**3GPP TSG-RAN WG1 Meeting #103-e *R1-2009561***

**E-meeting, October 26th – November 13th, 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **[DRAFT] CHANGE REQUEST** | | | | | | | | |
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|  | **38.214** | **CR** | ***xxxx*** | **rev** | **-** | **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:*** | Correction to DL PRS duration calculation for DL PRS processing | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Moderator(Intel Corporation), Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | RAN1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_pos-Core | | | | |  | ***Date:*** | | | 2020-10-16 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | 1. The P-msec window selection is undefined in the specification, which results in ambiguity of K-msec DL PRS duration calculation, as a different P corresponds to a different K. It will further result in ambiguity in calculation of the DL PRS measurement latency requirement defined in TS 38.133. The selection of P-msec is non-trivial as DL PRS resource (sets) on a positioning frequency layer can have various periodicities, and it should be clarified which periodicity should be used for the selection of P.  2. The specification number referenced for PRS processing capability is not correct, as LPP capabilities are not captured in TS 38.306, but in TS 37.355. | | | | | | | | |
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| ***Summary of change:*** | | 1. It is clarified that the P-msec window is based on the maximum DL PRS periodicity in a positioning frequency layer.  2. The citation of TS 38.306 is revised to TS 37.355. | | | | | | | | |
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| ***Consequences if not approved:*** | | 1. DL PRS duration calculation for the purpose of DL PRS measurement latency is not clearly defined.  2. Reference of the UE DL PRS processing capability is not correct. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.6.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:  This CR clarifies the ambiguity on the P-msec window selection for the DL PRS duration calculation and further for the DL PRS measurement latency calculation, and thus should be mandatorily implemented by both UE and LMF. If either or both entities do implement this CR, the DL PRS measurement requirement is broken in the specification. | | | | | | | | |
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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 [TS37.355]. For the purpose of DL PRS processing capability, the duration *K* *ms* of DL PRS symbols within *P* *ms* window corresponding to the maximum PRS periodicity in a positioning frequency layer, is calculated by

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

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

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