**3GPP TSG-RAN WG2 Meeting #116-e *R2-2111072***

**Electronic Meeting, 01 – 12 November 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **37.355** | **CR** | **0323** | **rev** | **1** | **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 |  | Core Network | **X** |

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| ***Title:*** | CCorrection on BDS B2I clock model [Rel16BDS] | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Swift Navigation, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2021-11-08 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | This correction is needed to make the LPP assistance data consistent with the BDS ICD[23].  The TGD2 parameter for the BDS B2I signal was not included from the ICD [23] when B2I was first added to LPP. B2I is defined under *GNSS-SignalID* and *GNSS-SignalIDs* in LPP, but TGD2 is missing in the *BDS-ClockModel.* This parameter is necessary to use the B2I signal. | | | | | | | | |
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| ***Summary of change:*** | | Add the BDS TG2 parameter within the *BDS-ClockModel* IE, as specified in the Beidou ICD in [23] and the text proposal below.  **Impact Analysis**  Impacted functionality:  Beidou support in LPP A-GNSS assistance data  Inter-operability:  There is no inter-operability issue. | | | | | | | | |
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| ***Consequences if not approved:*** | | Without this change, LPP assistance data is not complete with respect to the BDS ICD[23]. Specifically this prevents the use of the B2I signal as the ICD[23] requires TGD2 to be applied to B2I clock correction. | | | | | | | | |
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| ***Clauses affected:*** | | 6.5.2.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Rev0: Initial version  Rev1: Editorial corrections, added impact analysis | | | | | | | | |

#### **–** *BDS-ClockModel*

The IE *BDS-ClockModel* is used for BDS B1I defined in [23].

-- ASN1START

BDS-ClockModel-r12 ::= SEQUENCE {

bdsAODC-r12 INTEGER (0..31),

bdsToc-r12 INTEGER (0..131071),

bdsA0-r12 INTEGER (-8388608..8388607),

bdsA1-r12 INTEGER (-2097152..2097151),

bdsA2-r12 INTEGER (-1024..1023),

bdsTgd1-r12 INTEGER (-512..511),

...,

[[ bdsTgd2-r16 INTEGER (-512..511) OPTIONAL

]]

}

-- ASN1STOP

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| ***BDS-ClockModel* field descriptions** |
| ***bdsAODC***  Parameter Age of Data, Clock (AODC), see [23], Table 5-6. |
| ***bdsToc***  Parameter Toc, Time of clock (seconds) [23].  Scale factor 23 seconds. |
| ***bdsA0***  Parameter a0, Clock correction polynomial coefficient (seconds) [23].  Scale factor 2-33 seconds. |
| ***bdsA1***  Parameter a1, Clock correction polynomial coefficient (sec/sec) [23].  Scale factor 2-50 sec/sec. |
| ***bdsA2***  Parameter a2, Clock correction polynomial coefficient (sec/sec2) [23].  Scale factor 2-66 sec/sec2. |
| ***bdsTgd1***  Parameter Equipment group delay differential TGD1 [23].  Scale factor is 0.1 nanosecond. |
| ***bdsTgd2***  Parameter Equipment group delay differential TGD2 [23].  Scale factor is 0.1 nanosecond. |