**3GPP TSG-SA5 Meeting #141-eS5-221389**

**e-meeting, 17 - 26 January 2022**

**Source: Ericsson**

**Title: Discussion paper on eCosla completion**

**Document for: Discussion**

**Agenda Item: 6.4.10**

# 1 Decision/action requested

***The group is asked to endorse the detailed proposal in section 4.***

# 2 References

[1] [3GPP TS 28.535](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3693): "Management and orchestration; Management services for communication service assurance; Requirements"

[2] [3GPP TS 28.536](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3701): "Management and orchestration; Management services for communication service assurance; Stage 2 and stage 3"

[3] [3GPP TS 28.533](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3416): "Management and orchestration; Architecture framework"

[4] [SP-200196](https://www.3gpp.org/ftp/tsg_sa/TSG_SA/TSGS_87E_Electronic/Docs/SP-200196.zip): "New WID on Enhanced Closed loop SLS assurance"

[5] [SP 200465](https://www.3gpp.org/ftp/tsg_sa/TSG_SA/TSGS_88E_Electronic/Docs/SP-200465.zip): "Management data collection control and discovery"

[6] [SP\_210136](https://www.3gpp.org/ftp/tsg_sa/TSG_SA/TSGs_91E_Electronic/Docs/SP-210136.zip): "Study on Enhancement of service-based management architecture"

[7] [SP 210132](https://www.3gpp.org/ftp/tsg_sa/TSG_SA/TSGs_91E_Electronic/Docs/SP-210132.zip) "Enhancements of Management Data Analytics Service"

[8] SP 880028 "Management data collection control and discovery"

[9] S5-221338 Discussion paper on communication service assurance and closed control loops

[10] 3GPP TS 28.313 "Management and orchestration; Intent driven management services for mobile networks"

[11] 810027 "Intent driven management service for mobile network"

# 3 Rationale

The work-item to document management services for communication service assurance is nearing completion as per SA5 work plan.

The management solution provided in specifications [1] and [2] describe use cases, requirements and solutions on how to monitor communication service assurance goal fulfilment using closed control loops. On high level the following has been described in the specifications:

* Business level use cases and requirements, and specification level use cases and requirements documented in TS 28.535 [1].
* Procedure describing how MnS consumer can manage an MnS producer of closed control loops (goal in, fulfilment out), documented in TS 28.536 [2].
* Network Resource Model (stage 2) containing class for “AssuranceClosedControlLoop”, “AssuranceGoal” and AssuranceReport including dataType definitions and attributes, documented in TS 28.536 [2].
* Open-API template (stage 3) available as yaml file (cosla.yaml file), containing the model fragment for closed control loops, documented in TS 28.536 [2].
* Integration and verification of the cosla.yaml file with the complete NRM for Rel-17 in 3GPP Forge

The initial scope of the Cosla WI included objectives that are not addressed by Cosla WI as some of the identified gaps that should be addressed by those objectives have been addressed, are being addressed or will be addressed by other work items. The following is overview of objectives [4]:

1. add new service assurance management related use cases and requirements according to deployment, assurance aspects.
2. describe the data, the management service can provide to the CN.
3. describe the solution realizing the management service for efficient data collection and exposure of coordination of the collection from RAN and CN
4. describe management of the management functions involved in SLS assurance loops, including configuration of data analytic functions, e.g., setting thresholds for prediction accuracy.
5. describe how to apply the ML models of MDA to closed loop SLS assurance.
6. describe procedures and artefacts applicable to design phase of closed loops in relation to the deployment of closed loops
7. describe the association between the following concepts, such as: service user experience, service optimization, service assurance and intent driven management
8. enhance the descriptions on closed loop and related interactions which are important for service assurance
9. describe new information in NRM and new measurements and KPIs which support the service assurance

The following is the overview of the status of an individual objective:

Objective 1 has been addressed by documenting the use cases and requirements in TS 28.535 [1].

Objective 2 has not been addressed in Rel-17.

Objective 3 is in scope of the MADCOL WI [5].

Objective 4 has not been addressed in Rel-17 the first part of the objective is currently being studied in FS\_eSBMA [6] and the second part of the objective is in scope of MADCOL WI [5].

Objective 5 is being addressed by eMDAS WI [7] and proposed Rel-18 WI [8]

Objective 6 is not addressed in Rel-17

Objective 7 is addressed by discussion paper S5-221338 [9] and on-going work on intent [11]

Objective 8 is addressed by procedure and network resource model in TS 28.536 [2] and the association with intent is described in draft TS 28.313 [10]

Objective 9 is partially addressed in Rel-17, i.e. the NRM has been documented in TS 28.536. However no new measurements and KPI’s have been defined.

The objectives that are not in scope of eCOSLA Rel-17 or that have not been addressed are should be removed from the scope. The objective that is partially addressed is should be updated. Therefore it is proposed to update the objectives in eCOSLA WID to the following set of objectives:

* add new service assurance management related use cases and requirements according to deployment, assurance aspects.
* enhance the descriptions on closed loop and related interactions which are important for service assurance
* describe new information in NRM which support the service assurance

# 4 Detailed proposal

The group is asked to endorse the updated set of objectives:

* add new service assurance management related use cases and requirements according to deployment, assurance aspects.
* enhance the descriptions on closed loop and related interactions which are important for service assurance
* describe new information in NRM which support the service assurance