**3GPP TSG- Meeting # *rev1***

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **32.422** | **CR** |  | **rev** | **-** | **Current version:** | **16.0.0** |  |
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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 |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:*** | Add MDT user consent handling for 5G | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GMDT | | | | |  | ***Date:*** | | | 2020-02-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***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:*** | | Add Add MDT user consent handling for 5G | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add user consent handling for 5G | | | | | | | | |
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| ***Consequences if not approved:*** | | MDT user consent handling for 5G would be missing in relase 16 specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.X | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 change***

## 4.X User consent handling in MDT for NG-RAN

### 4.X.1 Signalling based MDT

In case of signalling based MDT getting user consent before activating the MDT functionality is required because of privacy and legal obligations. It is the Operator responsibility to collect user consent before initiating an MDT for a specific IMSI, IMEI number or SUPI.

Collecting the user consent shall be done via customer care process. The user consent information availability should be considered as part of the subscription data and as such this shall be provisioned to the UDM database.

The following figure summarizes the functionality.



Figure 4.X.1.1: Example for delivering user consent information in signalling based MDT

When the IMSI/IMEI(SV)/SUPI based MDT is activated it is targeted the UDM. Once the user consent availability information is stored in the UDM database, the UDM can check the user consent availability before starting a Trace Session for the given subscriber. If there is no user consent given by the specific user to network where TCE resides, the UDM should not start a Trace Session for the given subscriber.

As the user consent availability information is stored as part of the subscription data it should also be transferred to the AMF during update location procedure. This is required if the subscription based MDT is started from AMF. In that case similar checking is required as in the UDM case.

It should also be possible to handle user consent revocation. The process of user consent revocation shall be done also via customer care process and the user consent availability information should be updated in the UDM DB when a user consent revocation happens.

If the user consent revocation happens during an ongoing Trace Session with MDT, it is not required to stop and deactivate the Trace Recording Session, Trace Session respectively immediately i.e. to stop an ongoing Trace Recording Session in case of Immediate MDT. A notification to the management system should be sent and the management system should deactivate the Trace Session.

### 4.X.2 Management based MDT

The following figure summarizes the functionality.

 Figure 4.X.2.1: Example for delivering user consent information in management based MDT

When UE attaches to the network, the UDM shall forward the user consent information, stored in the UDM database, to the corresponding AMF. When the AMF receive the user consent information it shall store it in its subscriber database.

The AMF shall also check the roaming status of the user. If the user is within his home operator’s PLMNs and the user has given his consent, the AMF shall send the Management Based MDT Allowed IE to the gNodeB during the UE context setup procedure. Otherwise the AMF shall not send the Management Based MDT Allowed IE to the gNodeB.

If the result of the roaming status check indicates a home subscriber, AMF shall forward the already stored user consent information to the corresponding gNodeB as part of Management Based MDT Allowed IE.

When the management based MDT activation is sent to gNodeB, gNodeB shall check the availability of the Management Based MDT Allowed IE before making the UE selection. In case the Management Based MDT Allowed IE is not available, the gNodeB shall not select the UE. In case the Management Based MDT Allowed IE is available, the gNodeB shall verify if the UE’s RPLMN matches the PLMN where TCE resides – Trace Reference PLMN (PLMN portion of the Trace Reference). In case of a mismatch, the gNodeB shall not select the UE. The gNodeB shall forward the received Management Based MDT Allowed IE during Xn based handovers to the target node. The Management Based MDT Allowed IE is stored in the gNodeB as part of the UE context. If the user consent information is updated while a UE context is already set up in the gNodeB, the changed user consent should be taken into account in the next call/session setup.

***End of changes***