**3GPP TSG-RAN WG3 Meeting #125 *R3-244688***

**Maastricht, NL, 19 - 23 Aug, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.473** | **CR** | **1448** | **rev** | **1** | **Current version:** | **18.2.0** |  |
|  |
| *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 | **x** | Core Network |  |

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| ***Title:***  | Correction on Multicast Group Paging |
|  |  |
| ***Source to WG:*** | Huawei, CBN, Samsung, Nokia, CMCC, Qualcomm Incorporated, CATT, Ericsson, ZTE |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** | NR\_MBS-Core |  | ***Date:*** | 2024-08-20 |
|  |  |  |  |  |
| ***Category:*** | **A** |  | ***Release:*** | Rel-18 |
|  | *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 canbe 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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | Issue 1:In MULTICAST GROUP PAGING message, the UE Identity List for Paging IE is defined as a sequence type in asn.1 to include a list of UE Identity for Paging Item IE:And it is noticed that in ASN.1 part, ProtocolIE-SingleContainer is used to define the UEIdentity-List-For-Paging-ItemIEs, and in such case the id-UEIdentity-List-For-Paging-Item should be included as Mandatory IE, but it is now marked as optional.UEIdentity-List-For-Paging-List ::= SEQUENCE (SIZE(1.. maxnoofUEIDforPaging)) OF ProtocolIE-SingleContainer { { UEIdentity-List-For-Paging-ItemIEs } }UEIdentity-List-For-Paging-ItemIEs F1AP-PROTOCOL-IES ::= { { ID id-UEIdentity-List-For-Paging-Item CRITICALITY ignore TYPE UEIdentity-List-For-Paging-Item PRESENCE optional } , ...}Issue 2:The *MC Paging Cell List* IE is an optional IE, but without any description, and it is unclear about the gNB-DU handling in case the IE is absent. |
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| ***Summary of change:*** | 1) In ASN.1, change the id-UEIdentity-List-For-Paging-Item in the UEIdentity-List-For-Paging-ItemIEs from optional to mandatory.2) Add description about the optional *MC Paging Cell List* IE.Impact Analysis:Impact assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because the impact can be considered isolated because the change affects only Multicast Group Paging function.  |
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| ***Consequences if not approved:*** | 1) Error exists in asn.1, SingleContainer cannot include optional IE.2) Unclear gNB-DU handling about *MC Paging Cell List* IE. |
|  |  |
| ***Clauses affected:*** | 8.14.5.2, 9.4.4 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Rev 1: add co-source company. |

#### ***--------------Start of the First Change------------------***

### 8.14.5 Multicast Group Paging

#### 8.14.5.1 General

The purpose of the Multicast Group Paging procedure is used to provide the paging information to enable the gNB-DU to multicast group page UEs which have joined an MBS Session and notify them about its activation. The procedure uses non-UE associated signalling.

#### 8.14.5.2 Successful Operation



Figure 8.14.5.2-1: Multicast Group Paging

The gNB-CU initiates the Multicast Group Paging procedure by sending the MULTICAST GROUP PAGING message to the gNB-DU.

At the reception of the MULTICAST GROUP PAGING message, the gNB-DU shall perform paging of the MBS Session identified by the *MBS Session ID* IE.

If the *Paging DRX* IE is included in the MULTICAST GROUP PAGING message gNB-DU shall use it according to TS 38.304 [24].

If the *UE Identity List for Paging* IE is included in the MULTICAST GROUP PAGING message, the gNB-DU shall, if supported, use it according to TS 38.304 [24]. If absent, the gNB-DU shall perform multicast group paging of the MBS session in all paging occasions within at least one default paging cycle, as specified in TS 38.304 [24].

At the reception of the MULTICAST GROUP PAGING message, the gNB-DU shall perform paging of the MBS Session in all the served cells of the PLMN indicated in the *MBS Session ID* IE except if the *MC Paging Cell List* IEis included in which case the gNB-DU shall, if supported, perform multicast group paging of the MBS session in the indicated cells only.

#### 8.14.5.3 Abnormal Conditions

Void.

#### ***--------------Start of the Next Change------------------***

### 9.4.4 PDU Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- PDU definitions for F1AP.

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

F1AP-PDU-Contents {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

 AssociatedSessionID,

 BroadcastMRBs-FailedToBeModified-Item,

 BroadcastMRBs-FailedToBeSetup-Item,

 BroadcastMRBs-FailedToBeSetupMod-Item,

 BroadcastMRBs-Modified-Item,

 BroadcastMRBs-Setup-Item,

#### ***//skip unchanged part***

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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-- Multicast Group Paging ELEMENTARY PROCEDURE

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Multicast Group Paging

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

MulticastGroupPaging ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ MulticastGroupPagingIEs}},

 ...

}

MulticastGroupPagingIEs F1AP-PROTOCOL-IES ::= {

 { ID id-MBS-Session-ID CRITICALITY reject TYPE MBS-Session-ID PRESENCE mandatory }|

 { ID id-UEIdentity-List-For-Paging-List CRITICALITY ignore TYPE UEIdentity-List-For-Paging-List PRESENCE optional }|

 { ID id-MC-PagingCell-List CRITICALITY ignore TYPE MC-PagingCell-list PRESENCE optional }|

 { ID id-IndicationMCInactiveReception CRITICALITY ignore TYPE IndicationMCInactiveReception PRESENCE optional },

 ...

}

UEIdentity-List-For-Paging-List ::= SEQUENCE (SIZE(1.. maxnoofUEIDforPaging)) OF ProtocolIE-SingleContainer { { UEIdentity-List-For-Paging-ItemIEs } }

UEIdentity-List-For-Paging-ItemIEs F1AP-PROTOCOL-IES ::= {

 { ID id-UEIdentity-List-For-Paging-Item CRITICALITY ignore TYPE UEIdentity-List-For-Paging-Item PRESENCE mandatory } ,

 ...

}

MC-PagingCell-list::= SEQUENCE (SIZE(1.. maxnoofPagingCells)) OF ProtocolIE-SingleContainer { { MC-PagingCell-ItemIEs } }

MC-PagingCell-ItemIEs F1AP-PROTOCOL-IES ::= {

 { ID id-MC-PagingCell-Item CRITICALITY ignore TYPE MC-PagingCell-Item PRESENCE mandatory} ,

 ...

}

#### ***--------------End of the Changes------------------***