**3GPP TSG-RAN WG2 Meeting #115 Electronic DRAFT R2-210xxxx**

**Elbonia, 16 – 27 August 2021**

**Title: [DRAFT]** LS on inter-operability of band n77 extension in US

**Response to:** -

**Release:** Release 16

**Work Item:** NR\_RF\_FR1-Core

**Source:** Nokia [TSG RAN WG2]

**To:** TSG RAN WG4, TSG RAN

**Cc:** -

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** **mailto:3GPPLiaison@etsi.org**

**Attachments:** R2-210xxx (36.306), R2-210xxx (36.331), R2-210xxx (36.306), R2-210xxx (38.331)

**1. Overall Description:**

As RAN#92e requested, RAN2 has discussed the topic of ensuring network can properly deal with legacy n77 UEs that do not support 3.45-3.55 GHz (referred to as "DoD band") operation in US.

RAN2 has concluded that signalling is needed to distinguish which UEs support the n77 extensions in the US from Rel-16 onwards (with early implementation allowed from Rel-15 onwards). Two solutions have been discussed:

1. Defining a new per UE capability bit (for both LTE and NR RRC) to distinguish the UE support (for both EN-DC and NR CA/DC cases) for the band n77 extension in the US (which also assumes that the band n77 extension, for DoD Band, is defined in RAN4 specification [TS38.101-1](https://www.3gpp.org/DynaReport/38101-1.htm)). RAN2 has agreed that UE’s that don’t support the DoD band need to be barred from accessing the DoD band in the US. RAN2 thinks that a new NS-value can be defined to prevent legacy UEs supporting n77 from camping on the DoD bands and as legacy UEs cannot identify the new value, the UE would not camp on that cell.
2. Defining a new frequency band for n77, including both the 3450-3550 MHz and 3700-3890 MHz frequency ranges.

RAN2 has endorsed LTE and NR CRs for the solution A (see attachments) but defining new NS value requires RAN4 specification modifications. Solution B has no RAN2 signalling impact, but needs modification by RAN4. RAN2 would also note that it is assumed that the extended band m77 is defined in TS38.101-1 and the RAN2 CRs refer to that, so the definition should not change in the future. RAN2 would also note that the CRs refer to RAN4 specification TS38.101-1 for ther definition of the extended band n77, so would like to request that RAN4 ensures the definition is clear and doesn't change afterwards.

RAN2 respectfully asks RAN4 and RAN to take the RAN2 feedback into account.

**2. Actions:**

**To RAN4 group.**

**ACTION:** RAN2 respectfully asks RAN4 and RAN to take the RAN2 feedback into account

**3. Date of Next TSG-RAN WG2 Meeting:**

3GPP RAN2#116-e from 2021-11-01 to 2021-11-12 Electronic Meeting