all the smaller channel bandwidths

**Action:** RAN2 request RAN4 to indicate if the largest channel bandwidth supported by frequency band will change when 35 and 45 MHz is introduced into the specification.

**Question 1 : Do you agree with the LS text as proposed in R2-2010133**

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| --- | --- | --- |
| **Company** | Agree with Rapporteur proposal?  | Comments – If no please provide proposed text changes |
| Qualcomm Incorporated | Yes, partially | We agree that it is feasible to introduce necessary signalling from any release onwards.For the second part of the LS, the question is not very clear, but anyway does not seem to be a question for RAN4. We have channelBWs-DL and channelBWs-UL that can signal exact channel bandwidth**s** the UE supports. We also have SupportedBandwidthDL and SupportedBandwidthUL at the feature set per CC level to indicate the maximum bandwidth the UE supports.The relation between those parameters is already clear in TS38.306 as follows.* *NOTE: To determine whether the UE supports a specific SCS for a given band, the network validates the supportedSubCarrierSpacingDL and the scs-60kHz. To determine whether the UE supports a channel bandwidth of 90 MHz, the network may ignore this capability for and validate instead the channelBW-90mhz and the supportedBandwidthCombinationSet. For serving cells with other channel bandwidths the network validates the channelBWs-DL, the supportedBandwidthCombinationSet, the asymmetricBandwidthCombinationSet (for a band supporting asymmetric channel bandwidth as defined in clause 5.3.6 of TS 38.101-1 [2]) and supportedBandwidthDL.*
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| MediaTek | No | The first question is not necessary. RAN4 should decide which option to go without RAN2 LS. The second question is unclear to us. What is the problem if the largest CBW for a band is changed due to introduction of 35 and 45 MHz CBW?  |
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# References

[1] [AT111-e][011][NR15] UE cap Additions (vivo)

 Scope: Treat R2-2007303, R2-2007304, R2-2007305, R2-2007306, R2-2007212, R2-2007213, (proponents to drive)

 Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

 Deadline: Aug 20, 0900 UTC.

 Part 2: For agreeable parts, continuation to agree CRs.

 Deadline: Aug 26, 0900 UTC.