**3GPP TSG-CT6 Meeting #91 *C6-180695***

**West Palm Beach, Florida, United States, 27th Nov 2018 - 30th Nov 2018**

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| *CR-Form-v11.4* |
| **CHANGE REQUEST** |
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|  | **31.102** | **CR** | **0822** | **rev** | **2** | **Current version:** | **15.2.0** |  |
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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 | **X** | ME | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:***  | UICC re-activation/re-initialisation during PSM and eDRX |
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| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | TEI14 |  | ***Date:*** | 2018-11-30 |
|  |  |  |  |  |
| ***Category:*** | **A** |  | ***Release:*** | Rel-15 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | The present specificaiton provides in the sub-clauses 5.1.10 and 5.1.11 USIM reactivation verification conditions which are applicable to the cases when leaving PSM and eDRX. In particular:**Quote of 5.1.10**Verification shall include at least the check of the content of the following EFs: EFICCID, EFIMSI, EFLOCI, EFPSLOCI and EFEPSLOCI**Quote of 5.1.11**Verification shall include at least the check of the content of the following EFs: EFICCID, EFIMSI, EFLOCI, EFPSLOCI and EFEPSLOCIThe above text seems incorrect for a UE which operates operating in NB-S1 mode or WB-S1 mode. As for such a UE, it does not make sense to be mandated to read the EFLOCI and EFPSLOCI in addition to the EFEPSLOCI. In addition, the text should be consistent with the wording for location information files during USIM initialisation (see sub-clause 5.1.1.2) where it states, quote:[..]- Location Information request for CS-and/or PS-mode and/or EPS and/or 5GS;Note that the above text indicates that the reading of EF which contains the LOCI as “and/or” and this should be applicable to also a UE which operates in NB-S1 mode or WB-S1 mode. |
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| ***Summary of change:*** | The UE reads the specific EF(s) containing LOCI depending on which of them the ME used(read) prior to entering PSM or applying eDRX. Hence, the UE can read one or more of the EFs containing LOCI. |
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| ***Consequences if not approved:*** | Mandatory requirements on the USIM re-activation/re-initialisation during PSM and eDRX exists which are in fact not relevant for UE which operates in NB-S1 mode or WB-S1 mode. Additionally, this is not align within TS 31.102 where the sub-clause 5.1.1.2 indicates differently. This results in undesirable effect as a UE, which operates in NB-S1 mode, need not to read EFLOCI and EFPSLOCI in addition to the EFEPSLOCI. |
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| ***Clauses affected:*** | 5.1.10, 5.1.11 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **X** |  |  Test specifications | TS/TR 31.121 CR 0273  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |

\*\*\*\*\* First change \*\*\*\*\*

### 5.1.10 UICC interface in PSM

As defined in 3GPP TS 23.682 [78], PSM is intended for UEs that are expecting only infrequent mobile originating and terminating services and that can accept a corresponding latency in the mobile terminating communication. The following procedures may be used by the ME in order to reduce power consumption while in PSM.

If the UICC supports the UICC suspension mechanism (SUSPEND UICC command), the ME may suspend the UICC after entering the PSM. In this case, the ME shall successfully resume the UICC before it can leave the PSM.

If the UICC does not support the UICC suspension mechanism, and only in case the PIN of the USIM is disabled, the ME may optionally deactivate the UICC (as specified in clause 6A.1 of 3GPP TS 31.101 [11]) after entering the PSM. In this case, the ME shall perform these steps before it can leave the PSM:

- re-activate the UICC (as specified in clause 6A.1 of 3GPP TS 31.101 [11]),

- re-initialize the USIM (as specified in clause 5.1.1), with the exception of re-reading EFs that are not required for the verification of the USIM,

- take appropriate steps to verify that the same USIM is used.

Verification shall include at least the check of the content of the following EFs:

- EFICCID,

- EFIMSI, and

- EFLOCI and/or EFPSLOCI and/or EFEPSLOCI (depending on which of these specific EFs containing LOCI the ME used prior to entering PSM).

When the UE is in PSM and in case the ME wants to deactivate the UICC, it shall wait until the current proactive UICC session, if any, is terminated and/or any currently open BIP session is closed.

\*\*\*\*\* Next change \*\*\*\*\*

### 5.1.11 UICC interface during eDRX

In order to reduce power consumption when the UE uses extended idle mode DRX cycle, as defined in 3GPP TS 24.301 [51], in case the UICC supports the UICC suspension mechanism (SUSPEND UICC command), the ME may suspend the UICC during the extended idle mode DRX cycle. In this case, the ME shall resume the UICC successfully before the end of the extended idle mode DRX cycle or before any other transmission to the network.

In case the UICC does not support the UICC suspension mechanism, the PIN of the USIM is disabled and deactivation of UICC is authorized in EFAD, the UE may optionally deactivate the UICC (as specified in clause 6A.1 of 3GPP TS 31.101 [11]) during the extended idle mode DRX cycle. In this case, the UE shall re-activate the UICC (as specified in clause 6A.1 of 3GPP TS 31.101 [11]), re-initialize the USIM (as specified in clause 5.1.1) and take appropriate steps to verify that the same USIM is used, before the end of the extended idle mode DRX cycle or before any other transmission to the network.

Verification shall include at least the check of the content of the following EFs:

- EFICCID,

- EFIMSI,

- EFLOCI and/or EFPSLOCI and/or EFEPSLOCI (depending on which of these specific EFs containing LOCI the ME used prior to applying eDRX).

When the UE is in extended idle mode DRX cycle and in case the ME wants to deactivate the UICC, it shall wait until the current proactive UICC session, if any, is terminated and/or any currently open BIP session is closed.