**3GPP RAN WG4 Meeting #95-e R4-****2008665**

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

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **38.133** | **CR** | **0642** | **rev** | **1** | **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:*** | New sections: 10.1.24, 10.1.24.1, 10.1.24.2, 10.1.24.3, 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 DL PRS-RSRP Measurements

#### 10.1.24.1 Introduction

The requirements in Section 10.1.24 shall apply, provided the UE has received *nr-DL-TDOA-RequestLocationInformation* or *nr-Multi-RTT-RequestLocationInformation* or *nr-DL-AoD-RequestLocationInformation* message from LMF via LPP [31] requesting the UE to report one or more DL PRS-RSRP measurements [4].

#### 10.1.24.2 Measurement Accuracy Requirements

#### 10.1.24.3 Report mapping

#### 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.

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 |