**3GPP TSG-WG SA2 Meeting #143E e-meeting *S2-210xxxx***

**Elbonia, February 24 – March 09, 2021 (revision of S2-210xxxx)**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **23.501** | **CR** | **XXXX**  | **rev** | **-**  | **Current version:** | **16.7.0** |  |
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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 |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | UE On-boarding registration for NPN |
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| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | SA2 |
|  |  |
| ***Work item code:*** | eNPN |  | ***Date:*** | 2021-02-18 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-17 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | According to the TR 23700-07, On-boarding registration and following remote provisioning for SNPN case should be supported in R17. |
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| ***Summary of change:*** | Support on-boarding registration and remote provisioning after successful on-boarding |
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| ***Consequences if not approved:*** | Missing new features as per conclusion of TR 23.700.07 |
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| ***Clauses affected:*** | 5.30.2.X(NEW) |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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

#### 5.30.2.X UE on-boarding for SNPN

SNPN or PLMN can act as an on-boarding network to support On-boarding registration for UEs that need provisioning of NPN credentials (i.e. for primary authentication) and other information to enable SNPN access.

In order to register to an SNPN for On-boarding, the UE sets the registration type as On-boarding Registration and provides an RRC indication to indicate that the RRC connection is for on-boarding. This RRC indication allows NG-RAN to select an appropriate AMF that supports on-boarding procedures. The On-boarding Registration type allows AMF to, e.g., select an appropriate SMF and perform other on-boarding-related configuration, e.g., start the timer configured for on-boarding service, restrict the UP connectively only for purpose of remote provisioning with allowed PS(s).

On-boarding network should support functionality to restrict usage to only on-boarding service.

- When On-boarding network is O-SNPN, the information required to restrict the usage to only on-boarding service is locally configured in the AMF and SMF, and the AMF and SMF restrict the usage when the UE indicates that the registration type is On-boarding Registration or NG-RAN indicates that the RRC connection is for On-boarding.

- When On-boarding network is a PLMN, the AMF restrict its functionality only for on-boarding usage based on received operator subscription from the UDM. Based on operator’s configuration, the subscription data shall contain a DNN, S-NSSAI or information (e.g., explicit indication) dedicated for on-boarding.

The UE shall initiate de-registration from the on-boarding network after finishing the remote provisioning or the on-boarding network shall initiate the de-registration after successful completion of on-boarding or based on timer configured for on-boarding service.

\* \* \* \* End of changes \* \* \* \*