**3GPP RAN WG4 Meeting #95-e R4-****20XXXX**

Electronic Meeting**, 25 May – 5 June, 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **38.133** | **CR** | **0642** | **rev** | **2** | **Current version:** | **16.3.0** |  |
|  |
| *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:***  | CR on PRS-RSRP measurement report mapping |
|  |  |
| ***Source to WG:*** | CATT |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_POS-Core |  | ***Date:*** | 2020-05-06 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | PRS-RSRP measurement report mapping is missing in 38.133 |
|  |  |
| ***Summary of change:*** | PRS-RSRP measurement report mapping is introduced in 38.133 |
|  |  |
| ***Consequences if not approved:*** | PRS-RSRP measurement report mapping is missing |
|  |  |
| ***Clauses affected:*** | 10.1.24.3.1, 10.1.24.3.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

#### 10.1.24.3.1 Absolute PRS-RSRP Measurement Report Mapping

 The reporting range of absolute PRS-RSRP measurement is defined from -156 dBm to -31 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 10.1.24.3.1-1. The range in the signalling may be larger than the guaranteed accuracy range.

Table 10.1.24.3.1-1: Measurement report mapping for PRS-RSRP

|  |  |  |
| --- | --- | --- |
| **Reported value** | **Measured quantity value** | **Unit** |
| PRS\_RSRP\_0 | PRS-RSRP<-156 | dBm |
| PRS\_RSRP\_1 | -156≤PRS-RSRP<-155 | dBm |
| PRS\_RSRP\_2 | -155≤PRS-RSRP<-154 | dBm |
| PRS\_RSRP\_3 | -154≤PRS-RSRP<-153 | dBm |
| PRS\_RSRP\_4 | -153≤PRS-RSRP<-152 | dBm |
| PRS\_RSRP\_5 | -152≤PRS-RSRP<-151 | dBm |
| PRS\_RSRP\_6 | -151≤PRS-RSRP<-150 | dBm |
| PRS\_RSRP\_7 | -150≤PRS-RSRP<-149 | dBm |
| PRS\_RSRP\_8 | -149≤PRS-RSRP<-148 | dBm |
| PRS\_RSRP\_9 | -148≤PRS-RSRP<-147 | dBm |
| PRS\_RSRP\_10 | -147≤PRS-RSRP<-146 | dBm |
| PRS\_RSRP\_11 | -146≤PRS-RSRP<-145 | dBm |
| PRS\_RSRP\_12 | -145≤PRS-RSRP<-144 | dBm |
| PRS\_RSRP\_13 | -144≤PRS-RSRP<-143 | dBm |
| PRS\_RSRP\_14 | -143≤PRS-RSRP<-142 | dBm |
| PRS\_RSRP\_15 | -142≤PRS-RSRP<-141 | dBm |
| PRS\_RSRP\_16 | -141≤PRS-RSRP<-140 | dBm |
| PRS\_RSRP\_17 | -140≤PRS-RSRP<-139 | dBm |
| PRS\_RSRP\_18 | -139≤PRS-RSRP<-138 | dBm |
| … | … | … |
| PRS\_RSRP\_111 | -46≤PRS-RSRP<-45 | dBm |
| PRS\_RSRP\_112 | -45≤PRS-RSRP<-44 | dBm |
| PRS\_RSRP\_113 | -44≤PRS-RSRP<-43 | dBm |
| PRS\_RSRP\_114 | -43≤PRS-RSRP<-42 | dBm |
| PRS\_RSRP\_115 | -42≤PRS-RSRP<-41 | dBm |
| PRS\_RSRP\_116 | -41≤PRS-RSRP<-40 | dBm |
| PRS\_RSRP\_117 | -40≤PRS-RSRP<-39 | dBm |
| PRS\_RSRP\_118 | -39≤PRS-RSRP<-38 | dBm |
| PRS\_RSRP\_119 | -38≤PRS-RSRP<-37 | dBm |
| PRS\_RSRP\_120 | -37≤PRS-RSRP<-36 | dBm |
| PRS\_RSRP\_121 | -36≤PRS-RSRP<-35 | dBm |
| PRS\_RSRP\_122 | -35≤PRS-RSRP<-34 | dBm |
| PRS\_RSRP\_123 | -34≤PRS-RSRP<-33 | dBm |
| PRS\_RSRP\_124 | -33≤PRS-RSRP<-32 | dBm |
| PRS\_RSRP\_125 | -32≤PRS-RSRP<-31 | dBm |
| PRS\_RSRP\_126 | -31≤PRS-RSRP | dBm |

#### 10.1.24.3.2 Differential Report Mapping for PRS-RSRP Measurement

The reporting range of differential PRS-RSRP is defined from -30 dB to 0 dB with 1 dB resolution when *nr-DL-AoD-RequestLocationInformation* message is received.

The mapping of measured quantity is defined in Table 10.1.24.3.2-1. The range in the signalling may be larger than the guaranteed accuracy range.

The reporting range of differential PRS-RSRP is defined from -30 dB to 30 dB with 1 dB resolution when *nr-DL-TDOA-RequestLocationInformation* or *nr-Multi-RTT-RequestLocationInformation* is received.

The mapping of measured quantity is defined in Table 10.1.24.3.2-2. The range in the signalling may be larger than the guaranteed accuracy range or the range supported by the UE receiver for differentail RSRP measured on different PRS resources in frequency domain at the same time.

Table 10.1.24.3.2-1: Measurement report mapping for differential PRS-RSRP

|  |  |  |
| --- | --- | --- |
| **Reported value** | **Measured quantity value** | **Unit** |
| DIFFRSRP\_0 | -30≥ΔRSRP | dB |
| DIFFRSRP\_1 | -29≥ΔRSRP>-30 | dB |
| DIFFRSRP\_2 | -28≥ΔRSRP>-29 | dB |
| DIFFRSRP\_3 | -27≥ΔRSRP>-28 | dB |
| DIFFRSRP\_4 | -26≥ΔRSRP>-27 | dB |
| DIFFRSRP\_5 | -25≥ΔRSRP>-26 | dB |
| DIFFRSRP\_6 | -24≥ΔRSRP>-25 | dB |
| DIFFRSRP\_7 | -23≥ΔRSRP>-24 | dB |
| DIFFRSRP\_8 | -22≥ΔRSRP>-23 | dB |
| DIFFRSRP\_9 | -21≥ΔRSRP>-22 | dB |
| DIFFRSRP\_10 | -20≥ΔRSRP>-21 | dB |
| DIFFRSRP\_11 | -19≥ΔRSRP>-20 | dB |
| DIFFRSRP\_12 | -18≥ΔRSRP>-19 | dB |
| DIFFRSRP\_13 | -17≥ΔRSRP>-18 | dB |
| DIFFRSRP\_14 | -16≥ΔRSRP>-17 | dB |
| DIFFRSRP\_15 | -15≥ΔRSRP>-16 | dB |
| DIFFRSRP\_16 | -14≥ΔRSRP>-15 | dB |
| DIFFRSRP\_17 | -13≥ΔRSRP>-14 | dB |
| DIFFRSRP\_18 | -12≥ΔRSRP>-13 | dB |
| DIFFRSRP\_19 | -11≥ΔRSRP>-12 | dB |
| DIFFRSRP\_20 | -10≥ΔRSRP>-11 | dB |
| DIFFRSRP\_21 | -9≥ΔRSRP>-10 | dB |
| DIFFRSRP\_22 | -8≥ΔRSRP>-9 | dB |
| DIFFRSRP\_23 | -7≥ΔRSRP>-8 | dB |
| DIFFRSRP\_24 | -6≥ΔRSRP>-7 | dB |
| DIFFRSRP\_25 | -5≥ΔRSRP>-6 | dB |
| DIFFRSRP\_26 | -4≥ΔRSRP>-5 | dB |
| DIFFRSRP\_27 | -3≥ΔRSRP>-4 | dB |
| DIFFRSRP\_28 | -2≥ΔRSRP>-3 | dB |
| DIFFRSRP\_29 | -1≥ΔRSRP>-2 | dB |
| DIFFRSRP\_30 | 0≥ΔRSRP>-1 | dB |

Table 10.1.24.3.2-2: Measurement report mapping for differential PRS-RSRP

|  |  |  |
| --- | --- | --- |
| **Reported value** | **Measured quantity value** | **Unit** |
| DIFFRSRP\_0 | -30≥ΔRSRP | dB |
| DIFFRSRP\_1 | -29≥ΔRSRP>-30 | dB |
| DIFFRSRP\_2 | -28≥ΔRSRP>-29 | dB |
| DIFFRSRP\_3 | -27≥ΔRSRP>-28 | dB |
| DIFFRSRP\_4 | -26≥ΔRSRP>-27 | dB |
| DIFFRSRP\_5 | -25≥ΔRSRP>-26 | dB |
| DIFFRSRP\_6 | -24≥ΔRSRP>-25 | dB |
| DIFFRSRP\_7 | -23≥ΔRSRP>-24 | dB |
| DIFFRSRP\_8 | -22≥ΔRSRP>-23 | dB |
| DIFFRSRP\_9 | -21≥ΔRSRP>-22 | dB |
| DIFFRSRP\_10 | -20≥ΔRSRP>-21 | dB |
| DIFFRSRP\_11 | -19≥ΔRSRP>-20 | dB |
| DIFFRSRP\_12 | -18≥ΔRSRP>-19 | dB |
| DIFFRSRP\_13 | -17≥ΔRSRP>-18 | dB |
| DIFFRSRP\_14 | -16≥ΔRSRP>-17 | dB |
| … | … | … |
| DIFFRSRP\_25 | -5≥ΔRSRP>-6 | dB |
| DIFFRSRP\_26 | -4≥ΔRSRP>-5 | dB |
| DIFFRSRP\_27 | -3≥ΔRSRP>-4 | dB |
| DIFFRSRP\_28 | -2≥ΔRSRP>-3 | dB |
| DIFFRSRP\_29 | -1≥ΔRSRP>-2 | dB |
| DIFFRSRP\_30 | 0≥ΔRSRP>-1 | dB |
| DIFFRSRP\_31 | 1≥ΔRSRP>0 | dB |
| DIFFRSRP\_32 | 2≥ΔRSRP>1 | dB |
| DIFFRSRP\_33 | 3≥ΔRSRP>2 | dB |
| DIFFRSRP\_34 | 4≥ΔRSRP>3 | dB |
| DIFFRSRP\_35 | 5≥ΔRSRP>4 | dB |
| DIFFRSRP\_36 | 6≥ΔRSRP>5 | dB |
| … | … | … |
| DIFFRSRP\_47 | 17≥ΔRSRP>16 | dB |
| DIFFRSRP\_48 | 18≥ΔRSRP>17 | dB |
| DIFFRSRP\_49 | 19≥ΔRSRP>18 | dB |
| DIFFRSRP\_50 | 20≥ΔRSRP>19 | dB |
| DIFFRSRP\_51 | 21≥ΔRSRP>20 | dB |
| DIFFRSRP\_52 | 22≥ΔRSRP>21 | dB |
| DIFFRSRP\_53 | 23≥ΔRSRP>-22 | dB |
| DIFFRSRP\_54 | 24≥ΔRSRP>23 | dB |
| DIFFRSRP\_55 | 25≥ΔRSRP>24 | dB |
| DIFFRSRP\_56 | 26≥ΔRSRP>25 | dB |
| DIFFRSRP\_57 | 27≥ΔRSRP>26 | dB |
| DIFFRSRP\_58 | 28≥ΔRSRP>27 | dB |
| DIFFRSRP\_59 | 29≥ΔRSRP>28 | dB |
| DIFFRSRP\_60 | 30≥ΔRSRP>29 | dB |
| DIFFRSRP\_61 | ΔRSRP>30 | dB |