**SA WG2 Meeting #143E S2-21xxxxx**

**MUSIM Conference call. (revision of S2-21xxxx)**

**Source: Samsung**

**Title: Discussion on container for Leaving procedure(SR Vs TAU)**

**Document for: Information & Discussion**

**Agenda Item: TBD**

**Work Item / Release: MUSIM / Rel-17**

*Abstract of the contribution: TODO.*

# 1. Introduction

# 2. Discussion on TAU Vs SR.

Below are the identified impacts because of using SR or TAU message as a container to carry paging restriction information.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.no | SR as a container | TAU as a container. | Comments | Impacts if proposed changes not agreed. |
| 1 | a. If the UE includes paging restriction information in SR message, the MME stores paging restriction information, then enforces it in the network triggered service request procedure as described in clause 5.3.4.3.b. The MME shall delete the stored paging restriction information if paging restriction information is not received in service request message. | a. If the UE includes paging restriction information in TAU message, the MME stores paging restriction information, then enforces it in the network triggered service request procedure as described in clause 5.3.4.3.b. The MME shall delete the stored paging restriction information if paging restriction information is not received in TAU message. | Exactly similar.(This from CR version 7.2) | Basic feature not available. |
| Additional impacts to TAU procedure\*\*: |  |  |
| 2 | If TAU with Active flag received, MME delete the stored Paging restriction information |  |  |  |
| 3 | MME-MME, MME-AMF interface Paging restriction information has to be sent. |  |  | Basic feature not available. |
| 4 | Precondition:If TAU without Active flag is received by MME, Paging restriction information is stored by MME, DL data is pending for the UE, New behavior:Network shall not establish the DRB. |  |  | Unnecessary DRB established. |
| 5a. | New indication for smartphone similar to the one for IOT devices (signaling active flag) is required. So that after TAU procedure, network does not release the NAS signaling connection, If SR needs to be sent following to TAU procedure. |  | Group has to select either 5a or 5b. | Unnecessary DRB established because UE will have to use TAU with Active flag to send SR after TAU. |
| 5b. | If new indication is not implemented:a) IDLE to connected mode signaling(roughly > 8 message exchanges), execute TAU procedure; b) NAS signaling connection release; andc) IDLE to connected mode signaling (roughly > 8 message exchanges) to execute SR procedure. |  | Two times execution of IDLE to Connected mode signaling to indicate single information to the network. |

NOTE\*\*:

1) “3” above is required when Paging restriction information is stored at the PLMN-1 and UE moves out of registration area.

2) “4” above is required when Paging restriction information is stored at the PLMN-1 and UE moves out of registration area.

3) “5a” or “5b” above is required for example:

3a) UE provides paging filtering information in the PLMN-1 (for example block paging due to voice call at PLMN-2), UE leaves PLMN-1.

3b) UE after the call is done on PLMN-2, wants to reset the filters in PLMN-1 that is request to resume the paging without any filters.

4) 5b is actually not a new impact to implementation rather it is alternate way of implementing 5a. But this will need two times IDLE to Connected mode signaling.

Scenarios:

# 4. Proposed Way Forward

Based on above observations:

1) To make our life easy (instead of analysing each and every scenario) similar to other IEs in the SR message we think it is better to have MUSIM IE in both SR and TAU message **at least for EPS**. This needs only point 1 implemented in both the messages.

2) If we have to choose only one procedure which has a least impact then we think choosing TAU is better because it also have least side effects. **Again this is from EPS perspective**, for 5GS SR only impact is OK in our view.

3) In EPS we need to consider TAU because currently there is no provision to send SR following to TAU in the same NAS signalling connection without establishing the DRB. This is for example required during the resume to delete the set Paging filters.