**3GPP SA WG2 Meeting #154**  **S2-2210636**

**Toulouse, France, November 14-18, 2022**

**Source: Samsung, OPPO, Oracle, LG Electronics, ETRI, Tencent, Qualcomm, Toyota, LG Uplus, Intel, Interdigital, Mediatek, Xiaomi**

**Title: KI#7 Conclusion: Assistance to Member Selection**

**Document for: Approval**

**Agenda Item: 9.21**

**Work Item / Release: FS\_AIMLsys**

*Abstract of the contribution: This contribution provides a conclusion proposal to KI#7.*

# 1. Discussion

This contribution provides a conclusion proposal to KI#7 on assistance to member selection

# 2 Proposal

It is proposed to include the below changes to TR 23.700-80.

**FIRST CHANGE**

## 8.7 Key Issue #7: 5GS Assistance to Federated Learning Operation

### 8.7.X Assistance to Member Selection

It is concluded that an AI/ML AF performing FL operation may request the 5GC to provide assistance with the selection of the UEs participating in the FL operation by triggering the UE selection assistance functionality in the 5GC.

UE selection assistance is defined as a functionality offered by the 5GC upon receiving a request from the AF via NEF if needed to provide a list of candidate UEs and additional information. By using this function, the AI/ML AF may request 5GC to provide a list of candidate UEs and additional information for application layer FL member selection. After receiving the AF request, a 5GC NF may then trigger corresponding 5GC procedures to derive the candidate UE list as part of the assistance information to be reported back to the AF.

A new 5GC service is required to provide UE selection assistance to the AF performing application layer FL. The following characteristics apply to the proposed service:

- The AF uses a request or subscription service operation to trigger the UE selection assistance functionality. The 5GC provides the assistance to the AF by using a notify service operation.

- The AF may include the following parameters as part of the request or subscription service operation to the 5GC:

- UE list (a UE or a UE list or any UE)

- Optionally, the following additional parameters can be provided: UE(s) connection status (e.g. S-NSSA, DNN, MA configuration, access type), UE(s) location, target area(s), QoS requirements, time validity, etc.

- The 5GC may provide the following parameters as part of the notify service operation:

- List(s) with candidate UEs to be selected by the AF.

- Recommended time window(s) per candidate UE to be allocated by the AF.

- Optionally, additional information per candidate UE per time window may be provided: user consent info, UE(s) connection status (e.g. S-NSSA, DNN, MA configuration, access type), UE(s) location, QoS, etc.

NOTE 1: The 5GC service providing UE selection assistance to the AF shall comply with the list of General Architecture Principles contained in clause 8.0.

NOTE 2: The complete list of parameters provided in each service operation may be finalized during normative work.

The new 5GC service providing UE selection assistance is hosted in a new NF. The new NF can be co-located with other 5GC NF, e.g., NEF. The new NF may collect additional information from other 5GC NF to respond to the AF request or subscription.

In Release 18, the above new 5GC service may be also leveraged to provide UE assistance to the AF for AI/ML operations other than FL defined by SA1 in TS 22.261 [2], clause 6.40.

**END OF CHANGES**