**3GPP TSG- Meeting # *d2***

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *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 |  | Radio Access Network | **X** | Core Network |  |

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|  |
| ***Title:***  | Rel-17 CR 28.541 Add missing ExternalNRNetwork and ExternalEUTraNetwork definitions |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *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:*** | NRNetwork and EUtraNetwork are referenced in a note and shown in Figure 4.2.1.1-5. These IOCs are not however defined in the NRM.  |
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| ***Summary of change:*** | Add definitions for the missing IOCs. |
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| ***Consequences if not approved:*** | The IOCs are undefined which could lead to implementation errors and inconsistencies affecting interoperability |
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| ***Clauses affected:*** | 4.2.1.1, 4.2.1.2, 4.3.x (new), 4.3.x (new) |
|  |  |
|  | **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:*** |  |

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| **1st Change** |

## 4.2 Class diagram

### 4.2.1 Class diagram for gNB and en-gNB

#### 4.2.1.1 Relationships



Figure 4.2.1.1-5: Cell Relation view for all deployment scenarios

NOTE 2: The above NRM fragment uses NRNetwork to hold NR external entities and frequency and using EUtraNetwork to hold LTE external entities and frequency.

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| **2nd Change** |

#### 4.2.1.2 Inheritance

This clause depicts the inheritance relationships.



Figure 4.2.1.2-3: NRM fragment for ExternalNRNetwork and ExternalEUtraNetwork

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| **3rd Change** |

## 4.3 Class definitions

### 4.3.x ExternalNRNetwork

#### 4.3.x.1 Definition

This IOC represents a set of external NR entities. It contains only NR external entities and frequencies. This is used to differentiate these entities and frequencies from those in LTE.

#### 4.3.x.2 Attributes

The ExternalNRNetwork IOC includes the attributes inherited from Top IOC (defined in TS 28.622 [30]). It contains no additional attributes.

#### 4.3.x.3 Attribute constraints

None.

#### 4.3.x.4 Notifications

The common notifications defined in clause 4.5 are valid for this IOC, without exceptions or additions.

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| **4th Change** |

### 4.3.x ExternalEUtraNetwork

#### 4.3.x.1 Definition

This IOC represents a set of external EUTran entities. It contains only LTE external entities and frequencies. This is used to differentiate these entities and frequencies from those in NR.

#### 4.3.x.2 Attributes

The ExternalEUtraNetwork includes the attributes inherited from Top IOC (defined in TS 28.622 [30]). It contains no additional attributes.

#### 4.3.x.3 Attribute constraints

None.

#### 4.3.x.4 Notifications

The common notifications defined in clause 4.5 are valid for this IOC, without exceptions or additions.