**3GPP TSG-RAN WG2 Meeting #117-e *R2-220xxxx***

**Electronic meeting, February 21 – March 03, 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.331** | **CR** |  | **rev** | **-** | **Current version:** | **16.7.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | Correction on delta configuration for UAI overheating in EN-DC | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2022-03-03 |
|  |  | | | |  | |  | | |  |
| ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The configuration of UAI overheating in EN-DC is done via providing both *overheatingAssistanceConfig-r14* set to *setup* and *overheatingAssistanceConfigForSCG-r16* set to *true*. If the network intends to perform a delta RRC reconfiguration on the UE (without the intention to reconfigure the UAI overheating), it should be allowed to omit both *overheatingAssistanceConfig-r14* and *overheatingAssistanceConfigForSCG-r16* fields. But the current field condition of *overheatingAssistanceConfigForSCG-r16* is ambiguous and seems to imply that in case of delta configuration, the field would also be released by the UE, which is not the intention when the field was defined as –Need ON.  Furthermore, according to the field description of *overheatingAssistanceConfigForSCG-rel16*, the field is only set to *TRUE* when the UE is configured with an NR SCG. This implies that upon release of the SCG the network may then set the value of this field to *FALSE*, which should not require the presence of *overheatingAssistanceConfig* – the current conditional presence of the field *overheatingAssistanceConfigForSCG-rel16* also poses an issue for this case since the field can only be present if *overheatingAssistanceConfig* is present. We think the intention was rather to release the *overheatingAssistanceConfigForSCG-rel16* if *overheatingAssistanceConfig* is set to *release*.  This field condition should thus be clarified to avoid those issues.  **Impact analysis**  Impacted 5G architecture options: EN-DC    Impacted functionality: Overheating    Inter-operability: If the network implements the CR and the UE does not, the network may provide the UE with overheatingAssistanceConfigForSCG-rel16 without including overheatingAssistanceConfig-r14 in the same *RRCConnectionReconfiguration* message, while the UE may expect that both fields are included.  If the UE implements the CR and the network does not, there is no inter-operability issue, the network would always provide both overheatingAssistanceConfigForSCG-rel16 and overheatingAssistanceConfig-r14 when configuring the UE, which is also a supported case. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * The condition of the field *overheatingAssistanceConfigForSCG-rel16* is clarified to allow delta configuration. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Delta configuration is not possible for the field *overheatingAssistanceConfigForSCG-rel16*. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.6 Other information elements  - *overheatingAssistanceConfigForSCG-rel16* | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

START OF CHANGE

#### – *OtherConfig*

The IE *OtherConfig* contains configuration related to other configuration.

*OtherConfig* information element

-- ASN1START

OtherConfig-r9 ::= SEQUENCE {

reportProximityConfig-r9 ReportProximityConfig-r9 OPTIONAL, -- Need ON

...,

[[ idc-Config-r11 IDC-Config-r11 OPTIONAL, -- Need ON

powerPrefIndicationConfig-r11 PowerPrefIndicationConfig-r11 OPTIONAL, -- Need ON

obtainLocationConfig-r11 ObtainLocationConfig-r11 OPTIONAL -- Need ON

]],

[[ bw-PreferenceIndicationTimer-r14 ENUMERATED {s0, s0dot5, s1, s2, s5, s10, s20,

s30, s60, s90, s120, s300, s600, spare3,

spare2, spare1} OPTIONAL, -- Need OR

sps-AssistanceInfoReport-r14 BOOLEAN OPTIONAL, -- Need ON

delayBudgetReportingConfig-r14 CHOICE{

release NULL,

setup SEQUENCE{

delayBudgetReportingProhibitTimer-r14 ENUMERATED {

s0, s0dot4, s0dot8,

s1dot6, s3, s6, s12, s30}

}

} OPTIONAL, -- Need ON

rlm-ReportConfig-r14 CHOICE {

release NULL,

setup SEQUENCE{

rlmReportTimer-r14 ENUMERATED {s0, s0dot5, s1, s2, s5, s10, s20, s30,

s60, s90, s120, s300, s600, spare3, spare2, spare1},

rlmReportRep-MPDCCH-r14 ENUMERATED {setup} OPTIONAL -- Need OR

}

} OPTIONAL -- Need ON

]],

[[ overheatingAssistanceConfig-r14 CHOICE{

release NULL,

setup SEQUENCE{

overheatingIndicationProhibitTimer-r14 ENUMERATED {s0, s0dot5, s1, s2, s5, s10,

s20, s30, s60, s90, s120, s300, s600,

spare3, spare2, spare1}

}

} OPTIONAL -- Need ON

]],

[[ measConfigAppLayer-r15 CHOICE{

release NULL,

setup SEQUENCE{

measConfigAppLayerContainer-r15 OCTET STRING (SIZE(1..1000)),

serviceType-r15 ENUMERATED {qoe, qoemtsi, spare6, spare5, spare4, spare3, spare2, spare1}

}

} OPTIONAL, -- Need ON

ailc-BitConfig-r15 BOOLEAN OPTIONAL, -- Need ON

bt-NameListConfig-r15 BT-NameListConfig-r15 OPTIONAL, --Need ON

wlan-NameListConfig-r15 WLAN-NameListConfig-r15 OPTIONAL --Need ON

]],

[[ overheatingAssistanceConfigForSCG-r16 BOOLEAN OPTIONAL -- Cond overheating

]]

}

IDC-Config-r11 ::= SEQUENCE {

idc-Indication-r11 ENUMERATED {setup} OPTIONAL, -- Need OR

autonomousDenialParameters-r11 SEQUENCE {

autonomousDenialSubframes-r11 ENUMERATED {n2, n5, n10, n15,

n20, n30, spare2, spare1},

autonomousDenialValidity-r11 ENUMERATED {

sf200, sf500, sf1000, sf2000,

spare4, spare3, spare2, spare1}

} OPTIONAL, -- Need OR

...,

[[ idc-Indication-UL-CA-r11 ENUMERATED {setup} OPTIONAL -- Cond idc-Ind

]],

[[ idc-HardwareSharingIndication-r13 ENUMERATED {setup} OPTIONAL -- Need OR

]],

[[ idc-Indication-MRDC-r15 CHOICE{

release NULL,

setup CandidateServingFreqListNR-r15

} OPTIONAL -- Cond idc-Ind

]]

}

ObtainLocationConfig-r11 ::= SEQUENCE {

obtainLocation-r11 ENUMERATED {setup} OPTIONAL -- Need OR

}

PowerPrefIndicationConfig-r11 ::= CHOICE{

release NULL,

setup SEQUENCE{

powerPrefIndicationTimer-r11 ENUMERATED {s0, s0dot5, s1, s2, s5, s10, s20,

s30, s60, s90, s120, s300, s600, spare3,

spare2, spare1}

}

}

ReportProximityConfig-r9 ::= SEQUENCE {

proximityIndicationEUTRA-r9 ENUMERATED {enabled} OPTIONAL, -- Need OR

proximityIndicationUTRA-r9 ENUMERATED {enabled} OPTIONAL -- Need OR

}

CandidateServingFreqListNR-r15 ::= SEQUENCE (SIZE (1..maxFreqIDC-r11)) OF ARFCN-ValueNR-r15

-- ASN1STOP

| *OtherConfig* field descriptions |
| --- |
| ***ailc-BitConfig***  Indicates whether the UE is allowed to provide assistance information bit for local cache. If configured, the UE shall only apply to a DRB configured with 12-bit PDCP SN format as specified in TS 36.323 [8]. |
| ***autonomousDenialSubframes***  Indicates the maximum number of the UL subframes for which the UE is allowed to deny any UL transmission. Value n2 corresponds to 2 subframes, n5 to 5 subframes and so on. E-UTRAN does not configure autonomous denial for frequencies on which SCG cells are configured. |
| ***autonomousDenialValidity***  Indicates the validity period over which the UL autonomous denial subframes shall be counted. Value sf200 corresponds to 200 subframes, sf500 corresponds to 500 subframes and so on. |
| ***bw-PreferenceIndicationTimer***  Prohibit timer for bandwidth preference indication reporting. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***CandidateServingFreqListNR***  Indicates for each candidate NR serving cells, the center frequency around which UE is requested to report IDC issues for MR-DC. |
| ***delayBudgetReportingProhibitTimer***  Prohibit timer for delay budget reporting. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot4 means prohibit timer is set to 0.4 second, and so on. |
| ***idc-HardwareSharingIndication***  The field is used to indicate whether the UE is allowed indicate in *InDeviceCoexIndication* that the cause of the problems are due to hardware sharing, and whether the UE is allowed to omit the TDM assistance information. |
| ***idc-Indication***  The field is used to indicate whether the UE is configured to initiate transmission of the *InDeviceCoexIndication* message to the network. |
| ***idc-Indication-MRDC***  The field is used to indicate whether the UE is configured to provide IDC indications for MR-DC using the InDeviceCoexIndication message. |
| ***idc-Indication-UL-CA***  The field is used to indicate whether the UE is configured to provide IDC indications for UL CA using the *InDeviceCoexIndication* message. |
| ***measConfigAppLayerContainer***  The field contains configuration of application layer measurements, see Annex L (normative) in TS 26.247 [90] and clause 16.5 in TS 26.114 [99]. |
| ***serviceType***  Indicates the type of application layer measurement. Value qoe indicates Quality of Experience Measurement Collection for streaming services, value qoemtsi indicates Enhanced Quality of Experience Measurement Collection for MTSI. |
| ***obtainLocation***  Requests the UE to attempt to have detailed location information available using GNSS. E-UTRAN configures the field only if *includeLocationInfo* is configured for one or more measurements. |
| ***overheatingAssistanceConfig***  Configuration for the UE to report assistance information to inform the eNB about UE detected internal overheating. |
| ***overheatingAssistanceConfigForSCG***  The field is used to indicate whether the UE is configured to provide overheating assistance information for NR SCG. E-UTRAN configures value *TRUE* only when the UE is configured with an NR SCG. |
| ***overheatingIndicationProhibitTimer***  Prohibit timer for overheating assistance information reporting. Value in seconds. Value s0 means prohibit timer is set to 0 seconds, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***powerPrefIndicationTimer***  Prohibit timer for Power Preference Indication reporting. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***reportProximityConfig***  Indicates, for each of the applicable RATs (EUTRA, UTRA), whether or not proximity indication is enabled for CSG member cell(s) of the concerned RAT. Note. |
| ***rlmReportTimer***  Prohibit timer for RLM event reporting, i.e. "early-out-of-sync" and "early-in-sync" event reporting, as specified in clause 5.6.10. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***rlmReportRep-MPDCCH***  The field is used to indicate whether the UE is configured to report excess repetitions on MPDCCH. |
| ***sps-AssistanceInfoReport***  Value TRUE indicates that the UE is allowed to report SPS-AssistanceInformation. If the *sl-V2X-SPS-Config* is provided by an E-UTRA *RRCConnectionReconfiguration* message embedded within an NR *RRCReconfiguration* for V2X sidelink communication (i.e. *sl-ConfigDedicatedEUTRA*) as in TS 38.331 [82], the network should configure the *otherConfig* and set this field to TRUE. |

NOTE: Enabling/ disabling of proximity indication includes enabling/ disabling of the related functionality e.g. autonomous search in connected mode.

| Conditional presence | Explanation |
| --- | --- |
| *idc-Ind* | The field is optionally present if *idc-Indication* is present, need OR. Otherwise the field is not present. |
| *overheating* | The field is optionally present, need ON, if the UE is configured with *overheatingAssistanceConfig*; if *overheatingAssistanceConfig* is included and set to *release*, the UE shall delete any existing value for this field; otherwise, the field is not present. |

END OF CHANGE