**3GPP TSG- Meeting # *S5-253888***

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **rev** | **1** | **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 | **X** | Core Network | **X** |

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| ***Title:***  |  |
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| ***Source to WG:*** |  |
| ***Source to TSG:*** | S5 |
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| ***Work item code:*** |  |  | ***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 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. The solution reference description for serveral capabillities in TS 28.537 was added in previous meeting. However, the soluton description for Managing external management data in clause 6.4 in TS 28.537 is missing.2. The use cases and requirements for Managing external management data are described in clause 6.4 in TS 28.537, and corresponding NRM fragment is defined in TS 28.622. However, it is not clear what functionalities are provided for the solution of managing external management data. Also the detailed implementation description (RESTful HTTP-based solution set) for each functionality is missing. |
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| ***Summary of change:*** | 1. Add solution description for Managing external management data in clause 6.4 in TS 28.537.2. Add explicit description for functionalities provided for managing external management data.3. Add the detailed implementation description (RESTful HTTP-based solution set) for each functionality |
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| ***Consequences if not approved:*** | The description for the functionalities provided by for managing external management data is missing in the published TS 28.537. |
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| ***Clauses affected:*** | 6.4.X (new) |
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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:*** |  |

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| **1st Change** |

### 6.4.X Solutions

#### 6.4.X.0 Overview

##### 6.4.X.0.1 Introduction

The solution for managing external management data is based on the model driven approach. Following are the functionalities for managing external management data:

- Discovery of external management data type

- Request and retrieve of external management data

##### 6.4.X.0.2 Discovery of external management data types

The Discovery of external management data functionalities allow MnS consumer to retrieve external data type information (including the type of external management data and associated meta data) on available external management data exposed by the MnS producer. Following are the list of concrete functionalities for discovery of external management data:

**- Query available external management data types:** MnS consumer requests to query the available external data types (including the type of external management data and associated meta data, the externalDataTypeSchema and externalDataScope maybe included in the meta data) by providing the selection filter. MnS producer should provide the available external data types to MnS consumer based on selection filter and configured access control rules. If the selection filter is not specified in the request, MnS producer shall provide all external data types that the MnS consumer is authorized to access.

**- Subscribe/Unsubscribe changes on available external management data types:** MnS consumer requests to subscribe or unsubscribe the notifications on changes in one or multiple available external management data types that the MnS consumer is authorized to discover. MnS consumer also can update its own subscriptions for notification on changes in one or multiple available external management data types.

**- Notify changes on available external management data types:** MnS producer sends the notifications on changes in one or multiple available external data types to the subscribed MnS consumer(s).

##### 6.4.X.0.3 Request and retrieve external management data

MnS consumer can request and retrieve the external management data supported by the MnS producer.

**- Request external management data:** MnS consumer requests to query the address (i.e. mediaLocation) from which the described external management data can be retrieved by specifying the external management data type discovered and authorized to be accessed. The mediaLocation is a URI of the media which includes the transfer protocol.

- **Retrieve external management data:** MnS consumer uses the obtained medialocation to retrieve the requested external management data.

#### 6.4.X.1 Stage 2 definition

Following are the stage 2 definition for management of external management data:

- The operations and notifications of generic provisioning MnS defined in clause 11.1 in TS 28.532 [2].

- The External data type NRM fragment (including ExternalDataType IOC) defined in clause 4.3.73 in TS 28.622 [9].

#### 6.4.X.2 Stage 3 definition

Following are the stage 3 definition for managing external management data:

- RESTful HTTP-based solution set

- RESTful HTTP-based solution set for generic provisioning management service is defined in clause 12.1.1 in TS 28.532 [2]. OpenAPI document "TS28532\_ProvMnS.yaml" in clause A.1 in TS 28.532 [2].

- OpenAPI document "TS28623\_ExternalDataMgmtNrm.yaml" in clause 4.3 in TS 28.623 [10].

Following are the detailed SS to support managing external management data based on Table 12.1.1.1.1-1 and Table 12.1.1.2.1-1 in TS 28.532 [2].

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|  | Functionality | **IS operations** | HTTP Method | Resource URI |
| Discovery of Management Services | Query available external management data types | getMOIAttributes operation | GET | {MnSRoot}/ProvMnS/{MnSVersion}/{URI-LDN-first-part}/SubNetwork={id} |
| Subscribe changes on available external management data types | createMOI operation | POST | {MnSRoot}/ProvMnS/{MnSVersion}/{URI-LDN-first-part}/SubNetwork={id} |
| Unsubscribe changes on available external management data types | deleteMOI operation | DELETE | {MnSRoot}/ProvMnS/{MnSVersion}/{URI-LDN-first-part}/SubNetwork={id}/NtfSubscriptionControl={id} |
| Notify changes on available external management data types | notifyMOIAttributeValueChanges notification | POST  | {notificationTarget} |
| Request and retrieve external management data | Request external management data | getMOIAttributes operation | GET | MnSRoot}/ProvMnS/{MnSVersion}/SubNetwork={id}/{ExternalDataType}=id |

Note: The ExternalDataType resource is defined in "TS28623\_ExternalDataMgmtNrm.yaml", the NtfSubscriptionControl resource is defined in "TS28623\_SubscriptionControlNrm.yaml".

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| **End of Changes** |