**3GPP TSG RAN WG1 Meeting #104-e R1-210xxxx**

**e-Meeting, January 25 – February 05, 2021**

**Title: [Draft] LS on the maximum/minimum channel bandwidth and channelization for NR operation in 52.6 to 71 GHz**

**Response to:**

**Release:** Rel-17

**Work Item:** NR\_ext\_to\_71GHz

**Source:** Moderator (vivo) [RAN1]

**To:** RAN4

**Cc:**

**Contact Person:**

#### Name:

E-mail Address:

**Attachments:**

**1. Overall Description:**

RAN1 would like to inform RAN4 about RAN1’s agreement on the maximum channel bandwidth for NR operation in 52.6 GHz to 71 GHz.

* The maximum channel bandwidth for 120 kHz SCS is 400 MHz
* The maximum channel bandwidth for 480 kHz SCS is 1600 MHz
* The maximum channel bandwidth for 960 kHz SCS is one of the following options
  + 2000 MHz
  + 2160 MHz

It is RAN1’s understanding that RAN4 will decide the exact value of the maximum channel bandwidth for 960 kHz SCS. RAN1 prefers to retain the maximum sampling frequency for 52.6GHz to 71 GHz bandwidth, and maintain the present Tc definition. RAN1 would like to kindly request feedback from RAN4 on their decision of the maximum channel bandwidth for 960 kHz SCS and the corresponding number of RBs for the maximum channel bandwidth for each SCS supported in 52.6 GHz to 71 GHz.

RAN1 has also discussed and identified at least the following options of the minimum channel bandwidth for NR operation in 52.6 GHz to 71 GHz.

* for 120 kHz SCS
  + Option 1-1: 100 MHz
  + Option 1-2: 200 MHz
  + Option 1-3: 400 MHz
* for 480 kHz SCS
  + Option 2-1: 200 MHz
  + Option 2-2: 400 MHz
* for 960 kHz SCS
  + Option 3-1: 400 MHz
  + Option 3-2: 800 MHz
  + Option 3-3: same value as the maximum channel bandwidth for 960 kHz SCS

It is RAN1’s understanding that RAN4 will decide the minimum channel bandwidth for each SCS supported in 52.6 GHz to 71 GHz. RAN1 would like to kindly request timely feedback from RAN4 on their decision of the minimum channel bandwidth for NR operation in 52.6 GHz to 71 GHz.

Additionally, in RAN1’s understanding, RAN4 will decide channelization aspects (including but not limited to channel and sync rasters to support both licensed and unlicensed operation, channelization design flexibility to align or not align with the IEEE 802.11ad/ay channelization depending on the deployment (licensed or unlicensed band, potential regional regulations requiring LBT channel access mechanism), whether to support the same maximum and/or minimum channel bandwidth for licensed and unlicensed operation, and whether to allow intermediate channel bandwidth(s) between the maximum and minimum bandwidths identified) for NR operation in 52.6 GHz to 71 GHz. RAN1 would like to kindly request timely feedback from RAN4 on their decision of channelization.

Note that minimum channel bandwidth and channelization may have impact to RAN1 design and specification, particularly SSB/multiplexing pattern design and search complexity during initial cell selection, and therefore RAN1 would benefit from obtaining RAN4’s decision as early as possible.

**2. Actions:**

**To RAN4:** RAN1 respectfully requests RAN4 to take above information into account in their work and to provide timely feedback on their decisions.

**3. Date of Next TSG-RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #104-bis-e 12 – 20 Apr 2021 Online

TSG-RAN WG1 Meeting #105-e 19 – 27 May 2021 Online