**3GPP TSG-CT WG1 Meeting #135-eC1-22xxxx**

**E-Meeting, 6th – 12th April 2022**

(revision of C1-222630)

**3GPP TSG-CT WG4 Meeting #109-eC4-22xxxx**

**E-Meeting, 06th – 12th April 2022**

**Source: China Mobile, Nokia, Nokia Shanghai Bell, China Southern Power Grid Co.**

**Title: New WID on CT aspects of enhancement of RAN Slicing for NR**

**Document for: Approval**

**Agenda Item: 17.1.1**

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: CT aspects of enhancement of RAN Slicing for NR

## Acronym: NR\_Slice-Core

## Unique identifier: TBD

Potential target Release: Rel-17

## 1 Impacts

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

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

|  |  |
| --- | --- |
|  | Feature |
| X | Building Block |
|  | *Work Task* |
|  | Study Item |

### 2.2 Parent Work Item

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| NR\_Slice-Core | RAN2 | 911107 | Core part: Enhancement of RAN slicing for NR |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work Items (if any) |
| Unique ID | Title | Nature of relationship |
| 860039 | Study on enhancement of RAN slicing for NR | RAN work item |

## 3 Justification

RAN2 carried out a Rel-17 work item on the enhancement of RAN Slicing for NR. And "LS on Slice list and priority information for cell reselection" ( R2-2108928) from RAN2 to CT1 points out the solution agreed in RAN2#114e and #115e for cell reselection for the normative phase has the following impacts on protocols and interfaces under CT WGs' responsibilities:

1. For the *List of Slices with Slice Priority*, UE Access Stratum (AS) expects to receive a list from NAS containing a slice priority for each of the slices contained in the list when/ before it moves to RRC\_IDLE/RRC\_INACTIVE and when the list and/or priorities changes while the UE is in RRC\_IDLE/RRC\_INACTIVE.
2. Furthermore, RAN2 has been discussing a Slice Group concept and it is required to provide the UE with a mapping between slice groups and network slices.

This WID aims at carrying out the related work in CT WGs to complete the feature end to end. As the requirement to related CT work came from parent RAN2 WI "NR\_Slice-Core", and SA2 carried out the corresponding work under agenda item "Rel-17 CAT B/C alignment CR(s) due to the work led by other 3GPP Working Groups", WI code "NR\_Slice-Core" is suggested for this CT WI.

## 4 Objective

The objective of the work item is to develop the specifications according to the slice based cell reselection requirements from RAN WGs work item NR\_Slice-Core. CT WGs will support and align to normative stage 2 updates in the technical specifications under SA2 responsibility for “RAN Slicing for NR” introduced under corresponding RAN WI code. Stage 3 work on the enhancement of the NAS protocol and the NF services shall be started only after the applicable normative stage 2 work is available. The following areas of work are expected to be covered (non-exhaustive):

**CT1**

1. Enhancement of the NAS protocol to support the slice based cell reselection.
2. Clarification of the related interaction between the NAS and AS layers.

**CT4**

Potential enhancement of NSSF services to support the network slice group management.

## 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 |
| 24.501 | Enhancement of the NAS protocol and clarification of the related interaction between the NAS and AS layers to support the slice based cell reselection. | TSG#96(June 2022) | CT1 |
|  |  |  |  |
| 29.531 | Potential enhancement of NSSF services to support the network slice group management | TSG#96(June 2022) | CT4 |

## 6 Work item Rapporteur(s)

Chen Xu, China Mobile, chenxu@chinamobile.com

## 7 Work item leadership

CT1

## 8 Aspects that involve other WGs

## 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| China Mobile |
| ZTE |
| Huawei |
| HiSilicon |
| vivo |
| CATT |
| China Telecom |
| OPPO |
| Xiaomi |
| Ericsson |
| China Unicom |
| Nokia |
| Nokia Shanghai Bell |
| **China Southern Power Grid Co.** |
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