**3GPP TSG-CT WG1 Meeting #127bis-eC1-210032**

**Electronic meeting; 25-29 January 2021**

**Source: China Mobile, Mediatek Inc.**

**Title: Solution to KI#5 on access technology**

**Spec: 3GPP TR 24.821 v0.2.0**

**Agenda item: 17.2.4**

**Document for: Agreement**

**1. Introduction**

In TR 24.821, Key Issue 5, CT1 agreed to address the following issues:

1) which satellite access RAT types are used for PLMN selection:

a) all four satellite access RAT types specified in 3GPP TS 23.501 [4];

b) one generic satellite access RAT type is sufficient; or

c) no new RAT type is needed; and

2) if more than one RAT types are used for PLMN selection, what is the prioritization of the new RAT types and how it is implemented in the PLMN selection procedure?

a) what information is configured in the UE related to RAT prioritization.

In this contribution, a solution to the above questions is proposed according to TS22.011 and S1-204379 (the SA1’s reply to the CT1’ LS: C1-206507).

**2. Reason for Change**

This solution provides the access technology identifier in satellite access scenario for PLMN seletion.

**3. Proposal**

It is proposed to agree the following changes to 3GPP TR 24.821 v0.2.0.

\* \* \* First Change \* \* \* \*

## 

## 6.1 Mapping of solutions to key issues

Table 6.1-1: Mapping of solutions to key issues

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Key issue | | | | | | |
| Solution | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | X |  |  |  |  |  |  |
| 2 |  | X |  |  |  |  |  |
| 3 |  | X |  |  |  |  |  |
| 4 |  |  | X |  |  |  |  |
| 5 |  |  | X |  |  |  |  |
| 6 |  |  |  | X |  |  |  |
| 7 |  |  |  | X |  |  |  |
| 8 |  |  |  |  |  | X |  |
| x |  |  |  |  | X |  |  |

\* \* \* Next Change \* \* \* \*

## 6.x Solution <x>

### 6.x.1 Target key issue

This solution addresses key issue #5. It is applicable for the deployment scenario A/B/C/D.

### 6.x.2 Solution Description

According to TS 22.011 subclause 3.2.2.1:

*"It shall be possible to have an associated Access Technology identifier e.g., NG-RAN, satellite NG-RAN, E-UTRAN (WB-S1 mode), E-UTRAN (NB-S1 mode), UTRAN, GERAN or GERAN EC-GSM-IoT associated with each entry in the PLMN Selector lists."*

and in S1-204379 (the SA1’s reply to CT1’ LS), there was an agreement in SA1 on adding "satellite NG-RAN" to the set of possible associated access technology identifiers.

In addition, the agreed SA1 CR assumes that one identifier "satellite NG-RAN" is sufficient.

Therefore, the solution to the key issue #5 is as follows:

a) An access technology identifier "satellite NG-RAN", instead of satellite access RAT types "NR(LEO), NR(MEO), NR(GEO) and NR(OTHERSAT)", is used for PLMN selection.

b) In "Operator Controlled PLMN Selector list", "HPLMN Selector with Access Technology" and "User Controlled PLMN Selector list", "satellite NG-RAN" can be used for satellite only PLMN or Satellite/terrestrial access combined PLMN.

c) "satellite NG-RAN" needs to be considered in the "SOR transparent container" for 5G steering of roaming scenario.

The existing prioritization mechanism for different RAT types (i.e., the new satellite NG-RAN and old RAT types e.g., NG-RAN, E-UTRAN, …etc) is a general design and can accommodate many new RAT types; thus it can be extended (to include the new satellite NG-RAN) and reused. No new prioritization mechanism is needed, the PLMN+ACT selection shall follow the original "prioritization" mechanism as specified in TS 23.122.

### 6.x.3 Impacts

UE impacts:

- New Access Technology identifier "satellite NG-RAN" needs to be supported during PLMN selection.

*-* New Access Technology identifier "satellite NG-RAN" in "SOR transparent container" IE needs to be supported.

Network impacts:

- New Access Technology identifier "satellite NG-RAN" in "SOR transparent container" IE needs to be supported.