**3GPP SA4#120-e S4-221025r01**

**E-meeting, 17 – 26 August 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **PSEUDO CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26**.**927** | **CR** | pseudo | **rev** | **-** | **Current version:** | **0.1.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | **[FS\_AI4Media] Related work in 3GPP** | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung Electronics Co., Ltd. | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FS\_AI4Media | | | | |  | ***Date:*** | | | 11/08/2022 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **D** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)*  *Rel-17 (Release 17)*  *Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This pCR provides text on the current status of AI/ML related work within other 3GPP WGsd | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Source: Samsung Electronics Co., Ltd.**

**Title: [FS\_AI4Media] Related work in 3GPP**

**Agenda Item: 9.7**

**Document for: Agreement**

# 1 Introduction

This contribution provides text on the current status of AI/ML related work within other 3GPP WGs.

# 2 Related work in 3GPP WGs

This clause documents the 3GPP activity related to AI/ML in other Working Groups.

- SA1 has completed an initial study item on traffic characteristics and performance requirements for AI/ML model transfer in 5GS (FS\_AMMT), documented in TR 22.874. This technical report describes a variety of different use cases for AI/ML in 5G, with many that are related to media services. The media related use cases described in TR 22.874 are used as a basis for those listed and described in clause 4.2 of this TR. Resulting from this study item, SA1 has completed related normative works by way of multiple CRs on TS 22.261 (AMMT), reflecting new service requirements and KPIs for AI/ML model transfer in 5GS. Leading from this initial work, SA1 has also subsequently established a Rel-19 study on AI/ML model transfer phase 2 (FS\_AIML\_MT\_Ph2), the objectives of which are to study new use cases and potential service and performance requirements to support efficient AI/ML operations using direct device connection. This study avoids overlaps with stage-23 work ongoing in Rel-18.

- SA2 is in progress of a study item on system support for AI/ML-based services (AIMLsys). The scope of this study is based on requirements from SA1, including 7 key issues related to the training and inference processes of AI/ML applications, namely monitoring of network resources to support application AI/ML operations, 5GC information exposure to UE and authorized 3rd party, enhancing external parameter provisioning, QoS and policy enhancements, among others.

- SA3 has recently approved a study item on security and privacy of AI/ML-based services and applications in 5G (FS\_AIML). The objectives are to identify what security and privacy management is needed for data transmission to application layer AIML, including authentication and authorization of data collection and sharing between UE, AF and the network, and securing of AIML-based services and operations.

- SA5 has a study item on AI/ML management (FS\_AIML\_MGMT), related to automation and intelligence in 5G, including management and orchestration (e.g. MDA), 5GC (e.g., NWDAF), and NG-RAN. The objectives are to provide validation/testing of models and AIML enable functions, deployment of these models and functions, and configuration and performance evaluation of AIML enabled functions. The study will also investigate what coordination is needed between AIML management capabilities and 5GC AIML capabilities.

- SA6 is in progress of a study on application data analytics enablement service (FS\_ADAES), the goal is to study how to provide application layer data analytics as a possible new capability at the enablement layer for supporting the application specific layer to receive useful statistics/predictions for the application service, while complementing the analytics provided by the 5GS.

- RAN1 is in progress of a study on the 3GPP framework for AI/ML for NR air interface. The goal of this study is to explore the benefits of augmenting the air-interface with features enabling improved support of AI/ML based algorithms for enhanced performance and/or reduced complexity/overhead. Enhanced performance here depends on the use cases under consideration and could be, e.g., improved throughput, robustness, accuracy or reliability, etc.

- RAN3 has a study item on specify data collection enhancements and signalling support within existing NG-RAN interfaces and architecture (including non-split architecture and split architecture) for AI/ML-based Network Energy Saving, Load Balancing and Mobility Optimization (AIML\_RAN). Normative work is expected to start in Q3 2022.

# 3 Proposal

We propose to include the text in section 2 of this contribution to clause 4.3 of TR 26.927.