**3GPP TSG-RAN WG2** **Meeting #110 *R2-200xxxx***

**Electronic, 1– 12 June 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **38.331** | **CR** | **1637** | **rev** | **-** | **Current version:** | **16.0.0** |  |
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| *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 | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | CR on providing network specific *uac-AccessCategory1-SelectionAssistanceInfo* –Option 1 |
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| ***Source to WG:*** | ZTE corporation, Sanechips, Nokia |
| ***Source to TSG:*** | R2 |
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| ***Work item code:*** | NR\_newRAT-Core |  | ***Date:*** | 2020-05-21 |
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| ***Category:*** | F |  | ***Release:*** | Rel-16 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | Among all the PLMNs sharing the same cell, some PLMNs may want to configure access barring for delay tolerant service while others do not. With the current ASN.1 structure, if one PLMN wants to configure access barring for delay tolerant services, other PLMNs sharing the same cell have to configure a “a”, “b” or “c” either via *plmnCommon* or *individualPLMNList* even though they do not want to do so. As a result, UE configured with delay tolerant service may select access category 1 and perform barring check based on the factor and timer associated with access category 1 upon receiving such configuration although it should have selected another access category and perform access barring accordingly.Thus, it is suggested to introduce *UAC-AccessCategory1-SelectionAssistanceInfo-v16xy* with value {a, b, c, null} to allow network not to configure *UAC-AccessCategory1-SelectionAssistanceInfo* for a certain PLMN. |
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| ***Summary of change:*** | * Introduce *UAC-AccessCategory1-SelectionAssistanceInfo-v16xy* with value {a, b, c, null}.

**Impact Analysis**Impacted 5G architecture options:SA, NE-DC, NR-DC Impacted functionality:Unified Access control Inter-operability:1. If the network is implemented according to the CR and the UE is not, UE is not able to read and act on the *UAC-AccessCategory1-SelectionAssistanceInfo-v16xy* field. 2. If the UE is implemented according to the CR and the network is not, no inter-operability is forseen. |
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| ***Consequences if not approved:*** | Among all the PLMNs sharing the same cell, the current ASN.1 for configuring uac-AccessCategory1-SelectionAssistanceInfo does not allow some PLMNs to configure such assistance information while others not to configure it. |
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| ***Clauses affected:*** | 6.2.2 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

Start of change

6.2.2 Message definitions

– *SIB1*

*SIB1* contains information relevant when evaluating if a UE is allowed to access a cell and defines the scheduling of other system information.It also contains radio resource configuration information that is common for all UEs and barring information applied to the unified access control.

Signalling radio bearer: N/A

RLC-SAP: TM

Logical channels: BCCH

Direction: Network to UE

***SIB1* message**

-- ASN1START

-- TAG-SIB1-START

SIB1 ::= SEQUENCE {

 cellSelectionInfo SEQUENCE {

 q-RxLevMin Q-RxLevMin,

 q-RxLevMinOffset INTEGER (1..8) OPTIONAL, -- Need S

 q-RxLevMinSUL Q-RxLevMin OPTIONAL, -- Need R

 q-QualMin Q-QualMin OPTIONAL, -- Need S

 q-QualMinOffset INTEGER (1..8) OPTIONAL -- Need S

 } OPTIONAL, -- Cond Standalone

 cellAccessRelatedInfo CellAccessRelatedInfo,

 connEstFailureControl ConnEstFailureControl OPTIONAL, -- Need R

 si-SchedulingInfo SI-SchedulingInfo OPTIONAL, -- Need R

 servingCellConfigCommon ServingCellConfigCommonSIB OPTIONAL, -- Need R

 ims-EmergencySupport ENUMERATED {true} OPTIONAL, -- Need R

 eCallOverIMS-Support ENUMERATED {true} OPTIONAL, -- Cond Absent

 ue-TimersAndConstants UE-TimersAndConstants OPTIONAL, -- Need R

 uac-BarringInfo SEQUENCE {

 uac-BarringForCommon UAC-BarringPerCatList OPTIONAL, -- Need S

 uac-BarringPerPLMN-List UAC-BarringPerPLMN-List OPTIONAL, -- Need S

 uac-BarringInfoSetList UAC-BarringInfoSetList,

 uac-AccessCategory1-SelectionAssistanceInfo CHOICE {

 plmnCommon UAC-AccessCategory1-SelectionAssistanceInfo,

 individualPLMNList SEQUENCE (SIZE (2..maxPLMN)) OF UAC-AccessCategory1-SelectionAssistanceInfo

 } OPTIONAL -- Need S

 } OPTIONAL, -- Need R

 useFullResumeID ENUMERATED {true} OPTIONAL, -- Need R

 lateNonCriticalExtension OCTET STRING{CONTAINING SIB1-v16xy-IEs} OPTIONAL,

 nonCriticalExtension SIB1-v16xy-IEs OPTIONAL

}

SIB1-v16xy-IEs ::= SEQUENCE {

 idleModeMeasurements-r16 ENUMERATED{ffs} OPTIONAL, -- Need N

 posSI-SchedulingInfoList-r16 PosSI-SchedulingInfoList-r16 OPTIONAL, -- Need R

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

SIB1-v16xy-IEs ::= SEQUENCE {

 uac-BarringInfo-v16xy SEQUENCE {

 individualPLMNList-v16xy SEQUENCE (SIZE (2..maxPLMN)) OF UAC-AccessCategory1-SelectionAssistanceInfo-v16xy

 } OPTIONAL, -- Cond individualPLMNList

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

UAC-AccessCategory1-SelectionAssistanceInfo ::= ENUMERATED {a, b, c}

UAC-AccessCategory1-SelectionAssistanceInfo-v16xy ::= ENUMERATED {a, b, c, null}

-- TAG-SIB1-STOP

-- ASN1STOP

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| ***SIB1* field descriptions** |
| ***cellSelectionInfo***Parameters for cell selection related to the serving cell. |
| ***idleModeMeasurements***This field indicates that the UE can include idle/inactive measurement report availability during connection establishment or resumption. |
| ***ims-EmergencySupport***Indicates whether the cell supports IMS emergency bearer services for UEs in limited service mode. If absent, IMS emergency call is not supported by the network in the cell for UEs in limited service mode. |
| ***q-QualMin***Parameter "Qqualmin" in TS 38.304 [20], applicable for serving cell. If the field is absent, the UE applies the (default) value of negative infinity for Qqualmin.  |
| ***q-QualMinOffset***Parameter "Qqualminoffset" in TS 38.304 [20]. Actual value Qqualminoffset = field value [dB]. If the field is absent, the UE applies the (default) value of 0 dB for Qqualminoffset.Affects the minimum required quality level in the cell. |
| ***q-RxLevMin***Parameter "Qrxlevmin" in TS 38.304 [20], applicable for serving cell. |
| ***q-RxLevMinOffset***Parameter "Qrxlevminoffset" in TS 38.304 [20]. Actual value Qrxlevminoffset = field value \* 2 [dB]. If absent, the UE applies the (default) value of 0 dB for Qrxlevminoffset*.* Affects the minimum required Rx level in the cell. |
| ***q-RxLevMinSUL***Parameter "Qrxlevmin" in TS 38.304 [20], applicable for serving cell. |
| ***servingCellConfigCommon***Configuration of the serving cell. |
| ***uac-AccessCategory1-SelectionAssistanceInfo***Information used to determine whether Access Category 1 applies to the UE, as defined in TS 22.261 [25]. The value *null* indicates that the Access Category1 selection assistance information is not configured for the associated PLMN. |
| ***uac-BarringForCommon***Common access control parameters for each access category. Common values are used for all PLMNs, unless overwritten by the PLMN specific configuration provided in *uac-BarringPerPLMN-List*. The parameters are specified by providing an index to the set of configurations (*uac-BarringInfoSetList*). UE behaviour upon absence of this field is specified in clause 5.3.14.2. |
| ***ue-TimersAndConstants***Timer and constant values to be used by the UE. The cell operating as PCell always provides this field. |
| ***useFullResumeID***Indicates which resume identifier and Resume request message should be used. UE uses *fullI-RNTI* and *RRCResumeRequest1* if the field is present, or *shortI-RNTI* and *RRCResumeRequest* if the field is absent. |

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| **Conditional Presence** | **Explanation** |
| *Absent* | The field is not used in this version of the specification, if received the UE shall ignore. |
| *individualPLMNList* | The field is optional present if *uac-AccessCategory1-SelectionAssistanceInfo* is set to *individualPLMNList*, otherwise it is absent. |
| *Standalone* | The field is mandatory present in a cell that supports standalone operation, otherwise it is absent. |

End of change