**3GPP TSG- Meeting #133e**

**e-meeting 12th - 21st October 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **32.441** | **CR** | **0020** | **rev** |  | **Current version:** | 16.0.0 |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:*** | Add new MDT requirements for E-UTRAN | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | e\_5GMDT | | | | |  | ***Date:*** | | | 2020-10-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Add some additional MDT requirements | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * Add some additional MDT requirements in clause 6.1 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | MDT requirements would be missing | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | Introduction, 1, 6.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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***

# Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

**32.441 "Trace Management Integration Reference Point (IRP); Requirements".**

32.442 "Trace Management Integration Reference Point (IRP); Information Service (IS)".

32.446 "Trace Management Integration Reference Point (IRP); Solution Set (SS) definitions".

The present document is part of a TS-family which describes the requirements and information model necessary for the Telecommunication Management (TM) of UMTS and LTE systems. The TM principles and TM architecture are specified in 3GPP TS 32.101 [2] and 3GPP TS 32.102 [3].

Trace provides very detailed information on call level for a specific subscriber or MS. This data is an additional information source to Performance Measurements and allows deeper investigations in problems solving or in case of optimization.

# 1 Scope

The present document specifies the overall requirements for the Trace Management Integration Reference Point (TraceIRP) as it applies to Itf-N.

The Trace IRP supports the operations that are required for the Subscriber and Equipment trace, the Service Level Trace , the Cell Traffic Trace, Minimization of Drive Tests (MDT) functionalities across UMTS and LTE networks or EPS networks and Radio Link Failure (RLF) reporting functionalities across EPS networks GSM Trace is outside of the scope of this specification..

All functions (trace, MDT etc.) specified in this specification supports Network Sharing, with the following condition:

1) It is accepted that the recorded information from the shared network can be sent to any of the operators sharing the network, taking user consent into account. Operators must also agree on sharing the information, but how that agreement is done is outside the scope of this specification. The mapping of TCE IP addresses and TCE addresses must be coordinated among the operators that shares the network. How that coordination is done is outside the scope of this specification..

2) For signalling based activation, the operators that share a network must coordinate the TCE IP addresses and the TCE address mapping must be coordinated. How that coordination is done, is outside the scope of this specification.

3) The 3GPP Managment reference model, 3GPP TS 32.101 [2] is followed.

Editor's note: The requirements for Service Level Tracing are FFS.

***Next*** ***changes***

# 6 Requirements specific for managing MDT

## 6.1 Logged MDT and Immediate MDT requirements

All requirements are valid for Logged MDT and Immediate MDT functionality if not mentioned otherwise:

REQ-MDTMGMT-FUN-01 The IRPManager shall be able to configure MDT data collection for one or more IMEI(SV) number.

REQ-MDTMGMT-FUN-02 The IRPManager shall be able to configure MDT data collection for one or more IMSI number.

REQ-MDTMGMT-FUN-03 Each UE measurement result shall be linked to a time stamp. Accuracy of time information (absolute time, relative time) is FFS in RAN. (Editor’s Note: FFS in RAN)

REQ-MDTMGMT-FUN-04 The solutions for collecting UE measurements for the purpose of minimization of drive tests shall be able to work independently from SON support in the network.

REQ-MDTMGMT-FUN-05 The IRPManager shall be able to configure MDT data collection in one or more cells or TA/RA/LA.

REQ-MDTMGMT-FUN-06 The IRPManager shall be able to configure MDT data collection for one or more IMSI in one or more cells or TA/RA/LA.

REQ-MDTMGMT-FUN-07 The IRPManager shall be able to configure MDT data collection for one or more IMEI(SV) in one or more cells or TA/RA/LA.

REQ-MDTMGMT-FUN-08 The IRPManager shall be able to configure UE measurement types, and triggering conditions under which UE measurements would be collected for MDT.

Editor’s note: The detailed list of triggering conditions is FFS.

REQ-MDTMGMT-FUN-09 The IRPManager shall be able to configure the condition of MDT data collection based on certain device capability information (e.g. required free memory, battery status, etc.) .

Editor’s Note: the detailed list of device capabilities for MDT is FFS.

REQ-MDTMGMT-FUN-10 The IRPManager shall be able to configure the condition of MDT data collection based on certain device capability information in one or more cells or in TA/RA/LA.

REQ-MDTMGMT-FUN-11 The IRPManager shall be able to configure MDT data collection based on one or more IMSI in one or more cells or TA/RA/TA with a set of device capability information.

REQ-MDTMGMT-FUN-12 The IRPManager shall be able to configure MDT data collection based on one or more IMEI(SV) in one or more cells or TA/RA/TA with a set of device capability information.

REQ-MDTMGMT-FUN-13 The IRPManager shall be able to configure MDT data collection based on one or more IMEI(SV) with a set of device capability information.

REQ-MDTMGMT-FUN-14 The IRPManager shall be able to configure MDT data collection based on one or more IMSI with a set of device capability information.

REQ-MDTMGMT-FUN-15 The IRPManager shall be able to configure the periodicity for collecting UE measurements to a centralized collection entity.

REQ-MDTMGMT-FUN-16 The IRPAgent shall have the capability allowing the IRPManager to activate combined tracing and UE MDT measurement collection within the same Trace Session.

REQ-MDTMGMT-FUN-17 The IRPManager shall be able to deactivate MDT data collection by Trace Reference.

REQ-MDTMGMT-FUN-18 The IRPManager shall be able to initiate MDT data collection independently from other mobility related performance measurement and call trace collection.

REQ-MDTMGMT-FUN-19 It shall be possible for the IRPAgent to notify the IRPManager if the UE selection can’t fulfil operators’ expectation.

REQ-MDTMGMT-FUN-20 For area based MDT data collection, the IRPManager shall be able to configure the desired minimums over period of time for the amount of MDT data and for the number of UEs.

REQ-MDTMGMT-FUN-21 For area based MDT data collection, the IRPManager shall be able to configure the desired maximums over period of time for the amount of MDT data and for the number of UEs.

REQ-MDT-FUN-V In the case of signalling based immediate MDT, MDT configuration shall be able to propagate across RATs for the case of Xn inter-RAT intra-system handover between LTE and NR.

REQ-MDT-FUN-Q In the case of EN-DC scenario, for immediate MDT, MDT configuration shall be able to be provided for both master node and secondary node independently.

***End of changes***