**3GPP TSG- Meeting #**

**Changsha, Hunan Province, , -**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  | | | | | | | | |
| *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 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)* | |
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| ***Reason for change:*** | | Several use case and requirements in clause 6.5.4 have no solution agreed in Rel 18. This contribution proposes to remove the Use Cases and requirements related to it. | | | | | | | | |
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| ***Summary of change:*** | | Correct clause 6.5.4 Use cases and requirements related to AI/ML inference capability configuration management to fit the solution. | | | | | | | | |
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| ***Consequences if not approved:*** | | leads to incorrect implementation. | | | | | | | | |
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| ***Clauses affected:*** | | 6.5.4.2 and 6.5.4.3 | | | | | | | | |
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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:*** | |  | | | | | | | | |

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| **Start of modification** |

### 6.5.4 AI/ML inference capability configuration management

#### 6.5.4.1 Description

The AI/ML inference function and the associated ML entity may need to be managed and configured to conduct inference in the 5G system to align with the consumer´s expectation, e.g., to enable the AI/ML inference function to perform inference.

The MnS producer for AI/ML inference management needs to provide a capability for configuration of the AI/ML inference function.

##### 6.5.4.2 Use cases6.5.4.2.1 Managing NG-RAN AI/ML-based distributed Network Energy Saving

An NG-RAN AI/ML-based distributed Network Energy Saving Function may use one or more ML entities or AI/ML Inference Functions to derive energy saving recommendations.

The MnS consumer may need to monitor the network performance and determines if activation or deactivation of an ML entities or an AI/ML Inference Functions related to an AI/ML-based Distributed Network Energy Saving function is required.

##### 6.5.4.2.2 Managing NG-RAN AI/ML-based distributed Mobility Optimization

An AI/ML-based distributed Mobility Optimization Function may use one or more ML entities or AI/ML Inference Functions to derive handover recommendations.

This NG-RAN AI/ML-based distributed Mobility Optimization may need to monitors the network performance and determines if activation or deactivation an ML entities or and AI/ML Inference Functions related to an AI/ML-based Distributed Mobility Optimization function is required.

##### 6.5.4.2.3 Managing NG-RAN AI/ML-based distributed Load Balancing

An NG-RAN AI/ML-based distributed Load Balancing may use one or more ML entities or AI/ML Inference Functions to derive load balancing recommendations.

This NG-RAN AI/ML-based distributed Load Balancing may need to monitor the network performance and determines if activation or deactivation an ML entities or AI/ML Inference Functions related to an AI/ML-based Distributed Load balancing function is needed.

#### 6.5.4.3 Requirements for AI/ML inference management

Table 6.5.4.3-1

| Requirement label | Description | Related use case(s) |
| --- | --- | --- |
| **REQ- AI/ML\_INF-01** | 3gpp management System of AI/ML-based distributed Network Energy Saving Function should enable an authorized MnS consumer to to manage the ML entity and/or AI/ML Inference Function related to Distribuited Energy Saving functions. | Managing AI/ML-based for NG-RAN distributed Network Energy Saving (clause 6.5.4.2.1) |
| **REQ- AI/ML\_INF-02** | 3gpp management System of AI/ML-based distributed Mobility Optimization should enable an authorized MnS consumer to manage the ML entity and/or AI/ML Inference Function related to Distribuited Mobility Optimization functions. | Managing AI/ML-based for NG-RAN distributed Mobility Optimization (clause 6.5.4.2.2) |
| **REQ- AI/ML\_INF-03** | 3gpp management System of AI/ML-based distributed Load Balancing Function should enable an authorized MnS consumer to request to manage ML entity and/or AI/ML Inference Function related to Distribuited the Load Balancing functions. | Managing AI/ML-based for NG-RAN distributed Load Balancing (clause 6.5.4.2.3) |
| **REQ-AIML\_ INF\_ACT-1** | The MnS producer for AI/ML inference management should have a capability allowing an authorized MnS consumer to activate and deactivate an ML inference function. | Managing AI/ML-enabled for Distributed Network Energy Saving (clause 6.5.4.2.1)  Managing AI/ML-enabled for distributed Mobility Optimization (clause 6.5.4.2.2)  Managing AI/ML-enabled for distributed Load balancing (clause 6.5.4.2.3) |
| **REQ-AIML\_ INF\_ACT-2** | The MnS producer for AI/ML inference management should have a capability to allow an authorized MnS consumer to provide the policy for activating and deactivating inference function.  Note: The policies instructing the ML MnS producer on how or/and when to activate which ML capabilities. | Managing AI/ML-enabled for Distributed Network Energy Saving (clause 6.5.4.2.1)  Managing AI/ML-enabled for distributed Mobility Optimization (clause 6.5.4.2.2)  Managing AI/ML-enabled for distributed Load balancing (clause 6.5.4.2.3) |

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| **End of modification** |