**3GPP TSG-RAN Meeting #93 Electronic *R2-21XXXX***

**Online, 13 – 17 September 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **36.306** | **CR** | **1824** | **rev** | **2** | **Current version:** | **16.5.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network | **x** | Core Network |  |

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| ***Title:***  | Distinguishing support of extended band n77 |
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| ***Source to WG:*** |  |
| ***Source to TSG:*** | Ericsson, Nokia, Nokia Shanghai Bell, Verizon, Qualcomm Incorporated |
|  |  |
| ***Work item code:*** | NR\_RF\_FR1-Core |  | ***Date:*** | 2021-09-13 |
|  |  |  |  |  |
| ***Category:*** | **C** |  | ***Release:*** | 16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | RAN2 has been tasked to provide means to distinguish UEs that support only the current band n77 definition in the USA (i.e. only 3700 - 3980 MHz range) and those that would support the extended definition of band n77 in the USA as per latest FCC rulings (i.e. support of also 3450-3550 MHz). To ensure networks can distinguish the UEs, capability signalling is needed for indicating the support for the extended part. |
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| ***Summary of change:*** | 1. Added a per-UE (inter-RAT) capability for support of NR band n77 extension in the USA.

Note that this optional capability has no impact to n77-capable UEs certified outside of USA and such UEs are not be required to indicate this bit. But n77-capable UEs that wish to use the 3450-3550 MHz part of n77 frequency range in the USA need to indicate this bit.**Implementation of this CR by a Release 15 UE will not cause compatibility issues.****Impact analysis**Impacted functionality: Band n77 capability signalling.Inter-operability: 1. If the network is implemented according to the CR and the UE is not, there are no inter-operability issues since the network considers UE doesn't support the n77 extension in the USA and will not configure UE with 3450-3550 MHz frequency range.
2. If the UE is implemented according to the CR and the network is not, there are no inter-operability issues since the network will not comprehend the support for the n77 extension in the USA and will not configure UE with 3450-3550 MHz frequency range.
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| ***Consequences if not approved:*** | It is not possible for network to distinguish which version of band n77 UE supports in the USA. |
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| ***Clauses affected:*** | 4.3.7.X (new) |
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|  | **Y** | **N** |  |  |
| ***Other specs*** | **x** |  |  Other core specifications  | TS 36.331 CR 4723r2TS 38.306 CR 0643r2TS 38.331 CR 2810r2TS 38.101-1 CR 0926r2 |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Revision 1:The field description for extendedBand-n77 was updated to capture what absence of the field means and that NS 55 needs to be supported by UEs supporting this capability bit.Revision 2:Changed "US" to "USA" in the field description and cover page.Updated the revision-number of the CRs listed in "Other specs affected"-field.Changed the heading for the new added section from "extendedBand-n77" to "extendedBand-n77-r16" |

*First Modified Subclause*

### 4.3.7 Inter-RAT parameters

<UNNECESSARY PARTS OMITTED>

#### 4.3.7.X *extendedBand-n77-r16*

This field is only applicable for UEs that indicate support for band n77. If present, the UE is restricted to both 3450 - 3550 MHz and 3700 - 3980 MHz ranges of band n77 in the USA If absent, the UE is restricted to the 3700 - 3980 MHz range of band n77 in the USA. A UE that indicates this field shall support NS value 55 as specified in TS 38.101-1 [33].

*End of Changes*