**3GPP TSG- Meeting #**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** | **2** | **Current version:** |  |  |
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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 |  | Core Network | **x** |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** | Nokia, AT&T, T-Mobile US, Telefonica, KPN | | | | | | | | | |
| ***Source to TSG:*** | SA1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | CDRFraud | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Subscriber and device identities contained in charging records can be invalid – spoofed, malformed, or incorrect. The occurrence of spoofed identities in charging records could cause significant impact for the external sources that use them.  Rev1: - Added supporting companies - editorial fixes  Rev2:   * Added supporting companies * Removed requirement 2 * Clarified the target information to be analysed * Clarified the notion of identity “validation” * Removed changes on changes | | | | | | | | |
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| ***Summary of change:*** | | This CR proposes new charging requirements in order to improve fraud detection against invalid identities. | | | | | | | | |
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| ***Consequences if not approved:*** | | There will be no standard solution to improved fraud detection and protection in charging. | | | | | | | | |
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| ***Clauses affected:*** | | 9.1 | | | | | | | | |
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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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | S1-244318, S1-244414 | | | | | | | | |

**\* \* \* \* Start of First Change \* \* \* \***

## 9.1 General

The following set of requirements complement the requirements listed in 3GPP TS 22.115 [11]. The requirements apply for both home and roaming cases.

The 5G core network shall support collection of all charging information on either a network or a slice basis.

The 5G core network shall support collection of charging information for alternative authentication mechanisms.

The 5G core network shall support collection of charging information associated with each serving MNO when multi-network connectivity is used under the control of the home operator.

The 5G core network shall support charging for services/applications in an operator’s Service Hosting Environment.

The 5G core network shall support charging for content delivered from a content caching application.

The 5G core network shall support collection of charging information based on the access type (e.g. 3GPP, non-3GPP, satellite access).

The 5G core network shall support collection of charging information based on the slice that the UE accesses.

The 5G system shall be able to generate charging information regarding the used radio resources e.g. used frequency bands.

The 5G core network shall support collection of charging information based on the capacity and performance metrics.

The 5G system shall be able to support an indirect network connection even when the UE is in E-UTRAN or NG-RAN coverage.

The 5G system shall be able to support mechanisms to differentiate charging information for traffic carried over satellite backhaul.

For service function chaining (see clause 10) the collection of charging information associated to the use of service functions and the chain of service functions requested by third parties shall be supported.

The 5G system shall be able to support collection of charging information for a group of UEs, e.g. UEs of a AI/ML FL group.

The 5G system shall be able to support charging mechanism for multiple UE exchange data for the same service using the direct device connection.

Subject to regulatory requirements and operator's policies, the 5G network shall be able to support mechanisms to determine whether the subscriber's and device identities and other parameters like Cell-ID, Location information present in charging information are invalid.

NOTE: The objective is to determine whether the identities present in the charging information are real or invalid. There is no assumption that any assertion of a specific identity is needed.

Subject to regulatory requirements and operator's policies, the 5G network shall be able to support mechanisms to configure location information correlation and data filtering based on the validity of subscriber's and device the identities and other parameters present in charging information.

Subject to regulatory requirements and operator's policies, the 5G network shall be able to support mechanisms to expose to regulators information about subscriber's and device identities and other parameters determined as invalid in charging information.

**\* \* \* \* End of Changes \* \* \* \***