**SA WG2 Meeting #163 S2-2406536**

**May 20 - 31, 2024 Jeju, South Korea (Revision of S2-240xxxx)**

**Source: NTT DOCOMO,**

**Title: New WID on System aspects of 5G NR Femto**

**Agenda Item: 30.1**

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: System aspects of 5G NR Femto

Acronym: 5G\_Femto

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\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| FS\_5G\_Femto | S2 | 1020002 | Study on System aspects of 5G NR Femto |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 1020082 | Study on additional topological enhancements for NR | Study the overall RAN architecture and required functional and procedural impacts for supporting 5G Femto deployments |

**Dependency on non-3GPP (draft) specification:**

{This section is to be typically used to identify the IETF dependencies. Delete the header "Dependency on non-3GPP (draft) specification:" if no such dependency}

# 3 Justification

In 3G and 4G, 3GPP defined an architecture for Home eNodeB (HeNB)/Home NodeB (HNB) (or Femto/Femtocell is synonymous of HeNB/HNB in 3GPP and is also well-defined by other STD organizations such as Broadband Forum TR-196) in TS 22.220 and TS 36.300 that enables small access points deployed in customer premises (on a campus or at home) for access to operator, Internet and local services like local printers or local servers. For 5G, SA1 has defined normative requirements for Premises Radio Access Station (PRAS) as part of the PIRates WID (see TS 22.261, clause 6.38). In fact, NR Femto access is limitedly specified (e.g., TS 38.104) since the 5GS architecture is introduced in a flexible manner and no specific architecture for 5G NR Femto access deemed necessary so far.

SA2 studies the following key issue:

* KI#2: Enabling provisioning of subscribers allowed to access CAG cell and managing access control by the CAG owner or an authorized administrator.

This work item aims to complete the normative work based on the conclusions of the study agreed in TR 23.700-45 (clause 8).

# 4 Objective

This work item implements the conclusions of the Rel-19 study on system aspects of 5G NR Femto of TR 23.700-45 and TR 38.799. Following are the objectives for this work item:

**WT#3**: Support enabling the provisioning of CAG info via NEF by the CAG owner or an authorized administrator for non-roaming.

NOTE 1: A further update of the WID is required, based on the conclusion in TR 38.799 (**WT#1**) and the KI#2 (**WT#2**) conclusion.



# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **New specifications** *{One line per specification. Create/delete lines as needed}* | | | | | |
| Proposed Spec no. or series | Type (see note 1) | Rapporteur(s) (see note 2) | For info  at TSG# | For approval at TSG# | Remarks |
|  |  |  |  |  |  |

Note 1: Only TSs may contain normative provisions. Study Items shall create or impact only TRs.  
"Internal TR" is intended for 3GPP internal use only whereas "External TR" may be transposed by OPs.

Note 2: The first listed Rapporteur is the specification primary Rapporteur. Secondary Rapporteur(s) are possible for particular aspect(s) of the TS/TR. In this case, their responsibility has to be provided as "Remarks".

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| TS 23.501 | Architectural and functional updates | SA#106 (December 2024) |  |
| TS 23.502 | Procedural updates | SA#106 (December 2024) |  |

# 6 Work item Rapporteur(s)

Malla Reddy Sama, [sama@docomolab-euro.com](mailto:sama@docomolab-euro.com)

# 7 Work item leadership

SA2

# 8 Aspects that involve other WGs

Potential RAN impact to be covered by RAN WGs.

Potential security impact to be covered by SA3.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| NTT DOCOMO |
| Nokia |
| Nokia Shanghai Bell |
| Verizon |
| T-Mobile USA |
| AT&T |
| Samsung |
| Casa Systems |
| BT |
| Oracle |
| SK Telecom |
| Cisco |
| MATRIXX Software |
| Charter Communications |
| NEC |
| Rakuten Mobile |
| Reliance Jio |
| Telefonica |
| KPN |
| DISH Network |
| FirstNet |
| Comcast |
| Oppo |