**3GPP TSG-SA5 Meeting #137-eS5-213333**

**e-meeting 10th - 19th May 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  | **28.535** | **CR** | **-** | **rev** | **-** | **Current version:** | **17.1.0** |  |
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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:***  | Input to draftCR S5-212397 Update coordination between closed control loops |
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| ***Source to WG:*** | Huawei. |
| ***Source to TSG:*** | S5 |
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| ***Work item code:*** | eCOSLA |  | ***Date:*** | 2021-04-16 |
|  |  |  |  |  |
| ***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 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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | It is described in the draftCR S5-212397 the relationships and coordination categories between closed control loops in the management domains. However it is not clear what are coordinated between ACCLs. |
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| ***Summary of change:*** | Added texts in 4.2.x the coordination information between hierarchical and/or peer-to-peer closed control loops. For hierarchical ACCLs, the Escalation and Delegation type of coordination are supported.For peer-to-peer relations of ACCLs, the Cooperation type of coordination is supported. |
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| ***Consequences if not approved:*** | It is not clear what are actually coordinated between ACCLs in management domains. |
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| ***Clauses affected:*** | 4.2.x |
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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:*** | This CR is input to draftCR S5-212397 |

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| **1st Change** |

## 4.2.x Coordination between closed control loops

Different closed control loops reside in the management domains or in the network functions to support automation and the autonomous networks. Different domains may involve overlapping or non overlapping coverage areas. The results of a closed control loop may have impact on other closed control loops. Coordination between closed control loops is needed for example in and between, the 5GC management domain and the NG-RAN management domain, to improve the performance in order to achieve the goal(s) of the closed control loops. Furthermore coordination may also be needed when conflicts happen between closed control loops related to their activities.

A closed control loop may coordinate with other closed control loops in the same domain or in a different domain. Closed control loops in domain management for 5GC and NG-RAN are responsible for local optimization. Closed control loops in the cross management domain may need to coordinate with closed control loops in multiple other management domains for the end to end optimization.

The relationships between closed control loops can be hierarchical and/or peer-to-peer. Coordination in the management domains include the following categories:

* Coordination between Cross Management Domain and the 5GC Management Domain
* Coordination between Cross Management Domain and the NG-RAN Management Domain
* Coordination between Cross Management Domain, 5GC Management Domain and NG-RAN Management Domain
* Coordination within:

- Cross Management Domain,

- 5GC Management Domain and

- NG-RAN Management Domain

Coordination in management domains provides the SLS assurance from the overall management perspective. It also provides governance and goals for the 5GC NFs and gNBs.

The following coordinations are supported between hierarchical closed control loops:

- Escalation: If an ACCL in 5GC Management Domain or NG-RAN Management Domain is not able to achieve the goal(s) assigned to it, it escalates the situation to the correlated ACCL in the Cross Management Domain, e.g. requesting for goal adjustment or Policy or parameters reconfiguration request.

- Delegation: The ACCL in the Cross Management Domain delegates respective goal(s) to the correlated ACCL in 5GC Management Domain or NG-RAN Management Domain, e.g. by setting the goals for the correlated ACCLs if it may impact the SLS assurance achievement.

The coordination between peer-to-peer closed control loops is FFS.

Editor’s NOTE: This will be revisited.

Editor’s NOTE: Cross management domain interactions are FFS

Editor’s NOTE: Definition of hierarchical, peer-to-peer for ACCLs relationship may need to be introduced in the future.

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| **End of Change** |