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

**Athens, Greece, February 26 – March 1, 2024** ***(revision of S2-2402357)***

**Source: Philips International B.V.**

**Title:** **TEI19 WID on support for ProSe services in NPNs**

**Document for: Approval**

**Agenda Item: 30.2**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: TEI19 WID on ProSe support in NPN

Acronym: TEI19\_ProSe\_NPN

Unique identifier:

Potential target Release: Rel-19

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X |  | X |  |
| No |  |  | X |  |  |
| Don't know | X |  |  |  |  |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
|  | Study |
|  | Normative – Stage 1 |
| X | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

## 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| N/A |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 920042 | TEI18 (Small) Technical Enhancements and Improvements for Rel-18 | TS 22.261 CR 0518 Clarification of NPN in 22.261 |
| 970016 | Proximity-based Services in 5GS Phase 2 | Rel-18 Stage 2 5G\_ProSe\_Ph2 work item for the latest version of TS 23.304. |

# 3 Justification

As explicitly indicated in TS 23.501 clauses 5.30.2.0 and 5.30.3.1, ProSe is currently not supported for NPNs. It is important to consider this topic for inclusion in release 19, given that without NPN support, deployment of ProSe (e.g. in factories) is hampered, and important SA1 use cases identified and requirements for ProSe (e.g. collaborating mobile robots as specified in TS 22.104) cannot be fully supported. This would also not be in line with the requirements in TS 22.261, which require support for ProSe in NPNs.

As indicated in LS S2-2311029, various whitepapers from 5G-ACIA such as “Using 5G sidelink in industrial factory applications” show the need for 5G sidelink communication to be supported in non-public networks (SNPN, PNI-NPN). Not supporting ProSe in NPNs also affects other programs, such as Ranging, i.e. ranging cannot be deployed in NPNs unless support for ProSe in NPNs is added.

Therefore, standardizing support for ProSe in NPNs in Release 19 is crucial to address the above mentioned needs/requirements.

# 4 Objective

The objective is to specify the following enhancements to 5GS to support Proximity Services in the context of NPNs:

- Expand the non-roaming architecture for ProSe in TS 23.304 to also cover NPN support, including support for inter-SNPN operation in non-roaming deployment.

- Update TS 23.304 to be aligned with TS 23.501 on NPN identification, such as combining PLMN ID with a Network Identifier (NID) to enable identification of an SNPN, and update PLMN specific terminology to also cover NPNs.

NOTE: PLMN terminology is not updated and PLMN IDs are not combined with NID if the terminology of PLMN and the use of PLMN ID pertains to VPLMNs or Local PLMNs or Announcing PLMN IDs.

- Extend TS 23.304 to enable discovery and selection of 5G ProSe UE-to-Network Relays that support access to an NPN (e.g. that are registered to a certain SNPN and/or that camp on a CAG cell of a certain PNI-NPN).

# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New specifications {One line per specification. Create/delete lines as needed} | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Rapporteur |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| 23.304 | New clause on 5G ProSe for NPNs. | TBD | This will be handled as “TEI19”. |
| 23.501 | Remove statements that 5G ProSe is not supported for NPNs | TBD | This will be handled as “TEI19”. |

This TEI19\_WID requires 0.5 TU

# 6 Work item Rapporteur(s)

Walter Dees, Philips International B.V., walter.dees@philips.com

# 7 Work item leadership

SA2

# 8 Aspects that involve other WGs

Security aspects need to be checked by SA3. Stage 3 aspects need to be addressed by CT1.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Philips International B.V. |
| Siemens AG |
| Mitsubishi Electric |
| NICT |
| LG Electronics |
| Lenovo |
| Interdigital |
| Novamint |
| Futurewei |