**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

**Cc:** TSG RAN

**Contact Person:**

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**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 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 is defined in RAN4 specification [TS38.101-1](https://www.3gpp.org/DynaReport/38101-1.htm)). Additionally RAN2 deems the requirement to prevent legacy UEs supporting n77 only from camping on the DoD bands. One way is to define a new NS value, and as legacy UEs cannot identify this value, the UE would 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 CRs for the solution A. but the new NS value needs to be defined by RAN4. Solution B has no RAN2 signalling impact and needs modification by RAN4.

RAN2 kindly asks RAN4 to take the RAN2 feedback into account and decide the solution.

**2. Actions:**

**To RAN4 group.**

**ACTION:** RAN2 respectfully asks RAN4 to take the RAN2 feedback into account for band n77 (applicable for the 3450-3550 MHz frequency range) and decide the solution.

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

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