**3GPP TSG-RAN WG2 Meeting #121bis-e *DRAFT R2-2304496***

**Elbonia, 17– 26 April 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **37.355** | **CR** | **0442** | **rev** | **1** | **Current version:** | **17.4.0** |  |
|  | | | | | | | | |
| *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:*** | LOS-NLOS-Indicator Types | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_pos\_enh-Core | | | | |  | ***Date:*** | | | 2023-04-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 1. Field description for the field ‘*indicator-r17*’ in *LOS-NLOS-Indicator* IE is not accurate. Both values, ‘*soft’* and ‘*hard’*, indicates the likelihood of a Line-of-Sight (LOS) propagation path from the source to the receiver, but this is not very clear from the current description. 2. The two IEs, *LOS-NLOS-IndicatorType1* and *LOS-NLOS-IndicatorType2* have the same description and it is not clear why two similar IEs with same description is defined with different values. With *LOS-NLOS-IndicatorType2* value of ‘*hardAndsoftvalue*’, without searching all ASN.1 text, it is not readily obvious how it would be possible to report both hard and soft values when the UE can only report either hard or soft value. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Clarified the description for *indicator-r17* field in for *LOS-NLOS-Indicator* IE. 2. Clarified that *LOS-NLOS-IndicatorType1* is the type of information that can be requested by location server and *LOS-NLOS-IndicatorType2* is the type of information that can be supported by target device.   **Impact analysis**  Impacted functionality: LOS/NLOS reporting for DL-TDOA, DL-AoD and Multi-RTT positioning  Inter-operability:  No inter-operability issues forseen. No functional changes made. | | | | | | | | |
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| ***Consequences if not approved:*** | | Lack of clarity in the specification on how the different LOS-NLOS indicator types are used. | | | | | | | | |
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| ***Clauses affected:*** | | 6.4.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

*First Modified Subclause*

#### – *LOS-NLOS-Indicator*

The IE *LOS-NLOS-Indicator* provides information on the likelihood of a Line-of-Sight (LOS) propagation path from the source to the receiver.

-- ASN1START

LOS-NLOS-Indicator-r17 ::= SEQUENCE {

indicator-r17 CHOICE {

soft-r17 INTEGER (0..10),

hard-r17 BOOLEAN

},

...

}

-- ASN1STOP

| *LOS-NLOS-Indicator* field descriptions |
| --- |
| ***indicator***  This field provides information on the likelihood of a Line-of-Sight propagation path from the source to the receiver with a value of 1 corresponding to LoS and a value of 0 corresponding to NLoS.  - ***soft***: Integer value '0' indicates likelihood 0, integer value '10' indicates likelihood 1. Scale factor 0.1; range 0 to 1.  - ***hard***: FALSE indicates likelihood '0', TRUE indicates likelihood '1'. |

*Next Modified Subclause*

#### – *LOS-NLOS-IndicatorType1*

The IE *LOS-NLOS-IndicatorType1* provides information on the *LOS-NLOS-Indicator* type that is requested by the location server.

-- ASN1START

LOS-NLOS-IndicatorType1-r17 ::= ENUMERATED { hardvalue, softvalue }

-- ASN1STOP

#### – *LOS-NLOS-IndicatorType2*

The IE *LOS-NLOS-IndicatorType2* provides information on the *LOS-NLOS-Indicator* type that is supported by the target device.

-- ASN1START

LOS-NLOS-IndicatorType2-r17 ::= ENUMERATED { hardvalue, hardAndsoftvalue }

-- ASN1STOP

*End of Changes*