**SA WG2 Meeting SA2#165S2-240xxxx**

**14-18, October 2024, Hyderabad, IN (Revision of S2-2408676)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **502** | **CR** | **4994** | **rev** | **-** | **Current version:** | **19.1.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Support of Regenerative Payload with NG-RAN Node Onboard Satellite | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | OPPO, Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GSAT\_Ph3\_ARCH | | | | |  | ***Date:*** | | | 2024-08-08 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | The following conclusion for KI#1 has been agreed in TS 23.700-29 about regenerative payload with NG-RAN node onboard satellite:  - RAN transitioning between different NTN GWs, TAIs and potentially between MMEs/AMFs can be supported by using existing procedures, e.g. the eNB/gNB releasing UEs to (E)CM\_IDLE before changing NTN gateway, or by using existing load balancing, trigger handover when it realizes it is going to leave a tracking area due to its own movement, etc.  Relevant text needs to be updated in TS 23.502 to clarify other use cases for Intra-NG-RAN handover. | | | | | | | | |
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| ***Summary of change:*** | | NOTE for intra-NG-RAN node handover is extended to reflect the above conclusion in TS 23.700-29. | | | | | | | | |
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| ***Consequences if not approved:*** | | Lack of clarification of the intra-NG-RAN node handover when NG-RAN node onboard satellite. | | | | | | | | |
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| ***Clauses affected:*** | | 4.9.1.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

## 4.9 Handover procedures

### 4.9.1 Handover procedures in 3GPP access

#### 4.9.1.1 General

These procedures are used to hand over a UE from a source NG-RAN node to a target NG-RAN node using the Xn or N2 reference points. This can be triggered, for example, due to new radio conditions, load balancing or due to specific service e.g. in the presence of QoS Flow for voice, the source NG-RAN node being NR may trigger handover to E-UTRA connected to 5GC.

As defined in TS 38.413 [10] a generic mechanism exists for the source NG-RAN node to retrieve information on the level of support for a certain feature at the target NG-RAN side associated with an NGAP IE. The mechanism makes use of the Source to Target and Target to Source transparent containers.

The Inter NG-RAN node N2 based handover procedure specified in clause 4.9.1.3 may also be used for intra-NG-RAN node handover.

NOTE: Intra-NG-RAN handover by the Inter NG-RAN node N2 based handover procedure can be performed when an NG-RAN node serves a satellite access system covering more than one country or when a feeder link for the NG-RAN node changes. In the more than one country case, the UE might move from a "cell" in one country into a "cell" in another country and the NG-RAN node may need to cause the AMF to change to an AMF serving the UE's new country.

The RRC Inactive Assistance Information is included in N2 Path Switch Request Ack message for Xn based handover or Handover Request message for N2 based handover (see clause 5.3.3.2.5 of TS 23.501 [2]).

\*\*\*\*\* End of Changes \*\*\*\*\*