**SA WG2 Meeting #161 S2-240bbbb**

Athens, Greece, February 26 – March 1, 2024 *(revision of S2-2401308)*

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.501** | **CR** | **draft** | **rev** | **1** | **Current version:** | **18.4.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | TS 23.501 draft CR for ProSe support for NPNs | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Philips International B.V. | | | | | | | | | |
| ***Source to TSG:*** | S2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI19\_ProSe\_NPN | | | | |  | ***Date:*** | | | 2024-02-16 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 5G Proximity Services are currently not supported for NPNs. Since work item TEI19\_ProSe\_NPN addresses support for this feature in the related specification TS 23.304, the statements in TS 23.501 that 5G Proximity Services are not supported for NPNs should be removed. | | | | | | | | |
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| ***Summary of change:*** | | Remove statements on 5G Proximity Services not supported from clauses 5.30.2.0 and 5.30.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | 5G Proximity Services are mentioned to be not supported for NPNs | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.30.2.0, 5.30.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

#### 5.30.2.0 General

SNPN 5GS deployments are based on:

- the architecture depicted in clause 4.2.3;

- the architecture for 5GC with Untrusted non-3GPP access (Figure 4.2.8.2.1-1) for either access to SNPN services via a PLMN (and vice versa) or for direct access to SNPN via non-3GPP access;

- the architecture for 5GC with Trusted non-3GPP access (Figure 4.2.8.2.1-2); and

- the additional functionality covered in clause 5.30.2.

Alternatively, a Credentials Holder (CH) may authenticate and authorize access to an SNPN separate from the Credentials Holder based on the architecture specified in clause 5.30.2.9. Idle and connected mode mobility is supported as defined in clause 5.30.2.11.

Clauses 5.30.2.1 to 5.30.2.11 specify the common SNPN aspects applicable to both 3GPP and non-3GPP access, except where stated differently.

Aspects specific to Untrusted non-3GPP access for SNPN are specified in clause 5.30.2.12.

Aspects specific to Trusted non-3GPP access for SNPN are specified in clause 5.30.2.13.

Aspects specific to N5CW devices accessing SNPN services are specified in clause 5.30.2.15.

The following 5GS features and functionalities are not supported for SNPNs:

- Interworking with EPS;

- Emergency services when the UE accesses the SNPN over NWu via a PLMN;

- Roaming, e.g. roaming between SNPNs. However, it is possible for a UE to access an SNPN with credentials from a CH as described in clause 5.30.2.9 and to move between equivalent SNPNs;

- Handover between SNPN and PLMN or PNI-NPN;

- CIoT 5GS Optimizations;

- CAG;

A UE with two or more network subscriptions, where one or more network subscriptions may be for a subscribed SNPN, can apply procedures specified for Multi-USIM UEs as described in clause 5.38. The UE shall use a separate PEI for each network subscription when it registers to the network.

NOTE: The number of preconfigured PEIs for a UE is limited. If the number of network subscriptions for a UE is greater than the preconfigured number of PEIs, the number of network subscriptions that can be registered with the network simultaneously is restricted by the number of pre-configured number of PEIs.

\* \* \* \* Second change \* \* \* \*

#### 5.30.3.1 General

Public Network Integrated NPNs are NPNs made available via PLMNs e.g. by means of dedicated DNNs, or by one (or more) Network Slice instances allocated for the NPN. The existing network slicing functionalities apply as described in clause 5.15. When a PNI-NPN is made available via a PLMN, then the UE shall have a subscription for the PLMN in order to access PNI-NPN.

NOTE 1: Annex D provides additional consideration to consider when supporting Non-Public Network as a Network Slice of a PLMN.

As network slicing does not enable the possibility to prevent UEs from trying to access the network in areas where the UE is not allowed to use the Network Slice allocated for the NPN, Closed Access Groups may optionally be used to apply access control.

A Closed Access Group identifies a group of subscribers who are permitted to access one or more CAG cells associated to the CAG.

CAG is used for the PNI-NPNs to prevent UE(s), which are not allowed to access the NPN via the associated cell(s), from automatically selecting and accessing the associated CAG cell(s).

NOTE 2: CAG is used for access control e.g. authorization at cell selection and configured in the subscription as part of the Mobility Restrictions i.e. independent from any S-NSSAI. CAG is not used as input to AMF selection nor Network Slice selection. If NPN isolation is desired, operator can better support NPN isolation by deploying network slicing for PNI-NPN, configuring dedicated S-NSSAI(s) for the given NPN as specified in Annex D, clause D.2 and restricting NPN's UE subscriptions to these dedicated S-NSSAI(s).

The UE and PNI-NPN may support remote provisioning of credentials for NSSAA or credentials for secondary authentication/authorization to the UE, as specified in clause 5.39.

NOTE 3: After successful provisioning of the credentials to the UE, specific service subscription data (e.g. to enable the use of PNI-NPN) can be activated in the UE Subscription data in the UDR/UDM. This can result in a change of the UE Subscription Data to include new S-NSSAI, DNN or CAG information, which can trigger update of the UE configurations, e.g. described in clause 5.15.5.2.2.

NOTE 4: The UE always has subscription to the HPLMN providing the PNI-NPN and has a USIM that contains primary authentication credentials.

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