**3GPP TSG-RAN WG3 Meeting #117bis-eR3-226067**

E-Meeting, 10th – 18th Oct 2022

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.300** | **CR** |  | **rev** |  | **Current version:** | **17.2.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <http://www.3gpp.org/Change-Requests>.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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| ***Title:*** | Correction of UE History Information for CHO | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung, ZTE, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_ENDC\_SON\_MDT\_enh | | | | |  | ***Date:*** | | | 2022-10-10 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
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| ***Reason for change:*** | | The Source NG-RAN node sends UE History Information through Handover Request message to the target NG-RAN node. The UE Stayed Time in the source cell is determined at this point.  For CHO, the UE still stay in source cell until UE executes handover. The UE Stayed Time in the source cell sent to the target in Handover Request message is shorter than actual stayed time.  So, if the CHO preparation is made shortly after a UE attached to the source cell, the RAN misjudges that the UE has stayed in the source cell for a very short time. And the RAN may restrict the handover to source cell to reduce ping-pong handover frequency. | | | | | | | | |
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| ***Summary of change:*** | | The target gNB behaviour to update the UE stay time in source PCell for CHO is described.  Impact assessment towards the previous version of the specification (same release):  This CR has an isolated impact towards the previous version of the specification (same release).  This CR only has an impact on the UHI for CHO function. | | | | | | | | |
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| ***Consequences if not approved:*** | | The ping-pong detection may be wrong. | | | | | | | | |
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| ***Clauses affected:*** | | 15.5.4 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS37.340 CR R3-226030 | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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### 15.5.4 UE History Information from the UE

The source NG-RAN node collects and stores the UE History Information for as long as the UE stays in one of its cells.

The UE may report the UE history information when connecting to a cell of the NG-RAN node.

When information needs to be discarded because the list is full, such information will be discarded in order of its position in the list, starting with the oldest cell record. If the list is full, and the UE history information from the UE is available, the UE history information from the UE should also be discarded.

The resulting information is then used in subsequent handover preparations by means of the Handover Preparation procedures over the NG and XN interfaces, which provide the target NG-RAN node with a list of previously visited cells and associated (per-cell) information elements. The Handover Preparation procedures also trigger the target NG-RAN node to start collection and storage of UE history Information and thus to propagate the collected information.

In case of CHO, the target NG-RAN node updates the time UE stayed in cell of the latest PCell entry (i.e. the source cell) when the UE successfully accesses a candidate cell of the target NG-RAN node. The updated value of the time UE stayed in the source cell is equal to the value received from the source NG-RAN node during the Handover Preparation plus the time from receiving the Handover Request message from the source NG-RAN node to receiving the RRC Reconfiguration Complete message from the UE. When the target NG-RAN node receives the SCG UHI from the source NG-RAN node via the Handover Request message, the target NG-RAN node also updates the time UE stayed in cell of the latest PSCell entry (i.e. the source PSCell) as specified in TS 37.340 [21].

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