**3GPP TSG-RAN WG2 Meeting #110-eR2-20xxxxx**

**Electronic Meeting, 1st – 12th June 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **36.306** | **CR** |  | **rev** | **-** | **Current version:** | **16.0.0** |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:*** | Introduction of CGI reporting capability | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | vivo | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | [NR\_newRAT-Core](http://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750167) | | | | |  | ***Date:*** | | | 2020-05-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **A** |  | | | | | ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | During online discussion[[R2-1902687](file:///E:\\3GPP\\RAN2\\2019\\105\\docs\\R2-1902687.zip)],, some companies raised one issue in EN-DC. Since NR sub6 and LTE are actually quite similar, in some (especially early) UE implementation, some RF / Baseband hardware is shared in LTE and NR sub6 for early product launch. Then if DRX offsets are not aligned in MN and SN, such UEs must wait for both LTE and NR being idle (i.e. common idle period in DRX cycles in MN and SN) before measuring CGI. This is hardware specific or chip set vendor specific limitation, which requires different UE capability with EN-DC or LTE SA. Note that UE capability of per-FR and independent gap is introduced with similar reason.  As a result, three UE optional capabilities, i.e. utra-GERAN-CGI-Reporting-ENDC /eutra-CGI-Reporting-ENDC /reportCGI-NR-EN-DC-r15 are introduced in TS36.306 for ANR configured by LTE towards GERAN / UTRA /E-UTRA/NR neighbor cells when DRX configurations are different between MN and SN.  In the TS37.340, it states that “*In MR-DC, both the MN and the SN can configure CGI reporting. The MN can configure CGI reporting for intra-RAT and inter-RAT cells but the SN can only configure CGI reporting of intra-RAT cells”.*  As a concequence, we should ,introduce new UE optional capability (e.g. eutra-CGI-Reporting-NEDC) in NE-DC for ANR configured by LTE towards E-UTRA neighbor cells when DRX configurations are different between MN and SN | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | **Section 4.3.11**  Add a *eutra-CGI-Reporting-NEDC-r16* capability for whether the UE supports acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell and reporting the acquired information to the network.  **Impact analysis:**  Impacted architectures: NE-DC  Impacted functionality: CGI reporting | | | | | | | | |
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| ***Consequences if not approved:*** | | If the CR is not approved capability UE does not support neighbor NR cell CGI to SN when NE-DC is configured | | | | | | | | |
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| ***Clauses affected:*** | | 4.3.11 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 1st CHANGE*

### 4.3.11 Neighbour cell SI acquisition parameters

#### 4.3.11.1 *intraFreqSI-AcquisitionForHO*

This parameter defines whether the UE supports, upon configuration of *si-RequestForHO* by the network, acquisition of relevant information from a neighbouring intra-frequency cell by reading the SI of the neighbouring cell using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5].

#### 4.3.11.2 *interFreqSI-AcquisitionForHO*

This parameter defines whether the UE supports, upon configuration of *si-RequestForHO* by the network, acquisition of relevant information from a neighbouring inter-frequency cell by reading the SI of the neighbouring cell using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5].

#### 4.3.11.3 *utran-SI-AcquisitionForHO*

This parameter defines whether the UE supports, upon configuration of *si-RequestForHO* by the network, acquisition of relevant information from a neighbouring UMTS cell by reading the SI of the neighbouring cell using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5].

#### 4.3.11.4 *reportCGI-NR-EN-DC-r15*

This parameter defines whether the UE supports acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell and reporting the acquired information to the network as specified in TS 36.331 [5] when the EN-DC is configured.

#### 4.3.11.5 *reportCGI-NR-NoEN-DC-r15*

This parameter defines whether the UE supports acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell and reporting the acquired information to the network as specified in TS 36.331 [5] when the EN-DC is not configured.

#### 4.3.11.6 *eutra-CGI-Reporting-ENDC*

This parameter defines whether the UE supports acquisition of relevant information from a neighbouring E-UTRA cell by reading the SI of the neighbouring cell and reporting the acquired information to the network as specified in TS 36.331 [5] when the (NG)EN-DC is configured wherein either MN and SN have different DRX cycles, or on-duration configured by MN does not contain on-duration configured by SN if their DRX cycles are same..

#### 4.3.11.7 *utra-GERAN-CGI-Reporting-ENDC*

This parameter defines whether the UE supports acquisition of relevant information from a neighbouring GERAN/UTRA cell by reading the SI of the neighbouring cell and reporting the acquired information to the network as specified in TS 36.331 [5] when the (NG)EN-DC is configured wherein either MN and SN have different DRX cycles, or on-duration configured by MN does not contain on-duration configured by SN if their DRX cycles are same.

#### 4.3.11.8 *eutra-SI-AcquisitionForHO-ENDC-r16*

This parameter defines whether the UE supports, upon configuration of *si-RequestForHO* by the network, acquisition of relevant information from a neighbouring E-UTRA cell by reading the SI of the neighbouring cell using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5] when the (NG)EN-DC is configured.

#### 4.3.11.9 *nr-AutonomousGaps-ENDC-FR1-r16*

This parameter defines whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR1 using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5] when it is configured with (NG)EN-DC.

#### 4.3.11.10 *nr-AutonomousGaps-ENDC-FR2-r16*

This parameter defines whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR2 using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5] when it is configured with (NG)EN-DC.

#### 4.3.11.11 *nr-AutonomousGaps-FR1-r16*

This parameter defines whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR1 using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5] when it is not configured with (NG)EN-DC.

#### 4.3.11.12 *nr-AutonomousGaps-FR2-r16*

This parameter defines whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR2 using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5] when it is not configured with (NG)EN-DC.

#### 4.3.11.12 *nr-AutonomousGaps-FR2-r16*

This parameter defines whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR2 using autonomous gaps and reporting the acquired information to the network as specified in TS 36.331 [5] when it is not configured with (NG)EN-DC.

#### 4.3.11.X   eutra-CGI-Reporting-NEDC-r16

This parameter defines whether the UE supports acquisition of relevant information from a neighbouring E-UTRA cell by reading the SI of the neighbouring cell and reporting the acquired information to the network as specified in TS 36.331 [5] when the NE-DC is configured.

*END OF1st CHANGE*