**3GPP TSG-RAN WG1 Meeting #106-e *R1-21yyyyy***

**e-Meeting, August 16th – 27th, 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **[DRAFT] CHANGE REQUEST** | | | | | | | | |
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|  | **38.214** | **CR** | **xxxx** | **rev** | **-** | **Current version:** | **16.6.0** |  |
|  | | | | | | | | |
| *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:*** | Draft CR on alignment with RAN4 on DL PRS processing | | | | | | | | | |
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| ***Source to WG:*** | vivo, Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | RAN1 | | | | | | | | | |
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| ***Work item code:*** | NR\_pos-Core | | | | |  | ***Date:*** | | | 2021-08-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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 can be 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:*** | | RAN4 changed the calculation of the effective periodicity of a positioning frequency layer with respect to the periodicity profile among TPRs (using LCM instead of maximum value).  TS 38.214 still use “the maximum PRS periodicity” in the description of K calculation which is now not aligned with RAN4. | | | | | | | | |
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| ***Summary of change:*** | | The evaluation window of P should no longer be corresponding to the maximum PRS periodicity in a positioning frequency layer. The change is to remove the description “corresponding to the maximum PRS periodicity in a positioning frequency layer”. | | | | | | | | |
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| ***Consequences if not approved:*** | | Ambiguity exists as DL PRS processing is not aligned with RAN4’s specification. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.6.5 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
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| ***Other comments:*** | | Isolated Impact Analysis:  It is expected that both network and the UE are implemented as the correction clarifies, and thus no inter-operatability issue is identified. | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |

#### 5.1.6.5 PRS reception procedure

========================= Unchanged parts =========================

For the case when measurement gap is configured, the UE DL PRS processing capability is defined in [TS 37.355]. For the purpose of DL PRS processing capability, the duration *K* msec of DL PRS symbols within *P* msec window, is calculated by

*-* Type 1 duration calculation with UE symbol level buffering capability

*-* Type 2 duration calculation with UE slot level buffering capability

*- S* is the set of slots based on the numerology of the DL PRS of a serving cell within the *P* msec window in the positioning frequency layer that contains potential DL PRS resources considering the actual *nr-DL-PRS-ExpectedRSTD*, *nr-DL-PRS-ExpectedRSTD-Uncertainty* provided for each pair of DL PRS Resource Sets.

*-* For Type 1, is the smallest interval in msec within slot corresponding to an integer number of OFDM symbols based on the numerology of the DL PRS of a serving cell that covers the union of the potential PRS symbols and determines the PRS symbol occupancy within slot , where the interval considers the actual *nr-DL-PRS-ExpectedRSTD*, *nr-DL-PRS-ExpectedRSTD-Uncertainty* provided for each pair of DL PRS resource sets (target and reference).

*-* For Type 2, is the numerology of the DL PRS, and is the cardinality of the set .

========================= Unchanged parts =========================