**3GPP TSG-RAN WG2 Meeting #127 *R2-2407658***

 **Maastricht, Netherlands, August 19th - 23th, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.331** | **CR** | **4908** | **rev** | **1** | **Current version:** | **18.2.0** |  |
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| *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:***  | Miscellaneous corrections on mobility history information |
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| ***Source to WG:*** | ZTE Corporation, Sanechips |
| ***Source to TSG:*** | RAN2 |
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| ***Work item code:*** | NR\_ENDC\_SON\_MDT\_enh-Core |  | ***Date:*** | 2024-08-21 |
|  |  |  |  |  |
| ***Category:*** | **A** |  | ***Release:*** | Rel-18 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | 1. With the introduction of PSCell MHI, there could be two UE variables specified in *VarMobilityHistoryReport*. With current text in subclause 5.7.9.2, it is ambiguous for a newcomer to understand which variable is used to log this information. Therefore, it is proposed to capture clearly in the text that UE logs time in any cell selection/camped on any cell state in an entry in the *visitedCellInfoList* in the variable *VarMobilityHistoryReport* by removing the oldest entry is necessary, which is also aligned with the text style used in other places for MHI logging.2. Unaligned terminology UE variable used in procedure text and the ASN.1 is observed.*visitedPSCellInfoList* used in MHI procedure text doesn’t exist in ASN.1 signalling. After tracing the discussion history, it is noticed that the terminology of UE variable agreed in R2-2209022 for PSCell MHI logging was *visitedPSCellInfoList,* whichwas wrongly corrected to ‘*visitedPSCellInfoListReport*’ during CR implementation after RAN#107，which result in such inconsistency. Considering the UE variable is only a temporary variable in UE internal implementation which does not used in the signalling exchanged between BS and UE over radio interface. It is suggested to correct the terminology of UE variable used for PSCell MHI logging from ‘*visitedPSCellInfoListReport’* to ‘*visitedPSCellInfoList*’ to make specs consistent. |
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| ***Summary of change:*** |  1. Clarify in specs UE logs time in any cell selection or camped on any cell state by in an entry in the *visitedCellInfoList* in the variable *VarMobilityHistoryReport* by removing the oldest entry is necessary.2. Change the terminology of UE variable used for PSCell MHI logging from ‘*visitedPSCellInfoListReport*’ to ‘*visitedPSCellInfoList*’.**Impact analysis****Impacted functionality:**NR MHI **Inter-operability analysis:**There is no Inter-operability issue foreseen for the changes |
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| ***Consequences if not approved:*** | How UE logs MHI is unclear which could lead to misunderstanding between UE and NW on the logged MHI. |
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| ***Clauses affected:*** | 5.7.9.2, 7.4 |
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|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

*1st CHANGE STARTS*

1> upon entering 'camped normally' state in NR (in RRC\_IDLE or RRC\_INACTIVE) or E-UTRA (in RRC\_IDLE) while previously in 'any cell selection' state or 'camped on any cell' state in NR or LTE:

2> include an entry in *visitedCellInfoList* in variable *VarMobilityHistoryReport* possibly after removing the oldest entry, if necessary, according to following:

3> set the field *timeSpent* of the entry as the time spent in 'any cell selection' state and/or 'camped on any cell' state in NR or LTE.

*1st CHANGE ENDs*

*2nd CHANGE STARTS*

#### – *VarMobilityHistoryReport*

The UE variable *VarMobilityHistoryReport* includes the mobility history information.

*VarMobilityHistoryReport* UE variable

-- ASN1START

-- TAG-VARMOBILITYHISTORYREPORT-START

VarMobilityHistoryReport-r16 ::= VisitedCellInfoList-r16

VarMobilityHistoryReport-r17 ::= SEQUENCE {

 visitedCellInfoList-r16 VisitedCellInfoList-r16,

 visitedPSCellInfoList-r17 VisitedPSCellInfoList-r17 OPTIONAL

}

-- TAG-VARMOBILITYHISTORYREPORT-STOP

-- ASN1STOP

*2nd CHANGE ENDS*