**3GPP TSG-RAN WG2 Meeting #109e *Draft R2-2002114***

**Online, February 24th– March 05th 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v11.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.331** | **CR** | **4211** | **rev** | **1** | **Current version:** | **15.8.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network | **x** | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Minor corrections collected by Rapporteur | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI15 | | | | |  | | ***Date:*** | | 2020-02-15 |
|  |  | | | |  | | |  | |  |
| ***Category:*** | **F** |  | | | | | | ***Release:*** | | Rel-15 |
|  | *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:*** | | To correct several minor errors in the specification e.g. field names, references | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR includes the following changes:   1. Within 5.6.9.2, use correct field name for MRDC combinations affected by IDC (affectedCarrierFreqCombInfoListMRDC) 2. Within ASN.1 of LogicalChannelConfig, correct spelling of field name channel~~l~~AccessPriority 3. Correct LBT related references as as RAN1 moved concerned aspects from 36.213 [23] to 37.213 [94]   R1 of the CR includes the following additional changes:   1. 5.5.4.1: add missing “s” in numberOfTriggeringCell 2. IE MeasResultCellSFTD: add missing “F” in MeasResultCellSFTD field descriptions 3. IE UplinkPowerControl: add missing “S” in accumulationEnabledSTTI and correct field description of uplinkPower-CSIPayload to reflect it concerns mandatory present BOOLEAN   **Impact Analysis:**  **Impacted functionality:**  None i.e. these minor corrections do not involve any functional changes  **Interoperability issue:**  No interoperability issue (as no functional change). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Specification remains erroneous | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.5.4.1, 5.6.9.2, 6.3.2, 6.3.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

5.5.4.1 General

If security has been activated successfully, the UE shall:

1> for each *measId* included in the *measIdList* within *VarMeasConfig*:

2> if the corresponding *reportConfig* includes a purpose set to *reportStrongestCellsForSON*:

3> consider any neighbouring cell detected on the associated frequency to be applicable;

2> else if the corresponding *reportConfig* includes a purpose set to *reportCGI*:

3> consider any neighbouring cell detected on the associated frequency/ set of frequencies (GERAN) which has a physical cell identity matching the value of the *cellForWhichToReportCGI* included in the corresponding *measObject* within the *VarMeasConfig* to be applicable;

2> else:

3> if the corresponding *measObject* concerns E-UTRA:

4> if the *ue-RxTxTimeDiffPeriodical* is configured in the corresponding *reportConfig*:

5> consider only the PCell to be applicable;

4> else if the *reportSSTD-Meas* is set to *true* in the corresponding *reportConfig*:

5> consider the PSCell to be applicable;

4> else if the *eventA1* or *eventA2* is configured in the corresponding *reportConfig*:

5> consider only the serving cell to be applicable;

4> else if *eventC1* or *eventC2* is configured in the corresponding *reportConfig*; or if *reportStrongestCSI-RSs* is included in the corresponding *reportConfig*:

5> consider a CSI-RS resource on the associated frequency to be applicable when the concerned CSI-RS resource is included in the *measCSI-RS-ToAddModList* defined within the *VarMeasConfig* for this *measId*;

4> else if *measRSSI-ReportConfig* is configured in the corresponding *reportConfig*:

5> consider the resource indicated by the *rmtc-Config* on the associated frequency to be applicable;

4> else:

5> if *useWhiteCellList* is set to *TRUE*:

6> consider any neighbouring cell detected on the associated frequency to be applicable when the concerned cell is included in the *whiteCellsToAddModList* defined within the *VarMeasConfig* for this *measId*;

5> else:

6> consider any neighbouring cell detected on the associated frequency to be applicable when the concerned cell is not included in the *blackCellsToAddModList* defined within the *VarMeasConfig* for this *measId*;

5> for events involving a serving cell on one frequency and neighbours on another frequency, consider the serving cell on the other frequency as a neighbouring cell;

4> if the corresponding *reportConfig* includes *alternativeTimeToTrigger* and if the UE supports *alternativeTimeToTrigger*:

5> use the value of *alternativeTimeToTrigger* as the time to trigger instead of the value of *timeToTrigger* in the corresponding *reportConfig* for cells included in the *altTTT-CellsToAddModList* of the corresponding *measObject*;

3> else if the corresponding *measObject* concerns UTRA or CDMA2000:

4> consider a neighbouring cell on the associated frequency to be applicable when the concerned cell is included in the *cellsToAddModList* defined within the *VarMeasConfig* for this *measId* (i.e. the cell is included in the white-list);

NOTE 0: The UE may also consider a neighbouring cell on the associated UTRA frequency to be applicable when the concerned cell is included in the *csg-allowedReportingCells* within the *VarMeasConfig* for this *measId*, if configured in the corresponding *measObjectUTRA* (i.e. the cell is included in the range of physical cell identities for which reporting is allowed).

3> else if the corresponding *measObject* concerns GERAN:

4> consider a neighbouring cell on the associated set of frequencies to be applicable when the concerned cell matches the *ncc-Permitted* defined within the *VarMeasConfig* for this *measId*;

3> else if the corresponding *measObject* concerns WLAN:

4> consider a WLAN on the associated set of frequencies, as indicated by *carrierFreq* or on all WLAN frequencies when *carrierFreq* is not present, to be applicable if the WLAN matches all WLAN identifiers of at least one entry within *wlan-Id-List* for this *measId*;

3> else if the corresponding *measObject* concerns NR:

4> if the *reportSFTD-Meas* is set to *pSCell* in the corresponding *reportConfigInterRAT*:

5> consider the PSCell to be applicable;

4> else if the *reportSFTD-Meas* is set to *neighborCells* in the corresponding *reportConfigInterRAT*:

5> if *cellsForWhichToReportSFTD* is configured in the corresponding *measObjectNR*:

6> consider any neighbouring NR cell on the associated frequency that is included in *cellsForWhichToReportSFTD* to be applicable;

5> else:

6> consider up to 3 strongest neighbouring NR cells detected on the associated frequency to be applicable when the concerned cells are not included in the *blackCellsToAddModList* defined within the *VarMeasConfig* for this measId;

4> else:

5> if the *eventB1* or *eventB2* is configured in the corresponding *reportConfig*:

6> consider a serving cell, if any, on the associated NR frequency as neighbouring cell;

5> consider any neighbouring cell detected on the associated frequency to be applicable when the concerned cell is not included in the *blackCellsToAddModList* defined within the *VarMeasConfig* for this *measId*;

2> if *tx-ResourcePoolToAddList* is configured in the *measObject*, and if the corresponding *reportConfig* includes a purpose set to *sidelink* or includes *eventV1* or *eventV2*:

3> consider the transmission resource pools indicated by the *tx-ResourcePoolToAddList* defined within the *VarMeasConfig* for this *measId* to be applicable;

2> if the corresponding *reportConfig* includes a purpose set to *reportLocation*:

3> consider only the PCell to be applicable;

2> if the *triggerType* is set to *event,* and if the corresponding *reportConfig* does not include *numberOfTriggeringCells,* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable cells for all measurements after layer 3 filtering taken during *timeToTrigger* defined for this event within the *VarMeasConfig*, while the *VarMeasReportList* does not include a measurement reporting entry for this *measId* (a first cell triggers the event):

3> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> include the concerned cell(s) in the *cellsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> if the UE supports T312 and if *useT312* is included for this event and if T310 is running:

4> if T312 is not running:

5> start timer T312 with the value configured in the corresponding *measObject*;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *triggerType* is set to *event,* and if the corresponding *reportConfig* does not include *numberOfTriggeringCells,* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable cells not included in the *cellsTriggeredList* for all measurements after layer 3 filtering taken during *timeToTrigger* defined for this event within the *VarMeasConfig* (a subsequent cell triggers the event):

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> include the concerned cell(s) in the *cellsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> if the UE supports T312 and if *useT312* is included for this event and if T310 is running:

4> if T312 is not running:

5> start timer T312 with the value configured in the corresponding *measObject*;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *triggerType* is set to *event* and if the corresponding *reportConfig* includes *numberOfTriggeringCells,* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable cells for all measurements after layer 3 filtering taken during *timeToTrigger* defined for this event within the *VarMeasConfig*:

3> If the *VarMeasReportList* does not include a measurement reporting entry for this *measId* (a first cell triggers the event):

4> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> If the number of cell(s) in the *cellsTriggeredList* is larger than or equal to *numberOfTriggeringCells*:

4> include the concerned cell(s) in the *cellsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> else:

4> include the concerned cell(s) in the *cellsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

4> If the number of cell(s) in the *cellsTriggeredList* is larger than or equal to *numberOfTriggeringCells*:

5> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

5> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *triggerType* is set to *event* and if the leaving condition applicable for this event is fulfilled for one or more of the cells included in the *cellsTriggeredList* defined within the *VarMeasReportList* for this *measId* for all measurements after layer 3 filtering taken during *timeToTrigger* defined within the *VarMeasConfig* for this event:

3> remove the concerned cell(s) in the *cellsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> if *reportOnLeave* is set to *TRUE* for the corresponding reporting configuration or if *a6-ReportOnLeave* is set to *TRUE* or if *a4-a5-ReportOnLeave* is set to TRUE for the corresponding reporting configuration:

4> initiate the measurement reporting procedure, as specified in 5.5.5;

3> if the *cellsTriggeredList* defined within the *VarMeasReportList* for this *measId* is empty:

4> remove the measurement reporting entry within the *VarMeasReportList* for this *measId*;

4> stop the periodical reporting timer for this *measId*, if running;

2> if the *triggerType* is set to *event* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable CSI-RS resources for all measurements after layer 3 filtering taken during *timeToTrigger* defined for this event within the *VarMeasConfig*, while the *VarMeasReportList* does not include an measurement reporting entry for this *measId* (i.e. a first CSI-RS resource triggers the event):

3> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> include the concerned CSI-RS resource(s) in the *csi-RS-TriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *triggerType* is set to *event* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable CSI-RS resources not included in the *csi-RS-TriggeredList* for all measurements after layer 3 filtering taken during *timeToTrigger* defined for this event within the *VarMeasConfig* (i.e. a subsequent CSI-RS resource triggers the event):

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> include the concerned CSI-RS resource(s) in the *csi-RS-TriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *triggerType* is set to *event* and if the leaving condition applicable for this event is fulfilled for one or more of the CSI-RS resources included in the *csi-RS-TriggeredList* defined within the *VarMeasReportList* for this *measId* for all measurements after layer 3 filtering taken during *timeToTrigger* defined within the *VarMeasConfig* for this event:

3> remove the concerned CSI-RS resource(s) in the *csi-RS-TriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> if *c1-ReportOnLeave* is set to *TRUE* for the corresponding reporting configuration or if *c2-ReportOnLeave* is set to *TRUE* for the corresponding reporting configuration:

4> initiate the measurement reporting procedure, as specified in 5.5.5;

3> if the *csi-RS-TriggeredList* defined within the *VarMeasReportList* for this *measId* is empty:

4> remove the measurement reporting entry within the *VarMeasReportList* for this *measId*;

4> stop the periodical reporting timer for this *measId*, if running;

2> if the *triggerType* is set to *event* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable transmission resource pools for all measurements taken during *timeToTrigger* defined for this event within the *VarMeasConfig*, while the *VarMeasReportList* does not include an measurement reporting entry for this *measId* (a first transmission resource pool triggers the event):

3> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> include the concerned transmission resource pool(s) in the *poolsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *triggerType* is set to *event* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable transmission resource pools not included in the *poolsTriggeredList* for all measurements taken during *timeToTrigger* defined for this event within the *VarMeasConfig* (a subsequent transmission resource pool triggers the event):

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> include the concerned transmission resource pool(s) in the *poolsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *triggerType* is set to *event* and if the leaving condition applicable for this event is fulfilled for one or more applicable transmission resource pools included in the *poolsTriggeredList* defined within the *VarMeasReportList* for this *measId* for all measurements taken during *timeToTrigger* defined within the *VarMeasConfig* for this event:

3> remove the concerned transmission resource pool(s) from the *poolsTriggeredList* defined within the *VarMeasReportList* for this *measId*;

3> if the *poolsTriggeredList* defined within the *VarMeasReportList* for this *measId* is empty:

4> remove the measurement reporting entry within the *VarMeasReportList* for this *measId*;

4> stop the periodical reporting timer for this *measId*, if running;

2> if the *triggerType* is set to *event* and if the *eventId* is set to *eventH1* or *eventH2* and if the entering condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled during *timeToTrigger* defined within the *VarMeasConfig* for this event:

3> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if *measRSSI-ReportConfig* is included and if a (first) measurement result is available:

3> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> initiate the measurement reporting procedure as specified in 5.5.5 immediately when RSSI sample values are reported by the physical layer after the first L1 measurement duration;

2> else if the *purpose* is included and set to *reportStrongestCells,* *reportStrongestCellsForSON*, *reportLocation sidelink* or *sensing* and if a (first) measurement result is available:

3> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> if the *purpose* is set to *reportStrongestCells* and *reportStrongestCSI-RSs* is not included:

4> if the *triggerType* is set to *periodical* and the corresponding *reportConfig* includes the *ul-DelayConfig*:

5> initiate the measurement reporting procedure, as specified in 5.5.5, immediately after a first measurement result is provided by lower layers;

4> else if the corresponding measurement object concerns WLAN:

5> initiate the measurement reporting procedure, as specified in 5.5.5, immediately after the quantity to be reported becomes available for the PCell and for the applicable WLAN(s);

4> else if the *reportAmount* exceeds 1:

5> initiate the measurement reporting procedure, as specified in 5.5.5, immediately after the quantity to be reported becomes available for the PCell;

4> else (i.e. the *reportAmount* is equal to 1):

5> initiate the measurement reporting procedure, as specified in 5.5.5, immediately after the quantity to be reported becomes available for the PCell and for the strongest cell among the applicable cells, or becomes available for the pair of PCell and the PSCell in case of SSTD measurements, or becomes available for each requested pair of PCell and NR cell or the maximal measurement reporting delay as specified in TS 36.133 [16], clause 8.17.2.3 in case of SFTD measurements;

3> if the *purpose* is set to *reportLocation*, *sidelink* or *sensing*:

4> if the *purpose* is set to *reportLocation*:

5> initiate the measurement reporting procedure, as specified in 5.5.5, immediately after both the quantity to be reported for the PCell and the location information become available;

4> else if the *purpose* is set to *sidelink*:

5> initiate the measurement reporting procedure as specified in 5.5.5 immediately after both the quantity to be reported for the PCell and the CBR measurement result become available;

4> else if the *purpose* is set to *sensing*:

5> initiate the measurement reporting procedure as specified in 5.5.5 immediately after both the quantity to be reported for the PCell and the sensing measurement result become available;

3> else if the *purpose* is not set to *reportStrongestCells* or *reportStrongestCSI-RSs* is included:

4> initiate the measurement reporting procedure, as specified in 5.5.5, when it has determined the strongest cells on the associated frequency;

2> upon expiry of the periodical reporting timer for this *measId*:

3> initiate the measurement reporting procedure, as specified in 5.5.5;

2> if the *purpose* is included and set to *reportCGI*:

3> if the UE acquired the information needed to set all fields of *cgi-Info* for the requested cell; or

3> if the UE detects that the requested NR cell is not transmitting *SIB1:*

4> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

4> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

4> stop timer T321;

4> initiate the measurement reporting procedure, as specified in 5.5.5;

2> upon expiry of the T321 for this *measId*:

3> include a measurement reporting entry within the *VarMeasReportList* for this *measId*;

3> set the *numberOfReportsSent* defined within the *VarMeasReportList* for this *measId* to 0;

3> initiate the measurement reporting procedure, as specified in 5.5.5;

NOTE 2: The UE does not stop the periodical reporting with *triggerType* set to *event* or to *periodical* while the corresponding measurement is not performed due to the PCell RSRP (or PSCell RSRP, if the UE is in NE-DC) being equal to or better than *s-Measure* or due to the measurement gap not being setup.

NOTE 3: If the UE is configured with DRX, the UE may delay the measurement reporting for event triggered and periodical triggered measurements until the Active Time, which is defined in TS 36.321 [6].

5.6.9.2 Initiation

A UE capable of providing IDC indications may initiate the procedure when it is configured to provide IDC indications and upon change of IDC problem information.

Upon initiating the procedure, the UE shall:

1> if configured to provide IDC indications:

2> if the UE did not transmit an *InDeviceCoexIndication* message since it was configured to provide IDC indications:

3> if on one or more frequencies for which a *measObjectEUTRA* is configured, the UE is experiencing IDC problems that it cannot solve by itself; or

3> if configured to provide IDC indications for UL CA; and if on one or more supported UL CA combination comprising of carrier frequencies for which a measurement object is configured, the UE is experiencing IDC problems that it cannot solve by itself; or

3> if configured to provide IDC indications for MR-DC, and if on one or more supported MR-DC combination comprising of at least one E-UTRA carrier frequency for which a measurement object is configured and at least one NR carrier frequency included in *candidateServingFreqListNR*, the UE is experiencing IDC problems that it cannot solve by itself:

4> initiate transmission of the *InDeviceCoexIndication* message in accordance with 5.6.9.3;

2> else:

3> if the set of frequencies, for which a *measObjectEUTRA* is configured and on which the UE is experiencing IDC problems that it cannot solve by itself, is different from the set indicated in the last transmitted *InDeviceCoexIndication* message; or

3> if for one or more of the frequencies in the previously reported set of frequencies, the *interferenceDirection* is different from the value indicated in the last transmitted *InDeviceCoexIndication* message; or

3> if the TDM assistance information is different from the assistance information included in the last transmitted *InDeviceCoexIndication* message; or

3> if configured to provide IDC indications for UL CA; and if the *victimSystemType* is different from the value indicated in the last transmitted *InDeviceCoexIndication* message; or

3> if configured to provide IDC indications for UL CA; and if the set of supported UL CA combinations on which the UE is experiencing IDC problems that it cannot solve by itself and that the UE includes in *affectedCarrierFreqCombList* according to 5.6.9.3, is different from the set indicated in the last transmitted *InDeviceCoexIndication* message; or

3> if configured to provide IDC indications for MR-DC, and if the set of supported MR-DC combinations on which the UE is experiencing IDC problems that it cannot solve by itself and that the UE includes in *affectedCarrierFreqCombInfoListMRDC* according to 5.6.9.3, is different from the set indicated in the last transmitted *InDeviceCoexIndication* message:

4> initiate transmission of the *InDeviceCoexIndication* message in accordance with 5.6.9.3;

NOTE 1: The term "IDC problems" refers to interference issues applicable across several subframes/slots where not necessarily all the subframes/slots are affected.

NOTE 2: For the frequencies on which a serving cell or serving cells is configured that is activated, IDC problems consist of interference issues that the UE cannot solve by itself, during either active data exchange or upcoming data activity which is expected in up to a few hundred milliseconds.  
For frequencies on which a SCell or SCells is configured that is deactivated, reporting IDC problems indicates an anticipation that the activation of the SCell or SCells would result in interference issues that the UE would not be able to solve by itself.  
For a non-serving frequency, reporting IDC problems indicates an anticipation that if the non-serving frequency or frequencies became a serving frequency or serving frequencies then this would result in interference issues that the UE would not be able to solve by itself.

6.3.2 Radio resource control information elements

<Cut until next modified section>

– *LogicalChannelConfig*

The IE *LogicalChannelConfig* is used to configure the logical channel parameters.

***LogicalChannelConfig* information element**

-- ASN1START

LogicalChannelConfig ::= SEQUENCE {

ul-SpecificParameters SEQUENCE {

priority INTEGER (1..16),

prioritisedBitRate ENUMERATED {

kBps0, kBps8, kBps16, kBps32, kBps64, kBps128,

kBps256, infinity, kBps512-v1020, kBps1024-v1020,

kBps2048-v1020, spare5, spare4, spare3, spare2,

spare1},

bucketSizeDuration ENUMERATED {

ms50, ms100, ms150, ms300, ms500, ms1000, spare2,

spare1},

logicalChannelGroup INTEGER (0..3) OPTIONAL -- Need OR

} OPTIONAL, -- Cond UL

...,

[[ logicalChannelSR-Mask-r9 ENUMERATED {setup} OPTIONAL -- Cond SRmask

]],

[[ logicalChannelSR-Prohibit-r12 BOOLEAN OPTIONAL -- Need ON

]],

[[ laa-UL-Allowed-r14 BOOLEAN OPTIONAL, -- Need ON

bitRateQueryProhibitTimer-r14 ENUMERATED {

s0, s0dot4, s0dot8, s1dot6, s3, s6, s12,

s30} OPTIONAL --Need OR

]],

[[ allowedTTI-Lengths-r15 CHOICE {

release NULL,

setup SEQUENCE {

shortTTI-r15 BOOLEAN,

subframeTTI-r15 BOOLEAN

}

} OPTIONAL, -- Need ON

logicalChannelSR-Restriction-r15 CHOICE {

release NULL,

setup ENUMERATED {spucch, pucch}

} OPTIONAL, -- Need ON

channelAccessPriority-r15 CHOICE {

release NULL,

setup INTEGER (1..4)

} OPTIONAL, -- Need ON

lch-CellRestriction-r15 BIT STRING (SIZE (maxServCell-r13)) OPTIONAL -- Need ON

]]

}

-- ASN1STOP

| ***LogicalChannelConfig* field descriptions** |
| --- |
| ***allowedTTI-Lengths***  Indicates the allowed TTI lengths for the logical channel. If not configured, the UE is allowed to transmit the logical channel using any TTI length. |
| ***bitRateQueryProhibitTimer***  The timer is used for bit rate recommendation query in TS 36.321 [6], clause 5.18, in seconds. Value s0 means 0s, s0dot4 means 0.4s and so on. |
| ***bucketSizeDuration***  Bucket Size Duration for logical channel prioritization in TS 36.321 [6]. Value in milliseconds. Value ms50 corresponds to 50 ms, ms100 corresponds to 100 ms and so on. |
| ***channelAccessPriority***  Indicates the channel access priority class for the logical channel. UE shall select the lowest channel access priority class (i.e. highest signalled value) of the logical channel with MAC SDU multiplexed into the MAC PDU. MAC CEs except padding BSR apply the highest channel access priority class (i.e. lowest signalled value) , as defined in TS 36.300 [9]. |
| ***laa-UL-Allowed***  Indicates whether the data of a logical channel is allowed to be transmitted via UL of LAA SCells. Value *TRUE* indicates that the logical channel is allowed to be sent via UL of LAA SCells. Value *FALSE* indicates that the logical channel is not allowed to be sent via UL of LAA SCells. |
| ***lch-CellRestriction***  Indicates cells which are restricted for the logical channel, The bit is set to 1 if the cell is restricted and to 0 if the cell is not restricted, for each cell. The least significant bit corresponds to the serving cell with index 0, the next bit corresponds to the serving cell with index 1, and so on. If the cell is restricted for the logical channel, then data for the logical channel is not allowed to be sent using that cell. If the field is not included, no cells are restricted. See also TS 36.321 [6], clause 5.4.3.1. The restriction is only active when PDCP duplication using CA is activated. |
| ***logicalChannelGroup***  Mapping of logical channel to logical channel group for BSR reporting in TS 36.321 [6]. |
| ***logicalChannelSR-Mask***  Controlling SR triggering on a logical channel basis when an uplink grant is configured. See TS 36.321 [6]. |
| ***logicalChannelSR-Prohibit***  Value *TRUE* indicates that the *logicalChannelSR-ProhibitTimer* is enabled for the logical channel. E-UTRAN only (optionally) configures the field (i.e. indicates value *TRUE*) if *logicalChannelSR-ProhibitTimer* is configured. See TS 36.321 [6]. |
| ***logicalChannelSR-Restriction***  Defines the restricted SR configuration for the logical channel. Value spucch indicates that the SR cannot be sent on SPUCCH and value pucch indicates that the SR cannot be sent on PUCCH. If not configured, the UE is allowed to transmit the SR on any SR resource. |
| ***prioritisedBitRate***  Prioritized Bit Rate for logical channel prioritization in TS 36.321 [6]. Value in kilobytes/second. Value kBps0 corresponds to 0 kB/second, kBps8 corresponds to 8 kB/second, kBps16 corresponds to 16 kB/second and so on. Infinity is the only applicable value for SRB1 and SRB2 |
| ***priority***  Logical channel priority in TS 36.321 [6]. Value is an integer. |
| ***shortTTI, subframeTTI***  For short TTIs and subframe TTIs respectively: Value TRUE indicates that the UE is allowed to transmit using this TTI length for the logical channel and the value FALSE indicates that the UE is not allowed to transmit using this TTI length for the logical channel. If not configured for a TTI length, then the UE is allowed to transmit this logical channel using this TTI length. |

| **Conditional presence** | **Explanation** |
| --- | --- |
| *SRmask* | The field is optionally present if *ul-SpecificParameters* is present, need OR; otherwise it is not present. |
| *UL* | The field is mandatory present for UL logical channels; otherwise it is not present. |

<Cut until next modified section>

– *PhysicalConfigDedicated*

The IE *PhysicalConfigDedicated* is used to specify the UE specific physical channel configuration.

***PhysicalConfigDedicated* information element**

-- ASN1START

PhysicalConfigDedicated ::= SEQUENCE {

pdsch-ConfigDedicated PDSCH-ConfigDedicated OPTIONAL, -- Need ON

pucch-ConfigDedicated PUCCH-ConfigDedicated OPTIONAL, -- Need ON

pusch-ConfigDedicated PUSCH-ConfigDedicated OPTIONAL, -- Need ON

uplinkPowerControlDedicated UplinkPowerControlDedicated OPTIONAL, -- Need ON

tpc-PDCCH-ConfigPUCCH TPC-PDCCH-Config OPTIONAL, -- Need ON

tpc-PDCCH-ConfigPUSCH TPC-PDCCH-Config OPTIONAL, -- Need ON

cqi-ReportConfig CQI-ReportConfig OPTIONAL, -- Cond CQI-r8

soundingRS-UL-ConfigDedicated SoundingRS-UL-ConfigDedicated OPTIONAL, -- Need ON

antennaInfo CHOICE {

explicitValue AntennaInfoDedicated,

defaultValue NULL

} OPTIONAL, -- Cond AI-r8

schedulingRequestConfig SchedulingRequestConfig OPTIONAL, -- Need ON

...,

[[ cqi-ReportConfig-v920 CQI-ReportConfig-v920 OPTIONAL, -- Cond CQI-r8

antennaInfo-v920 AntennaInfoDedicated-v920 OPTIONAL -- Cond AI-r8

]],

[[ antennaInfo-r10 CHOICE {

explicitValue-r10 AntennaInfoDedicated-r10,

defaultValue NULL

} OPTIONAL, -- Cond AI-r10

antennaInfoUL-r10 AntennaInfoUL-r10 OPTIONAL, -- Need ON

cif-Presence-r10 BOOLEAN OPTIONAL, -- Need ON

cqi-ReportConfig-r10 CQI-ReportConfig-r10 OPTIONAL, -- Cond CQI-r10

csi-RS-Config-r10 CSI-RS-Config-r10 OPTIONAL, -- Need ON

pucch-ConfigDedicated-v1020 PUCCH-ConfigDedicated-v1020 OPTIONAL, -- Need ON

pusch-ConfigDedicated-v1020 PUSCH-ConfigDedicated-v1020 OPTIONAL, -- Need ON

schedulingRequestConfig-v1020 SchedulingRequestConfig-v1020 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicated-v1020

SoundingRS-UL-ConfigDedicated-v1020 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedAperiodic-r10

SoundingRS-UL-ConfigDedicatedAperiodic-r10 OPTIONAL, -- Need ON

uplinkPowerControlDedicated-v1020

UplinkPowerControlDedicated-v1020 OPTIONAL -- Need ON

]],

[[ additionalSpectrumEmissionCA-r10 CHOICE {

release NULL,

setup SEQUENCE {

additionalSpectrumEmissionPCell-r10 AdditionalSpectrumEmission

}

} OPTIONAL -- Need ON

]],

[[ -- DL configuration as well as configuration applicable for DL and UL

csi-RS-ConfigNZPToReleaseList-r11

CSI-RS-ConfigNZPToReleaseList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigNZPToAddModList-r11

CSI-RS-ConfigNZPToAddModList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigZPToReleaseList-r11

CSI-RS-ConfigZPToReleaseList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigZPToAddModList-r11 CSI-RS-ConfigZPToAddModList-r11 OPTIONAL, -- Need ON

epdcch-Config-r11 EPDCCH-Config-r11 OPTIONAL, -- Need ON

pdsch-ConfigDedicated-v1130 PDSCH-ConfigDedicated-v1130 OPTIONAL, -- Need ON

-- UL configuration

cqi-ReportConfig-v1130 CQI-ReportConfig-v1130 OPTIONAL, -- Need ON

pucch-ConfigDedicated-v1130 PUCCH-ConfigDedicated-v1130 OPTIONAL, -- Need ON

pusch-ConfigDedicated-v1130 PUSCH-ConfigDedicated-v1130 OPTIONAL, -- Need ON

uplinkPowerControlDedicated-v1130

UplinkPowerControlDedicated-v1130 OPTIONAL -- Need ON

]],

[[ antennaInfo-v1250 AntennaInfoDedicated-v1250 OPTIONAL, -- Cond AI-r10

eimta-MainConfig-r12 EIMTA-MainConfig-r12 OPTIONAL, -- Need ON

eimta-MainConfigPCell-r12 EIMTA-MainConfigServCell-r12 OPTIONAL, -- Need ON

pucch-ConfigDedicated-v1250 PUCCH-ConfigDedicated-v1250 OPTIONAL, -- Need ON

cqi-ReportConfigPCell-v1250 CQI-ReportConfig-v1250 OPTIONAL, -- Need ON

uplinkPowerControlDedicated-v1250

UplinkPowerControlDedicated-v1250 OPTIONAL, -- Need ON

pusch-ConfigDedicated-v1250 PUSCH-ConfigDedicated-v1250 OPTIONAL, -- Need ON

csi-RS-Config-v1250 CSI-RS-Config-v1250 OPTIONAL -- Need ON

]],

[[ pdsch-ConfigDedicated-v1280 PDSCH-ConfigDedicated-v1280 OPTIONAL -- Need ON

]],

[[ pdsch-ConfigDedicated-v1310 PDSCH-ConfigDedicated-v1310 OPTIONAL, -- Need ON

pucch-ConfigDedicated-r13 PUCCH-ConfigDedicated-r13 OPTIONAL, -- Need ON

pusch-ConfigDedicated-r13 PUSCH-ConfigDedicated-r13 OPTIONAL, -- Need ON

pdcch-CandidateReductions-r13

PDCCH-CandidateReductions-r13 OPTIONAL, -- Need ON

cqi-ReportConfig-v1310 CQI-ReportConfig-v1310 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicated-v1310

SoundingRS-UL-ConfigDedicated-v1310 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedUpPTsExt-r13

SoundingRS-UL-ConfigDedicatedUpPTsExt-r13 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedAperiodic-v1310

SoundingRS-UL-ConfigDedicatedAperiodic-v1310 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r13

SoundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r13 OPTIONAL, -- Need ON

csi-RS-Config-v1310 CSI-RS-Config-v1310 OPTIONAL, -- Need ON

ce-Mode-r13 CHOICE {

release NULL,

setup ENUMERATED {ce-ModeA,ce-ModeB}

} OPTIONAL, -- Need ON

csi-RS-ConfigNZPToAddModListExt-r13 CSI-RS-ConfigNZPToAddModListExt-r13 OPTIONAL, -- Need ON

csi-RS-ConfigNZPToReleaseListExt-r13 CSI-RS-ConfigNZPToReleaseListExt-r13 OPTIONAL -- Need ON

]],

[[ cqi-ReportConfig-v1320 CQI-ReportConfig-v1320 OPTIONAL -- Need ON

]],

[[ typeA-SRS-TPC-PDCCH-Group-r14 CHOICE {

release NULL,

setup SEQUENCE (SIZE (1..32)) OF SRS-TPC-PDCCH-Config-r14

} OPTIONAL, -- Need ON

must-Config-r14 CHOICE{

release NULL,

setup SEQUENCE {

k-max-r14 ENUMERATED {l1, l3},

p-a-must-r14 ENUMERATED {

dB-6, dB-4dot77, dB-3, dB-1dot77,

dB0, dB1, dB2, dB3} OPTIONAL -- Need ON

}

} OPTIONAL, -- Need ON

pusch-EnhancementsConfig-r14 PUSCH-EnhancementsConfig-r14 OPTIONAL, -- Need ON

ce-pdsch-pusch-EnhancementConfig-r14 ENUMERATED {on} OPTIONAL, -- Need OR

antennaInfo-v1430 AntennaInfoDedicated-v1430 OPTIONAL, -- Need ON

pucch-ConfigDedicated-v1430 PUCCH-ConfigDedicated-v1430 OPTIONAL, -- Need ON

pdsch-ConfigDedicated-v1430 PDSCH-ConfigDedicated-v1430 OPTIONAL, -- Need ON

pusch-ConfigDedicated-v1430 PUSCH-ConfigDedicated-v1430 OPTIONAL, -- Need ON

soundingRS-UL-PeriodicConfigDedicatedList-r14 SEQUENCE (SIZE (1..2)) OF SoundingRS-UL-ConfigDedicated OPTIONAL, -- Cond PeriodicSRSPCell

soundingRS-UL-PeriodicConfigDedicatedUpPTsExtList-r14 SEQUENCE (SIZE (1..4)) OF SoundingRS-UL-ConfigDedicatedUpPTsExt-r13 OPTIONAL, -- Cond PeriodicSRSExt

soundingRS-UL-AperiodicConfigDedicatedList-r14 SEQUENCE (SIZE (1..2)) OF SoundingRS-UL-ConfigDedicatedAperiodic-r10 OPTIONAL, -- Cond AperiodicSRS

soundingRS-UL-ConfigDedicatedApUpPTsExtList-r14 SEQUENCE (SIZE (1..4)) OF SoundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r13 OPTIONAL, -- Cond AperiodicSRSExt

csi-RS-Config-v1430 CSI-RS-Config-v1430 OPTIONAL, -- Need ON

csi-RS-ConfigZP-ApList-r14 CSI-RS-ConfigZP-ApList-r14 OPTIONAL, -- Need ON

cqi-ReportConfig-v1430 CQI-ReportConfig-v1430 OPTIONAL, -- Need ON

semiOpenLoop-r14 BOOLEAN OPTIONAL -- Need ON

]],

[[ csi-RS-Config-v1480 CSI-RS-Config-v1480 OPTIONAL -- Need ON

]],

[[ physicalConfigDedicatedSTTI-r15 PhysicalConfigDedicatedSTTI-r15 OPTIONAL,-- Need ON

pdsch-ConfigDedicated-v1530 PDSCH-ConfigDedicated-v1530 OPTIONAL,-- Need ON

pusch-ConfigDedicated-v1530 PUSCH-ConfigDedicated-v1530 OPTIONAL,-- Need ON

cqi-ReportConfig-v1530 CQI-ReportConfig-v1530 OPTIONAL,-- Need ON

antennaInfo-v1530 AntennaInfoDedicated-v1530 OPTIONAL,-- Need ON

csi-RS-Config-v1530 CSI-RS-Config-v1530 OPTIONAL,-- Need ON

uplinkPowerControlDedicated-v1530

UplinkPowerControlDedicated-v1530 OPTIONAL, -- Need ON

semiStaticCFI-Config-r15 CHOICE{

release NULL,

setup CHOICE{

cfi-Config-r15 CFI-Config-r15,

cfi-PatternConfig-r15 CFI-PatternConfig-r15

}

} OPTIONAL, -- Need ON

blindPDSCH-Repetition-Config-r15 CHOICE{

release NULL,

setup SEQUENCE {

blindSubframePDSCH-Repetitions-r15 BOOLEAN,

blindSlotSubslotPDSCH-Repetitions-r15 BOOLEAN,

maxNumber-SubframePDSCH-Repetitions-r15 ENUMERATED {n4,n6} OPTIONAL, -- Need ON

maxNumber-SlotSubslotPDSCH-Repetitions-r15 ENUMERATED {n4,n6} OPTIONAL, -- Need ON

rv-SubframePDSCH-Repetitions-r15 ENUMERATED {dlrvseq1, dlrvseq2} OPTIONAL, -- Need ON

rv-SlotsublotPDSCH-Repetitions-r15 ENUMERATED {dlrvseq1, dlrvseq2} OPTIONAL, -- Need ON

numberOfProcesses-SubframePDSCH-Repetitions-r15 INTEGER(1..16) OPTIONAL, -- Need ON

numberOfProcesses-SlotSubslotPDSCH-Repetitions-r15 INTEGER(1..16) OPTIONAL, -- Need ON

mcs-restrictionSubframePDSCH-Repetitions-r15 ENUMERATED {n0, n1} OPTIONAL, -- Need ON

mcs-restrictionSlotSubslotPDSCH-Repetitions-r15 ENUMERATED {n0, n1} OPTIONAL -- Need ON

}

} OPTIONAL -- Need ON

]],

[[ spucch-Config-v1550 SPUCCH-Config-v1550 OPTIONAL -- Need ON

]]

}

PhysicalConfigDedicated-v1370 ::= SEQUENCE {

pucch-ConfigDedicated-v1370 PUCCH-ConfigDedicated-v1370 OPTIONAL -- Cond PUCCH-Format4or5

}

PhysicalConfigDedicated-v13c0 ::= SEQUENCE {

pucch-ConfigDedicated-v13c0 PUCCH-ConfigDedicated-v13c0

}

PhysicalConfigDedicatedSCell-r10 ::= SEQUENCE {

-- DL configuration as well as configuration applicable for DL and UL

nonUL-Configuration-r10 SEQUENCE {

antennaInfo-r10

AntennaInfoDedicated-r10 OPTIONAL, -- Need ON

crossCarrierSchedulingConfig-r10

CrossCarrierSchedulingConfig-r10 OPTIONAL, -- Need ON

csi-RS-Config-r10 CSI-RS-Config-r10 OPTIONAL, -- Need ON

pdsch-ConfigDedicated-r10 PDSCH-ConfigDedicated OPTIONAL -- Need ON

} OPTIONAL, -- Cond SCellAdd

-- UL configuration

ul-Configuration-r10 SEQUENCE {

antennaInfoUL-r10 AntennaInfoUL-r10 OPTIONAL, -- Need ON

pusch-ConfigDedicatedSCell-r10

PUSCH-ConfigDedicatedSCell-r10 OPTIONAL, -- Cond PUSCH-SCell1

uplinkPowerControlDedicatedSCell-r10

UplinkPowerControlDedicatedSCell-r10 OPTIONAL, -- Need ON

cqi-ReportConfigSCell-r10 CQI-ReportConfigSCell-r10 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicated-r10

SoundingRS-UL-ConfigDedicated OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicated-v1020

SoundingRS-UL-ConfigDedicated-v1020 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedAperiodic-r10

SoundingRS-UL-ConfigDedicatedAperiodic-r10 OPTIONAL -- Need ON

} OPTIONAL, -- Cond CommonUL

...,

[[ -- DL configuration as well as configuration applicable for DL and UL

csi-RS-ConfigNZPToReleaseList-r11

CSI-RS-ConfigNZPToReleaseList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigNZPToAddModList-r11

CSI-RS-ConfigNZPToAddModList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigZPToReleaseList-r11

CSI-RS-ConfigZPToReleaseList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigZPToAddModList-r11

CSI-RS-ConfigZPToAddModList-r11 OPTIONAL, -- Need ON

epdcch-Config-r11 EPDCCH-Config-r11 OPTIONAL, -- Need ON

pdsch-ConfigDedicated-v1130 PDSCH-ConfigDedicated-v1130 OPTIONAL, -- Need ON

-- UL configuration

cqi-ReportConfig-v1130 CQI-ReportConfig-v1130 OPTIONAL, -- Need ON

pusch-ConfigDedicated-v1130

PUSCH-ConfigDedicated-v1130 OPTIONAL, -- Cond PUSCH-SCell1

uplinkPowerControlDedicatedSCell-v1130

UplinkPowerControlDedicated-v1130 OPTIONAL -- Need ON

]],

[[ antennaInfo-v1250 AntennaInfoDedicated-v1250 OPTIONAL, -- Need ON

eimta-MainConfigSCell-r12

EIMTA-MainConfigServCell-r12 OPTIONAL, -- Need ON

cqi-ReportConfigSCell-v1250 CQI-ReportConfig-v1250 OPTIONAL, -- Need ON

uplinkPowerControlDedicatedSCell-v1250

UplinkPowerControlDedicated-v1250 OPTIONAL, -- Need ON

csi-RS-Config-v1250 CSI-RS-Config-v1250 OPTIONAL -- Need ON

]],

[[ pdsch-ConfigDedicated-v1280 PDSCH-ConfigDedicated-v1280 OPTIONAL -- Need ON

]],

[[ pucch-Cell-r13 ENUMERATED {true} OPTIONAL, -- Cond PUCCH-SCell1

pucch-SCell CHOICE{

release NULL,

setup SEQUENCE {

pucch-ConfigDedicated-r13

PUCCH-ConfigDedicated-r13 OPTIONAL, -- Need ON

schedulingRequestConfig-r13

SchedulingRequestConfigSCell-r13 OPTIONAL, -- Need ON

tpc-PDCCH-ConfigPUCCH-SCell-r13

TPC-PDCCH-ConfigSCell-r13 OPTIONAL, -- Need ON

pusch-ConfigDedicated-r13

PUSCH-ConfigDedicated-r13 OPTIONAL, -- Cond PUSCH-SCell

uplinkPowerControlDedicated-r13

UplinkPowerControlDedicatedSCell-v1310 OPTIONAL -- Need ON

}

} OPTIONAL, -- Need ON

crossCarrierSchedulingConfig-r13

CrossCarrierSchedulingConfig-r13 OPTIONAL, -- Cond Cross-Carrier-Config

pdcch-ConfigSCell-r13 PDCCH-ConfigSCell-r13 OPTIONAL, -- Need ON

cqi-ReportConfig-v1310 CQI-ReportConfig-v1310 OPTIONAL, -- Need ON

pdsch-ConfigDedicated-v1310 PDSCH-ConfigDedicated-v1310 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicated-v1310

SoundingRS-UL-ConfigDedicated-v1310 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedUpPTsExt-r13

SoundingRS-UL-ConfigDedicatedUpPTsExt-r13 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedAperiodic-v1310

SoundingRS-UL-ConfigDedicatedAperiodic-v1310 OPTIONAL, -- Need ON

soundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r13

SoundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r13 OPTIONAL, -- Need ON

csi-RS-Config-v1310 CSI-RS-Config-v1310 OPTIONAL, -- Need ON

laa-SCellConfiguration-r13 LAA-SCellConfiguration-r13 OPTIONAL, -- Need ON

csi-RS-ConfigNZPToAddModListExt-r13 CSI-RS-ConfigNZPToAddModListExt-r13 OPTIONAL, -- Need ON

csi-RS-ConfigNZPToReleaseListExt-r13 CSI-RS-ConfigNZPToReleaseListExt-r13 OPTIONAL -- Need ON

]],

[[ cqi-ReportConfig-v1320 CQI-ReportConfig-v1320 OPTIONAL -- Need ON

]],

[[ laa-SCellConfiguration-v1430 LAA-SCellConfiguration-v1430

OPTIONAL, -- Need ON

typeB-SRS-TPC-PDCCH-Config-r14 SRS-TPC-PDCCH-Config-r14 OPTIONAL, -- Need ON

uplinkPUSCH-LessPowerControlDedicated-v1430 UplinkPUSCH-LessPowerControlDedicated-v1430 OPTIONAL, -- Need ON

soundingRS-UL-PeriodicConfigDedicatedList-r14 SEQUENCE (SIZE (1..2)) OF SoundingRS-UL-ConfigDedicated OPTIONAL, -- Cond PeriodicSRS

soundingRS-UL-PeriodicConfigDedicatedUpPTsExtList-r14 SEQUENCE (SIZE (1..4)) OF SoundingRS-UL-ConfigDedicatedUpPTsExt-r13 OPTIONAL, -- Cond PeriodicSRSExt

soundingRS-UL-AperiodicConfigDedicatedList-r14 SEQUENCE (SIZE (1..2)) OF SoundingRS-AperiodicSet-r14 OPTIONAL, -- Cond AperiodicSRS

soundingRS-UL-ConfigDedicatedApUpPTsExtList-r14 SEQUENCE (SIZE (1..4)) OF SoundingRS-AperiodicSetUpPTsExt-r14 OPTIONAL, -- Cond AperiodicSRSExt

must-Config-r14 CHOICE{

release NULL,

setup SEQUENCE {

k-max-r14 ENUMERATED {l1, l3},

p-a-must-r14 ENUMERATED {

dB-6, dB-4dot77, dB-3, dB-1dot77,

dB0, dB1, dB2, dB3} OPTIONAL -- Need ON

}

} OPTIONAL, -- Need ON

pusch-ConfigDedicated-v1430 PUSCH-ConfigDedicatedSCell-v1430 OPTIONAL, -- Need ON

csi-RS-Config-v1430 CSI-RS-Config-v1430 OPTIONAL, -- Need ON

csi-RS-ConfigZP-ApList-r14 CSI-RS-ConfigZP-ApList-r14 OPTIONAL, -- Need ON

cqi-ReportConfig-v1430 CQI-ReportConfig-v1430 OPTIONAL, -- Need ON

semiOpenLoop-r14 BOOLEAN OPTIONAL, -- Need ON

pdsch-ConfigDedicatedSCell-v1430 PDSCH-ConfigDedicatedSCell-v1430 OPTIONAL -- Need ON

]],

[[ csi-RS-Config-v1480 CSI-RS-Config-v1480 OPTIONAL -- Need ON

]],

[[ physicalConfigDedicatedSTTI-r15 PhysicalConfigDedicatedSTTI-r15 OPTIONAL, -- Need ON

pdsch-ConfigDedicated-v1530 PDSCH-ConfigDedicated-v1530 OPTIONAL, -- Need ON

dummy CQI-ReportConfig-v1530 OPTIONAL, -- Need ON

cqi-ReportConfigSCell-r15 CQI-ReportConfigSCell-r15 OPTIONAL, -- Need ON

cqi-ShortConfigSCell-r15 CQI-ShortConfigSCell-r15 OPTIONAL, -- Need ON

csi-RS-Config-v1530 CSI-RS-Config-v1530 OPTIONAL, -- Need ON

uplinkPowerControlDedicatedSCell-v1530

UplinkPowerControlDedicated-v1530 OPTIONAL, -- Need ON

laa-SCellConfiguration-v1530 LAA-SCellConfiguration-v1530 OPTIONAL, -- Need ON

pusch-ConfigDedicated-v1530 PUSCH-ConfigDedicatedScell-v1530 OPTIONAL, -- Cond AUL

semiStaticCFI-Config-r15 CHOICE{

release NULL,

setup CHOICE{

cfi-Config-r15 CFI-Config-r15,

cfi-PatternConfig-r15 CFI-PatternConfig-r15

}

} OPTIONAL, -- Need ON

blindPDSCH-Repetition-Config-r15 CHOICE{

release NULL,

setup SEQUENCE {

blindSubframePDSCH-Repetitions-r15 BOOLEAN,

blindSlotSubslotPDSCH-Repetitions-r15 BOOLEAN,

maxNumber-SubframePDSCH-Repetitions-r15 ENUMERATED {n4,n6} OPTIONAL, -- Need ON

maxNumber-SlotSubslotPDSCH-Repetitions-r15 ENUMERATED {n4,n6} OPTIONAL, -- Need ON

rv-SubframePDSCH-Repetitions-r15 ENUMERATED {dlrvseq1, dlrvseq2} OPTIONAL, -- Need ON

rv-SlotsublotPDSCH-Repetitions-r15 ENUMERATED {dlrvseq1, dlrvseq2} OPTIONAL, -- Need ON

numberOfProcesses-SubframePDSCH-Repetitions-r15 INTEGER(1..16) OPTIONAL, -- Need ON

numberOfProcesses-SlotSubslotPDSCH-Repetitions-r15 INTEGER(1..16) OPTIONAL, -- Need ON

mcs-restrictionSubframePDSCH-Repetitions-r15 ENUMERATED {n0, n1} OPTIONAL, -- Need ON

mcs-restrictionSlotSubslotPDSCH-Repetitions-r15 ENUMERATED {n0, n1} OPTIONAL -- Need ON

}

} OPTIONAL -- Need ON

]],

[[ spucch-Config-v1550 SPUCCH-Config-v1550 OPTIONAL -- Need ON

]]

}

PhysicalConfigDedicatedSCell-v1370 ::= SEQUENCE {

pucch-SCell-v1370 CHOICE{

release NULL,

setup SEQUENCE {

pucch-ConfigDedicated-v1370 PUCCH-ConfigDedicated-v1370 OPTIONAL -- Cond PUCCH-Format4or5

}

}

}

PhysicalConfigDedicatedSCell-v13c0 ::= SEQUENCE {

pucch-SCell-v13c0 CHOICE{

release NULL,

setup SEQUENCE {

pucch-ConfigDedicated-v13c0 PUCCH-ConfigDedicated-v13c0

}

}

}

CFI-Config-r15 ::= SEQUENCE {

cfi-SubframeNonMBSFN-r15 INTEGER (1..4) OPTIONAL, -- Need ON

cfi-SlotSubslotNonMBSFN-r15 INTEGER (1..3) OPTIONAL, -- Need ON

cfi-SubframeMBSFN-r15 INTEGER (1..2) OPTIONAL, -- Need ON

cfi-SlotSubslotMBSFN-r15 INTEGER (1..2) OPTIONAL -- Need ON

}

CFI-PatternConfig-r15 ::= SEQUENCE {

cfi-PatternSubframe-r15 SEQUENCE (SIZE(10)) OF INTEGER (1..4) OPTIONAL, -- Need ON

cfi-PatternSlotSubslot-r15 SEQUENCE (SIZE(10)) OF INTEGER (1..3) OPTIONAL -- Need ON

}

LAA-SCellConfiguration-r13 ::= SEQUENCE {

subframeStartPosition-r13 ENUMERATED {s0, s07},

laa-SCellSubframeConfig-r13 BIT STRING (SIZE(8))

}

LAA-SCellConfiguration-v1430 ::= SEQUENCE {

crossCarrierSchedulingConfig-UL-r14 CHOICE {

release NULL,

setup SEQUENCE {

crossCarrierSchedulingConfigLAA-UL-r14 CrossCarrierSchedulingConfigLAA-UL-r14

}

} OPTIONAL, -- Cond Cross-Carrier-ConfigUL

lbt-Config-r14 LBT-Config-r14 OPTIONAL, -- Need ON

pdcch-ConfigLAA-r14 PDCCH-ConfigLAA-r14 OPTIONAL, -- Need ON

absenceOfAnyOtherTechnology-r14 ENUMERATED {true} OPTIONAL, -- Need OR

soundingRS-UL-ConfigDedicatedAperiodic-v1430

SoundingRS-UL-ConfigDedicatedAperiodic-v1430 OPTIONAL -- Need ON

}

LAA-SCellConfiguration-v1530 ::= SEQUENCE {

aul-Config-r15 AUL-Config-r15 OPTIONAL, -- Need ON

pusch-ModeConfigLAA-r15 PUSCH-ModeConfigLAA-r15 OPTIONAL -- Need OR

}

PUSCH-ModeConfigLAA-r15 ::= SEQUENCE {

laa-PUSCH-Mode1 BOOLEAN,

laa-PUSCH-Mode2 BOOLEAN,

laa-PUSCH-Mode3 BOOLEAN

}

LBT-Config-r14 ::= CHOICE{

maxEnergyDetectionThreshold-r14 INTEGER(-85..-52),

energyDetectionThresholdOffset-r14 INTEGER(-13..20)

}

CSI-RS-ConfigNZPToAddModList-r11 ::= SEQUENCE (SIZE (1..maxCSI-RS-NZP-r11)) OF CSI-RS-ConfigNZP-r11

CSI-RS-ConfigNZPToAddModListExt-r13 ::= SEQUENCE (SIZE (1..maxCSI-RS-NZP-v1310)) OF CSI-RS-ConfigNZP-r11

CSI-RS-ConfigNZPToAddModList-r15 ::= SEQUENCE (SIZE (1..maxCSI-RS-NZP-r13)) OF CSI-RS-ConfigNZP-r11

CSI-RS-ConfigNZPToReleaseList-r11 ::= SEQUENCE (SIZE (1..maxCSI-RS-NZP-r11)) OF CSI-RS-ConfigNZPId-r11

CSI-RS-ConfigNZPToReleaseListExt-r13 ::= SEQUENCE (SIZE (1..maxCSI-RS-NZP-v1310)) OF CSI-RS-ConfigNZPId-v1310

CSI-RS-ConfigNZPToReleaseList-r15 ::= SEQUENCE (SIZE (1..maxCSI-RS-NZP-r13)) OF CSI-RS-ConfigNZPId-r13

CSI-RS-ConfigZPToAddModList-r11 ::= SEQUENCE (SIZE (1..maxCSI-RS-ZP-r11)) OF CSI-RS-ConfigZP-r11

CSI-RS-ConfigZPToReleaseList-r11 ::= SEQUENCE (SIZE (1..maxCSI-RS-ZP-r11)) OF CSI-RS-ConfigZPId-r11

PhysicalConfigDedicatedSTTI-r15 ::= CHOICE {

release NULL,

setup SEQUENCE {

antennaInfoDedicatedSTTI-r15 AntennaInfoDedicatedSTTI-r15 OPTIONAL, -- Need ON

antennaInfoUL-STTI-r15 AntennaInfoUL-STTI-r15 OPTIONAL, -- Need ON

pucch-ConfigDedicated-v1530 PUCCH-ConfigDedicated-v1530 OPTIONAL, -- Need ON

schedulingRequestConfig-v1530 SchedulingRequestConfig-v1530 OPTIONAL, -- Need ON

uplinkPowerControlDedicatedSTTI-r15 UplinkPowerControlDedicatedSTTI-r15 OPTIONAL, --Need ON

cqi-ReportConfig-r15 CQI-ReportConfig-r15 OPTIONAL, -- Need ON

csi-RS-Config-r15 CSI-RS-Config-r15 OPTIONAL, -- Need ON

csi-RS-ConfigNZPToReleaseList-r15 CSI-RS-ConfigNZPToReleaseList-r15 OPTIONAL, -- Need ON

csi-RS-ConfigNZPToAddModList-r15 CSI-RS-ConfigNZPToAddModList-r15 OPTIONAL, -- Need ON

csi-RS-ConfigZPToReleaseList-r15 CSI-RS-ConfigZPToReleaseList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigZPToAddModList-r11 CSI-RS-ConfigZPToAddModList-r11 OPTIONAL, -- Need ON

csi-RS-ConfigZP-ApList-r15 CSI-RS-ConfigZP-ApList-r14 OPTIONAL, -- Need ON

eimta-MainConfig-r12 EIMTA-MainConfig-r12 OPTIONAL, -- Need ON

eimta-MainConfigServCell-r15 EIMTA-MainConfigServCell-r12 OPTIONAL, -- Need ON

semiOpenLoopSTTI-r15 BOOLEAN,

slotOrSubslotPDSCH-Config-r15 SlotOrSubslotPDSCH-Config-r15 OPTIONAL, -- Need ON

slotOrSubslotPUSCH-Config-r15 SlotOrSubslotPUSCH-Config-r15 OPTIONAL, -- Need ON

spdcch-Config-r15 SPDCCH-Config-r15 OPTIONAL, -- Need ON

spucch-Config-r15 SPUCCH-Config-r15 OPTIONAL, -- Need ON

srs-DCI7-TriggeringConfig-r15 BOOLEAN,

shortProcessingTime-r15 BOOLEAN,

shortTTI-r15 ShortTTI-r15 OPTIONAL -- Need ON

}

}

SoundingRS-AperiodicSet-r14 ::= SEQUENCE{

srs-CC-SetIndexList-r14

SEQUENCE (SIZE (1..4)) OF SRS-CC-SetIndex-r14

OPTIONAL, -- Cond SRS-Trigger-TypeA

soundingRS-UL-ConfigDedicatedAperiodic-r14

SoundingRS-UL-ConfigDedicatedAperiodic-r10

}

SoundingRS-AperiodicSetUpPTsExt-r14 ::= SEQUENCE{

srs-CC-SetIndexList-r14

SEQUENCE (SIZE (1..4)) OF SRS-CC-SetIndex-r14

OPTIONAL, -- Cond SRS-Trigger-TypeA

soundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r14

SoundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r13

}

ShortTTI-r15 ::= SEQUENCE {

dl-STTI-Length-r15 ShortTTI-Length-r15 OPTIONAL, -- Need OR

ul-STTI-Length-r15 ShortTTI-Length-r15 OPTIONAL -- Need OR

}

ShortTTI-Length-r15 ::= ENUMERATED {slot, subslot}

-- ASN1STOP

| ***PhysicalConfigDedicated* field descriptions** |
| --- |
| ***absenceOfAnyOtherTechnology***  Presence of this field indicates absence on a long term basis (e.g. by level of regulation) of any other technology sharing the carrier; absence of this field indicates the potential presence of any other technology sharing the carrier, as specified in TS 37.213 [94]. |
| ***additionalSpectrumEmissionPCell***  E-UTRAN does not configure this field in this release of the specification. |
| ***antennaInfo***  A choice is used to indicate whether the *antennaInfo* is signalled explicitly or set to the default antenna configuration as specified in clause 9.2.4. |
| ***blindSlotSubslotPDSCH-Repetitions***  Enables HARQ-less/blind slot or subslot PDSCH repetitions for a UE in a given cell, i.e. back to back slot/subslot PDSCH transmissions for the same transport block. The number of slot/subslot PDSCH transmissions is indicated in the DCI. |
| ***blindSubframePDSCH-Repetitions***  Enables HARQ-less/blind subframe PDSCH repetitions for a UE in a given cell, i.e. back to back PDSCH transmissions for the same transport block. The number of PDSCH transmissions is indicated in the DCI. |
| ***cqi-ShortConfigSCell***  Indicates whether the CSI (CQI/PMI/RI/PTI/CRI) reporting resource configured by *cqi-ShortConfigSCell* is available upon receiving the SCell activation command for this SCell. E-UTRAN only configures this field when transmission mode 1-8 is configured for the serving cell on this carrier frequency. |
| ***ce-Mode***  Indicates the CE mode as specified in TS 36.213 [23]. |
| ***ce-pdsch-pusch-Enhancement-Config***  Activation of new numbers of repetitions for PUSCH and modulation restrictions for PDSCH/PUSCH in CE mode A, see TS 36.212 [22] and TS 36.213 [23]. |
| ***csi-RS-Config***  For a serving frequency E-UTRAN does not configure *csi-RS-Config* (includes *zeroTxPowerCSI-RS*) when transmission mode 10 is configured for the serving cell on this carrier frequency. |
| ***csi-RS-ConfigNZPToAddModList***  For a serving frequency E-UTRAN configures one or more *CSI-RS-ConfigNZP* only when transmission mode 9 or 10 is configured for the serving cell on this carrier frequency. For a serving frequency, EUTRAN configures a maximum number of *CSI-RS-ConfigNZP* in accordance with transmission mode (including CSI processes), eMIMO (including class) and associated UE capabilities (e.g. k-Max, n-MaxList). |
| ***csi-RS-ConfigZP-ApList***  The aperiodic ZP CSI-RS for PDSCH rate matching. The field *subframeConfig* is applicable to semi-persistent CSI RS reporting. In other cases, the UE shall ignore field *subframeConfig*. |
| ***csi-RS-ConfigZPToAddModList***  For a serving frequency E-UTRAN configures one or more *CSI-RS-ConfigZP* only when transmission mode 10 is configured for the serving cell on this carrier frequency. |
| ***dl-STTI-Length, ul-STTI-Length***  Indicates the DL and UL short TTI lengths. Value slot corresponds to 7 OFDM symbols and value subslot corresponds to 2 or 3 OFDM symbols. E-UTRAN configures the same value for all serving cells sending PUCCH feedback on the same cell. If one SCell is configured with short TTI in the group of cells configured to send PUCCH on the same cell, the cell carrying PUCCH shall be configured with short TTI. E-UTRAN can configure different value of *dl-STTI-Length* and *ul-STTI-Length* for serving cells sending PUCCH feedback on different cells. E-UTRAN does not configure the combination {slot,subslot} for {DL,UL}. |
| ***dummy***  This field is not used in the specification. If received it shall be ignored by the UE. |
| ***eimta-MainConfigPCell, eimta-MainConfigSCell***  If E-UTRAN configures *eimta-MainConfigPCell* or *eimta-MainConfigSCell* for one serving cell in a frequency band, E-UTRAN configures *eimta-MainConfigPCell* or *eimta-MainConfigSCell* for all serving cells residing on the frequency band. E-UTRAN configures *eimta-MainConfigPCell* or *eimta-MainConfigSCell* only if *eimta-MainConfig* is configured. |
| ***energyDetectionThresholdOffset***  Indicates the offset to the default maximum energy detection threshold value. Unit in dB. Value -13 corresponds to -13dB, value -12 corresponds to -12dB, and so on (i.e. in steps of 1dB) as specified in TS 37.213 [94]. |
| ***epdcch-Config***  indicates the *EPDCCH-Config* for the cell. E-UTRAN does not configure *EPDCCH-Config* for an SCell that is configured with value *other* for *schedulingCellInfo* in *CrossCarrierSchedulingConfig*. |
| ***k-max***  Indicates the maximum number of interfering spatial layers signaled in the assistance information for MUST. Value l1 corresponds to 1 layer, Value l3 corresponds to 3 layers. |
| ***laa-PUSCH-Mode1, laa-PUSCH-Mode2, laa-PUSCH-Mode3***  Indicates whether LAA PUSCH mode 1, 2 and/or 3 is configured as specified in TS 36.212 [22], clause 5.3.3.1. |
| ***laa-SCellSubframeConfig***  A bit-map indicating LAA SCell subframe configuration, "1" denotes that the corresponding subframe is allocated as MBSFN subframe. The bitmap is interpreted as follows:  Starting from the first/leftmost bit in the bitmap, the allocation applies to subframes #1, #2, #3, #4, #6, #7, #8, and #9. |
| ***maxEnergyDetectionThreshold***  Indicates the absolute maximum energy detection threshold value. Unit in dBm. Value -85 corresponds to -85 dBm, value -84 corresponds to -84 dBm, and so on (i.e. in steps of 1dBm) as specified in TS 36.213 [23]. If the field is not configured, the UE shall use a default maximum energy detection threshold value as specified in TS 37.213 [94]. |
| ***maxNumber-SlotSubslotPDSCH-Repetitions***  Indicates the maximum number of PDSCH transmissions for slot or subslot PDSCH repetitions. |
| ***maxNumber-SubframePDSCH-Repetitions***  Indicates the maximum number of PDSCH transmissions for subframe PDSCH repetitions. |
| ***mcs-restrictionSlotSubslotPDSCH-Repetitions***  Indicates the MCS restriction in terms of number of non-addressable MSB in the MCS bit-field for slot or subslot PDSCH repetition applicable when k > 1. |
| ***mcs-restrictionSubframePDSCH-Repetitions***  Indicates MCS restriction in terms of number of non-addressable MSB in the MCS bit-field for subframe PDSCH repetition applicable when k > 1. |
| ***numberOfProcesses-SlotSubslotPDSCH-Repetitions***  Indicates the number of HARQ processes for slot/subslot PDSCH repetition applicable when k > 1 configured per serving cell. |
| ***numberOfProcesses-SubframePDSCH-Repetitions***  Indicates the number of HARQ processes for subframe PDSCH repetition applicable when k > 1 configured per serving cell. |
| ***p-a-must***  Parameter: , see TS 36.213 [23], clause 5.2. Value dB-6 corresponds to -6 dB, dB-4dot77 corresponds to -4.77 dB etc. |
| ***pdsch-ConfigDedicated-v1130***  For a serving frequency, E-UTRAN configures *pdsch-ConfigDedicated-v1130* only when transmission mode 10 is configured for the serving cell on this carrier frequency. |
| ***pdsch-ConfigDedicated-v1280***  For a serving frequency, E-UTRAN configures *pdsch-ConfigDedicated-v1280* only when transmission mode 9 or 10 is configured for the serving cell on this carrier frequency. |
| ***pucch-Cell***  If present, PUCCH feedback of this SCell is sent on the PUCCH SCell. If absent, PUCCH feedback of this SCell is sent on PCell or PSCell, or if the cell concerns the PUCCH SCell, on the concerned cell. If this field is not modified upon change of PUCCH SCell, the UE shall always send the PUCCH feedback of the concerned SCell using the configured PUCCH SCell. |
| ***pucch-ConfigDedicated***  E-UTRAN configures *pucch-ConfigDedicated-r13* only if *pucch-ConfigDedicated* (i.e., without suffix) is not configured. UE shall ignore *pucch-ConfigDedicated-v1020* when *pucch-ConfigDedicated-r13* is configured. |
| ***pucch-SCell***  If present, the concerned SCell is the PUCCH SCell. E-UTRAN only configures this field upon SCell addition i.e. this field is only released when the SCell is released. The field is not applicable for an LAA SCell in this release. |
| ***pusch-ConfigDedicated-r13***  E-UTRAN configures *pusch-ConfigDedicated-r13* only if *pusch-ConfigDedicated* is not configured. |
| ***pusch-ConfigDedicated-v1250***  E-UTRAN configures *pusch-ConfigDedicated-v1250* only if *tpc-SubframeSet* is configured. |
| ***pusch-EnhancementsConfig***  Indicates that the UE shall transmit in the PUSCH enhancement mode if *pusch-EnhancementsConfig* is set to *setup*, see TS 36.211 [21] and TS 36.213 [23]. |
| ***rv-SlotsublotPDSCH-Repetitions***  Indicates the RV cycling sequence for slot or subslot PDSCH repetition. Value dlrvseq1 = {0, 0, 0, 0} and value dlrvseq2 = {0, 2, 3, 1}. |
| ***rv-SubframePDSCH-Repetitions***  Indicates the RV cycling sequence for subframe PDSCH repetition. Value dlrvseq1 = {0, 0, 0, 0} and value dlrvseq2 = {0, 2, 3, 1}. |
| ***semiOpenLoop, semiOpenLoopSTTI***  Value TRUE indicates that semi-open-loop transmission is used for deriving CSI reporting and corresponding PDSCH transmission (DMRS). |
| ***semiStaticCFI-SlotSubslotNonMBSFN***  Indicates the semi-static control format indicator for slot/subslot operation in non-MBSFN subframes. |
| ***semiStaticCFI-SlotSubslotMBSFN***  Indicates the semi-static control format indicator for slot/subslot operation in MBSFN subframes. |
| ***semiStaticCFI-SubframeMBSFN***  Indicates the semi-static control format indicator for subframe operation in MBSFN subframes. |
| ***semiStaticCFI-*** ***SubframeNonMBSFN***  Indicates the semi-static control format indicator for subframe operation in non-MBSFN subframes. |
| ***shortProcessingTime***  Indicates whether short processing time is configured as specific in TS 36.321 [6]. An SCell can only be configured with short processing if the cell carrying PUCCH for that SCell is configured with short processing time. |
| ***soundingRS-UL-PeriodicConfigDedicatedList***  Indicates periodic soundingRS configuration except for the extension sounding symbols of the UpPTs subframe. E-UTRAN configures this field in *PhysicalConfigDedicated* only for the UE indicating support of *ce-SRS-Enhancement-r14* or *ce-SRS-EnhancementWithoutComb4-r14*. E-UTRAN configures this field in *PhysicalConfigDedicatedSCell-r10* only for the UE indicating support of *srs-UpPTS-6sym-r14*. |
| ***soundingRS-UL-PeriodicConfigDedicatedUpPTsExtList***  Indicates periodic soundingRS configuration in extension sounding symbols of the UpPTs subframe. E-UTRAN configures this field in *PhysicalConfigDedicated* only for the UE indicating support of *ce-SRS-Enhancement-r14* or *ce-SRS-EnhancementWithoutComb4-r14*. E-UTRAN configures this field in *PhysicalConfigDedicatedSCell-r10* only for the UE indicating support of *srs-UpPTS-6sym-r14*. |
| ***soundingRS-UL-AperiodicConfigDedicatedList***  Indicates aperiodic soundingRS configuration except for the extension sounding symbols of the UpPTs subframe. E-UTRAN configures this field in *PhysicalConfigDedicated* only for the UE indicating support of *ce-SRS-Enhancement-r14* or *ce-SRS-EnhancementWithoutComb4-r14*. E-UTRAN configures this field in *PhysicalConfigDedicatedSCell-r10* only for the UE indicating support of *srs-UpPTS-6sym-r14*. |
| ***soundingRS-UL-DedicatedApUpPTsExtList***  Indicates aperiodic soundingRS configuration in extension sounding symbols of the UpPTs subframe. E-UTRAN configures this field in *PhysicalConfigDedicated* only for the UE indicating support of *ce-SRS-Enhancement-r14* or *ce-SRS-EnhancementWithoutComb4-r14*. E-UTRAN configures this field in *PhysicalConfigDedicatedSCell-r10* only for the UE indicating support of *srs-UpPTS-6sym-r14*. |
| ***srs-CC-SetIndexList***  Indicates the *srs-CC-SetIndex* list which the *soundingRS-UL-ConfigDedicatedAperiodic* and*soundingRS-UL-ConfigDedicatedAperiodicUpPTsExt* belongs to. |
| ***srs-DCI7-TriggeringConfig***  Indicates whether SRS triggering via DCI7 is configured. |
| ***subframeStartPosition***  Indicates possible starting positions of transmission in the first subframe of the DL transmission burst, see TS 36.211 [21]. Value *s0* means the starting position is subframe boundary, *s07* means the starting position is either subframe boundary or slot boundary. |
| ***tpc-PDCCH-ConfigPUCCH***  PDCCH configuration for power control of PUCCH using format 3/3A, see TS 36.212 [22]. |
| ***tpc-PDCCH-ConfigPUSCH***  PDCCH configuration for power control of PUSCH using format 3/3A, see TS 36.212 [22]. |
| ***typeA-SRS-TPC-PDCCH-Group***  Indicates Type A trigger configuration for SRS transmission on a PUSCH-less SCell. E-UTRAN configures the UE with either *typeA-SRS-TPC-PDCCH-Group* or *typeB-SRS-TPC-PDCCH-Group*, if any. |
| ***uplinkPowerControlDedicated***  E-UTRAN configures *uplinkPowerControlDedicated-v1130* only if *uplinkPowerControlDedicated* (without suffix) is configured. |
| ***uplinkPowerControlDedicatedSCell***  E-UTRAN configures *uplinkPowerControlDedicatedSCell-v1130* only if *uplinkPowerControlDedicatedSCell-r10* is configured for this serving cell. |

| **Conditional presence** | **Explanation** |
| --- | --- |
| *AI-r8* | The field is optionally present, need ON, if *antennaInfoDedicated-r10* is absent. Otherwise the field is not present |
| *AI-r10* | The field is optionally present, need ON, if *antennaInfoDedicated* is absent. Otherwise the field is not present |
| *AperiodicSRS* | If *soundingRS-UL-ConfigDedicatedAperiodic-r10* is absent, the field is optional, Need ON. Otherwise the field is not present and the UE shall delete any existing value for this field. |
| *AperiodicSRSExt* | If *soundingRS-UL-ConfigDedicatedAperiodicUpPTsExt-r13* is absent, the field is optional, Need ON. Otherwise the field is not present and the UE shall delete any existing value for this field. |
| *AUL* | The field is optionally present, need ON, if *aul-config-r15* is present. Otherwise the field is not present. |
| *CommonUL* | The field is mandatory present if *ul-Configuration* of *RadioResourceConfigCommonSCell-r10* is present; otherwise it is optional, need ON. |
| *CQI-r8* | The field is optionally present, need ON, if *cqi-ReportConfig-r10* is absent. Otherwise the field is not present |
| *CQI-r10* | The field is optionally present, need ON, if *cqi-ReportConfig* is absent. Otherwise the field is not present |
| *Cross-Carrier-Config* | The field is optionally present, need ON, if *crossCarrierSchedulingConfig-r10* is absent. Otherwise the field is not present |
| *Cross-Carrier-ConfigUL* | The field is optionally present, need ON, if *crossCarrierSchedulingConfig-r10* and *crossCarrierSchedulingConfig-r13* are absent or *schedulingCellInfo* is set to 'own'. Otherwise the field is not present. |
| *PeriodicSRS* | If *soundingRS-UL-ConfigDedicated-r10* is absent, the field is optional, Need ON. Otherwise the field is not present and the UE shall delete any existing value for this field. |
| *PeriodicSRSPCell* | If *soundingRS-UL-ConfigDedicated* is absent, the field is optional, Need ON. Otherwise the field is not present and the UE shall delete any existing value for this field. |
| *PeriodicSRSExt* | If *soundingRS-UL-ConfigDedicatedUpPTsExt-r13* is absent, the field is optional, Need ON. Otherwise the field is not present and the UE shall delete any existing value for this field. |
| *PUCCH-Format4or5* | The field is mandatory present with *pucch-Format-v1370* set to *setup* if *pucch-ConfigDedicated-r13* is configured and *pucch-ConfigDedicated-r13* indicates PUCCH format 4 or PUCCH format 5; otherwise it is not present and the UE shall delete any existing value for this field. |
| *PUCCH-SCell1* | The field is optionally present, need OR, for SCell not configured with *pucch-configDedicated-r13*. Otherwise it is not present. |
| *PUSCH-SCell* | The field is optionally present, need ON, if *pusch-ConfigDedicatedSCell-r10 and pusch-ConfigDedicated-v1130* are absent. Otherwise the field is not present |
| *PUSCH-SCell1* | The field is optionally present, need ON, for SCell not configured with *pucch-configDedicated-r13*. Otherwise it is not present. |
| *SCellAdd* | The field is mandatory present if *cellIdentification* is present; otherwise it is optional, need ON. |
| *SRS-Trigger-TypeA* | The field is mandatory present if *typeA-SRS-TPC-PDCCH-Group-r14* is present. Otherwise the field is not present and the UE shall delete any existing value for this field. |

NOTE 1: During handover, the UE performs a MAC reset, which involves reverting to the default CQI/ SRS/ SR configuration in accordance with clause 5.3.13 and TS 36.321 [6], clauses 5.9 and 5.2. Hence, for these parts of the dedicated radio resource configuration, the default configuration (rather than the configuration used in the source PCell) is used as the basis for the delta signalling that is included in the message used to perform handover.

NOTE 2: Since delta signalling is not supported for the common SCell configuration, E-UTRAN can only add or release the uplink of an SCell by releasing and adding the concerned SCell.

– *UplinkPowerControl*

The IE *UplinkPowerControlCommon* and IE *UplinkPowerControlDedicated* are used to specify parameters for uplink power control in the system information and in the dedicated signalling, respectively.

***UplinkPowerControl* information elements**

-- ASN1START

UplinkPowerControlCommon ::= SEQUENCE {

p0-NominalPUSCH INTEGER (-126..24),

alpha Alpha-r12,

p0-NominalPUCCH INTEGER (-127..-96),

deltaFList-PUCCH DeltaFList-PUCCH,

deltaPreambleMsg3 INTEGER (-1..6)

}

UplinkPowerControlCommon-v1020 ::= SEQUENCE {

deltaF-PUCCH-Format3-r10 ENUMERATED {deltaF-1, deltaF0, deltaF1, deltaF2,

deltaF3, deltaF4, deltaF5, deltaF6},

deltaF-PUCCH-Format1bCS-r10 ENUMERATED {deltaF1, deltaF2, spare2, spare1}

}

UplinkPowerControlCommon-v1310 ::= SEQUENCE {

deltaF-PUCCH-Format4-r13 ENUMERATED {deltaF16, deltaF15, deltaF14,deltaF13, deltaF12,

deltaF11, deltaF10, spare1} OPTIONAL, -- Need OR

deltaF-PUCCH-Format5-13 ENUMERATED { deltaF13, deltaF12, deltaF11, deltaF10, deltaF9,

deltaF8, deltaF7, spare1} OPTIONAL -- Need OR

}

UplinkPowerControlCommon-v1530 ::= SEQUENCE {

deltaFList-SPUCCH-r15 DeltaFList-SPUCCH-r15

}

UplinkPowerControlCommonPSCell-r12 ::= SEQUENCE {

-- For uplink power control the additional/ missing fields are signalled (compared to SCell)

deltaF-PUCCH-Format3-r12 ENUMERATED {deltaF-1, deltaF0, deltaF1, deltaF2,

deltaF3, deltaF4, deltaF5, deltaF6},

deltaF-PUCCH-Format1bCS-r12 ENUMERATED {deltaF1, deltaF2, spare2, spare1},

p0-NominalPUCCH-r12 INTEGER (-127..-96),

deltaFList-PUCCH-r12 DeltaFList-PUCCH

}

UplinkPowerControlCommonSCell-r10 ::= SEQUENCE {

p0-NominalPUSCH-r10 INTEGER (-126..24),

alpha-r10 Alpha-r12

}

UplinkPowerControlCommonSCell-v1130 ::= SEQUENCE {

deltaPreambleMsg3-r11 INTEGER (-1..6)

}

UplinkPowerControlCommonSCell-v1310 ::= SEQUENCE {

-- For uplink power control the additional/ missing fields are signalled (compared to SCell)

p0-NominalPUCCH INTEGER (-127..-96),

deltaFList-PUCCH DeltaFList-PUCCH,

deltaF-PUCCH-Format3-r12 ENUMERATED {deltaF-1, deltaF0, deltaF1,

deltaF2, deltaF3, deltaF4, deltaF5,

deltaF6} OPTIONAL, -- Need OR

deltaF-PUCCH-Format1bCS-r12 ENUMERATED {deltaF1, deltaF2,

spare2, spare1} OPTIONAL, -- Need OR

deltaF-PUCCH-Format4-r13 ENUMERATED {deltaF16, deltaF15, deltaF14,

deltaF13, deltaF12, deltaF11, deltaF10,

spare1} OPTIONAL, -- Need OR

deltaF-PUCCH-Format5-13 ENUMERATED { deltaF13, deltaF12, deltaF11,

deltaF10, deltaF9, deltaF8, deltaF7,

spare1} OPTIONAL -- Need OR

}

UplinkPowerControlCommonPUSCH-LessCell-v1430 ::= SEQUENCE {

p0-Nominal-PeriodicSRS-r14 INTEGER (-126..24) OPTIONAL, -- Need OR

p0-Nominal-AperiodicSRS-r14 INTEGER (-126..24) OPTIONAL, -- Need OR

alpha-SRS-r14 Alpha-r12 OPTIONAL -- Need OR

}

UplinkPowerControlDedicated ::= SEQUENCE {

p0-UE-PUSCH INTEGER (-8..7),

deltaMCS-Enabled ENUMERATED {en0, en1},

accumulationEnabled BOOLEAN,

p0-UE-PUCCH INTEGER (-8..7),

pSRS-Offset INTEGER (0..15),

filterCoefficient FilterCoefficient DEFAULT fc4

}

UplinkPowerControlDedicated-v1020 ::= SEQUENCE {

deltaTxD-OffsetListPUCCH-r10 DeltaTxD-OffsetListPUCCH-r10 OPTIONAL, -- Need OR

pSRS-OffsetAp-r10 INTEGER (0..15) OPTIONAL -- Need OR

}

UplinkPowerControlDedicated-v1130 ::= SEQUENCE {

pSRS-Offset-v1130 INTEGER (16..31) OPTIONAL, -- Need OR

pSRS-OffsetAp-v1130 INTEGER (16..31) OPTIONAL, -- Need OR

deltaTxD-OffsetListPUCCH-v1130 DeltaTxD-OffsetListPUCCH-v1130 OPTIONAL -- Need OR

}

UplinkPowerControlDedicated-v1250 ::= SEQUENCE {

set2PowerControlParameter CHOICE {

release NULL,

setup SEQUENCE {

tpc-SubframeSet-r12 BIT STRING (SIZE(10)),

p0-NominalPUSCH-SubframeSet2-r12 INTEGER (-126..24),

alpha-SubframeSet2-r12 Alpha-r12,

p0-UE-PUSCH-SubframeSet2-r12 INTEGER (-8..7)

}

}

}

UplinkPowerControlDedicated-v1530 ::= SEQUENCE {

alpha-UE-r15 Alpha-r12 OPTIONAL, -- Need OR

p0-UE-PUSCH-r15 INTEGER (-16..15) OPTIONAL -- Need OR

}

UplinkPowerControlDedicatedSTTI-r15 ::= SEQUENCE {

accumulationEnabledSTTI-r15 BOOLEAN,

deltaTxD-OffsetListSPUCCH-r15 DeltaTxD-OffsetListSPUCCH-r15 OPTIONAL, -- Need OR

uplinkPower-CSIPayload BOOLEAN

}

UplinkPUSCH-LessPowerControlDedicated-v1430 ::= SEQUENCE {

p0-UE-PeriodicSRS-r14 INTEGER (-8..7) OPTIONAL, -- Need OR

p0-UE-AperiodicSRS-r14 INTEGER (-8..7) OPTIONAL, -- Need OR

accumulationEnabled-r14 BOOLEAN

}

UplinkPowerControlDedicatedSCell-r10 ::= SEQUENCE {

p0-UE-PUSCH-r10 INTEGER (-8..7),

deltaMCS-Enabled-r10 ENUMERATED {en0, en1},

accumulationEnabled-r10 BOOLEAN,

pSRS-Offset-r10 INTEGER (0..15),

pSRS-OffsetAp-r10 INTEGER (0..15) OPTIONAL, -- Need OR

filterCoefficient-r10 FilterCoefficient DEFAULT fc4,

pathlossReferenceLinking-r10 ENUMERATED {pCell, sCell}

}

UplinkPowerControlDedicatedSCell-v1310 ::= SEQUENCE {

--Release 8

p0-UE-PUCCH INTEGER (-8..7),

--Release 10

deltaTxD-OffsetListPUCCH-r10 DeltaTxD-OffsetListPUCCH-r10 OPTIONAL -- Need OR

}

Alpha-r12 ::= ENUMERATED {al0, al04, al05, al06, al07, al08, al09, al1}

DeltaFList-PUCCH ::= SEQUENCE {

deltaF-PUCCH-Format1 ENUMERATED {deltaF-2, deltaF0, deltaF2},

deltaF-PUCCH-Format1b ENUMERATED {deltaF1, deltaF3, deltaF5},

deltaF-PUCCH-Format2 ENUMERATED {deltaF-2, deltaF0, deltaF1, deltaF2},

deltaF-PUCCH-Format2a ENUMERATED {deltaF-2, deltaF0, deltaF2},

deltaF-PUCCH-Format2b ENUMERATED {deltaF-2, deltaF0, deltaF2}

}

DeltaFList-SPUCCH-r15 ::= CHOICE {

release NULL,

setup SEQUENCE {

deltaF-slotSPUCCH-Format1-r15 ENUMERATED {deltaF-1, deltaF0, deltaF1, deltaF2,

deltaF3, deltaF4, deltaF5, deltaF6} OPTIONAL, --Need OR

deltaF-slotSPUCCH-Format1a-r15 ENUMERATED {deltaF1, deltaF2, deltaF3, deltaF4,

deltaF5, deltaF6, deltaF7, deltaF8} OPTIONAL, --Need OR

deltaF-slotSPUCCH-Format1b-r15 ENUMERATED {deltaF3, deltaF4, deltaF5, deltaF6,

deltaF7, deltaF8, deltaF9, deltaF10} OPTIONAL,--Need OR

deltaF-slotSPUCCH-Format3-r15 ENUMERATED {deltaF4, deltaF5, deltaF6, deltaF7,

deltaF8, deltaF9, deltaF10, deltaF11} OPTIONAL,--Need OR

deltaF-slotSPUCCH-RM-Format4-r15 ENUMERATED {deltaF13, deltaF14, deltaF15, deltaF16,

deltaF17, deltaF18, deltaF19, deltaF20} OPTIONAL,

--Need OR

deltaF-slotSPUCCH-TBCC-Format4-r15 ENUMERATED {deltaF10, deltaF11, deltaF12, deltaF13,

deltaF14, deltaF15, deltaF16, deltaF17} OPTIONAL,

--Need OR

deltaF-subslotSPUCCH-Format1and1a-r15 ENUMERATED {deltaF5, deltaF6, deltaF7, deltaF8,

deltaF9, deltaF10, deltaF11, deltaF12} OPTIONAL,

--Need OR

deltaF-subslotSPUCCH-Format1b-r15 ENUMERATED {deltaF6, deltaF7, deltaF8, deltaF9,

deltaF10, deltaF11, deltaF12, deltaF13} OPTIONAL,

--Need OR

deltaF-subslotSPUCCH-RM-Format4-r15 ENUMERATED {deltaF15, deltaF16, deltaF17, deltaF18,

deltaF19, deltaF20, deltaF21, deltaF22} OPTIONAL,

--Need OR

deltaF-subslotSPUCCH-TBCC-Format4-r15 ENUMERATED {deltaF10, deltaF11, deltaF12, deltaF13,

deltaF14, deltaF15, deltaF16, deltaF17} OPTIONAL,

--Need OR

...

}

}

DeltaTxD-OffsetListPUCCH-r10 ::= SEQUENCE {

deltaTxD-OffsetPUCCH-Format1-r10 ENUMERATED {dB0, dB-2},

deltaTxD-OffsetPUCCH-Format1a1b-r10 ENUMERATED {dB0, dB-2},

deltaTxD-OffsetPUCCH-Format22a2b-r10 ENUMERATED {dB0, dB-2},

deltaTxD-OffsetPUCCH-Format3-r10 ENUMERATED {dB0, dB-2},

...

}

DeltaTxD-OffsetListPUCCH-v1130 ::= SEQUENCE {

deltaTxD-OffsetPUCCH-Format1bCS-r11 ENUMERATED {dB0, dB-1}

}

DeltaTxD-OffsetListSPUCCH-r15 ::= SEQUENCE {

deltaTxD-OffsetSPUCCH-Format1-r15 ENUMERATED {dB0, dB-2},

deltaTxD-OffsetSPUCCH-Format1a-r15 ENUMERATED {dB0, dB-2},

deltaTxD-OffsetSPUCCH-Format1b-r15 ENUMERATED {dB0, dB-2},

deltaTxD-OffsetSPUCCH-Format3-r15 ENUMERATED {dB0, dB-2},

...

}

-- ASN1STOP

| ***UplinkPowerControl* field descriptions** |
| --- |
| ***accumulationEnabled, accumulationEnabledSTTI***  Parameter: Accumulation-enabled, see TS 36.213 [23], clauses 5.1.1.1 and 5.1.3.1. TRUE corresponds to "enabled" whereas FALSE corresponds to "disabled". |
| ***alpha***  Parameter: *α* See TS 36.213 [23], clause 5.1.1.1, where al0 corresponds to 0, al04 corresponds to value 0.4, al05 to 0.5, al06 to 0.6, al07 to 0.7, al08 to 0.8, al09 to 0.9 and al1 corresponds to 1. This field applies for uplink power control subframe set 1 if uplink power control subframe sets are configured by *tpc-SubframeSet*. |
| ***alpha-SRS***  Parameter: *αSRS*. See TS 36.213 [23], clause 5.1.3.1, where al0 corresponds to 0, al04 corresponds to value 0.4, al05 to 0.5, al06 to 0.6, al07 to 0.7, al08 to 0.8, al09 to 0.9 and al1 corresponds to 1. This field applies for SRS power control on a PUSCH-less SCell. |
| ***alpha-SubframeSet2***  Parameter: *α*. See TS 36.213 [23], clause 5.1.1.1, where al0 corresponds to 0, al04 corresponds to value 0.4, al05 to 0.5, al06 to 0.6, al07 to 0.7, al08 to 0.8, al09 to 0.9 and al1 corresponds to 1. This field applies for uplink power control subframe set 2 if uplink power control subframe sets are configured by *tpc-SubframeSet*. |
| ***alpha-UE***  Parameter: *αUE* See TS 36.213 [23], clause 5.1.1.1, where al0 corresponds to 0, al04 corresponds to value 0.4, al05 to 0.5, al06 to 0.6, al07 to 0.7, al08 to 0.8, al09 to 0.9 and al1 corresponds to 1. |
| ***deltaF-PUCCH-FormatX***  Parameter:  for the PUCCH formats 1, 1b, 2, 2a, 2b, 3, 4, 5 and 1b with channel selection. See TS 36.213 [23], clause 5.1.2, where deltaF-2 corresponds to -2 dB, deltaF0 corresponds to 0 dB and so on. |
| ***deltaF-PUCCH-FormatX, deltaF-slotSPUCCH-FormatX, deltaF-subslotSPUCCH-FormatX***  Parameter:  for the SPUCCH formats 1, 1a, 1b, 3 and 4. See TS 36.213 [23], clause 5.1.2 where deltaF-2 corresponds to -2 dB, deltaF0 corresponds to 0 dB and so on. In case both an A and a B configuration exist, configuration A is used in case SPUCCH carries ≤ 22 HARQ-ACK bits, and B otherwise. |
| ***deltaMCS-Enabled***  Parameter: *Ks* See TS 36.213 [23], clause 5.1.1.1. en0 corresponds to value 0 corresponding to state "disabled". en1 corresponds to value 1.25 corresponding to "enabled". |
| ***deltaPreambleMsg3***  Parameter:  *see* TS 36.213 [23], clause 5.1.1.1. Actual value = field value \* 2 [dB]. |
| ***deltaTxD-OffsetPUCCH-FormatX***  Parameter:  for the PUCCH formats 1, 1a/1b, 1b with channel selection, 2/2a/2b and 3 when two antenna ports are configured for PUCCH transmission. See TS 36.213 [23], clause 5.1.2.1, where dB0 corresponds to 0 dB, dB-1 corresponds to -1 dB, dB-2 corresponds to -2 dB. EUTRAN configures the field *deltaTxD-OffsetPUCCH-Format1bCS-r11* for the PCell and/or the PSCell only. |
| ***deltaTxD-OffsetSPUCCH-FormatX***  Parameter:  for the SPUCCH formats 1, 1a/1b, 1b with channel selection and 3 when two antenna ports are configured for SPUCCH transmission. See TS 36.213 [23], clause 5.1.2.1 where dB0 corresponds to 0 dB, dB-1 corresponds to -1 dB, dB-2 corresponds to -2 dB. |
| ***filterCoefficient***  Specifies the filtering coefficient for RSRP measurements used to calculate path loss, as specified in TS 36.213 [23], clause 5.1.1.1. The same filtering mechanism applies as for *quantityConfig* described in 5.5.3.2. |
| ***p0-Nominal-AperiodicSRS***  Parameter:  where *m*=1. See TS 36.213 [23], clause 5.1.3.1, unit dBm. |
| ***p0-Nominal-PeriodicSRS***  Parameter:  where *m*=0. See TS 36.213 [23], clause5.1.3.1, unit dBm. |
| ***p0-NominalPUCCH***  Parameter:  See TS 36.213 [23], clause 5.1.2.1, unit dBm. |
| ***p0-NominalPUSCH***  Parameter:  See TS 36.213 [23], clause 5.1.1.1, unit dBm. This field is applicable for non-persistent scheduling only. This field applies for uplink power control subframe set 1 if uplink power control subframe sets are configured by *tpc-SubframeSet*. |
| ***p0-NominalPUSCH-SubframeSet2***  Parameter: . See TS 36.213 [23], clause 5.1.1.1, unit dBm. This field is applicable for non-persistent scheduling only. This field applies for uplink power control subframe set 2 if uplink power control subframe sets are configured by *tpc-SubframeSet*. |
| ***p0-UE-AperiodicSRS***  Parameter:  where *m*=1. See TS 36.213 [23], clause 5.1.3.1, unit dB. |
| ***p0-UE-PeriodicSRS***  Parameter:  where *m*=0. See TS 36.213 [23], clause 5.1.3.1, unit dB. |
| ***p0-UE-PUCCH***  Parameter:  See TS 36.213 [23], clause 5.1.2.1. Unit dB |
| ***p0-UE-PUSCH***  Parameter:  See TS 36.213 [23], clause 5.1.1.1, unit dB. This field is applicable for non-persistent scheduling, only. This field applies for uplink power control subframe set 1 if uplink power control subframe sets are configured by *tpc-SubframeSet*. If *p0-UE-PUSCH-r15* is included, the UE ignores *p0-UE-PUSCH* (i.e., without suffix). |
| ***p0-UE-PUSCH-SubframeSet2***  Parameter:  See TS 36.213 [23], clause 5.1.1.1, unit dB. This field is applicable for non-persistent scheduling, only. This field applies for uplink power control subframe set 2 if uplink power control subframe sets are configured by *tpc-SubframeSet*. |
| ***pathlossReferenceLinking***  Indicates whether the UE shall apply as pathloss reference either the downlink of the PCell or of the SCell that corresponds with this uplink (i.e. according to the *cellIdentification* within the field *sCellToAddMod*). For SCells part of an STAG E-UTRAN sets the value to sCell. |
| ***pSRS-Offset, pSRS-OffsetAp***  Parameter: *PSRS\_OFFSET* for periodic and aperiodic sounding reference signal transmission repectively. See TS 36.213 [23], clause 5.1.3.1. For *Ks*=1.25, the actual parameter value is *pSRS-Offset* value – 3. For *Ks*=0, the actual parameter value is -10.5 + 1.5\**pSRS-Offset* value.  If *pSRS-Offset-v1130* is included, the UE ignores *pSRS-Offset* (i.e., without suffix). Likewise, if *pSRS-OffsetAp-v1130* is included, the UE ignores *pSRS-OffsetAp-r10*. For *Ks*=0, E-UTRAN does not set values larger than 26. |
| ***tpc-SubframeSet***  Indicates the uplink subframes (including UpPTS in special subframes) of the uplink power control subframe sets. Value 0 means the subframe belongs to uplink power control subframe set 1, and value 1 means the subframe belongs to uplink power control subframe set 2. |
| ***uplinkPower-CSIPayload***  *TRUE* indicates that the UE shall derive BPRE based on the actual value of O\_CQI for slot/subslot-PUSCH, whereas *FALSE* indicates that the largest value of O\_CQI across all RI values shall be used for the derivation of BPRE for slot/subslot-PUSCH. |

6.3.5 Measurement information elements

*– MeasResultCellSFTD*

The IE *MeasResultCellSFTD* consists of SFN and radio frame boundary difference between the PCell and an NR cell as specified in TS 38.215 [89] and TS 38.133 [84].

***MeasResultCellSFTD* information element**

-- ASN1START

MeasResultCellListSFTD-r15 ::= SEQUENCE (SIZE (1..maxCellSFTD)) OF MeasResultCellSFTD-r15

MeasResultCellSFTD-r15 ::= SEQUENCE {

physCellId-r15 PhysCellIdNR-r15,

sfn-OffsetResult-r15 INTEGER (0..1023),

frameBoundaryOffsetResult-r15 INTEGER (-30720..30719),

rsrpResult-r15 RSRP-RangeNR-r15 OPTIONAL

}

-- ASN1STOP

| ***MeasResultCellSFTD* field descriptions** |
| --- |
| ***physCellId***  Indicates the physical layer identity (PCI) of an NR cell. | |
| ***sfn-OffsetResult***  Indicates the SFN difference between the PCell and the NR cell as an integer value according to TS 38.215 [89]. |
| ***frameBoundaryOffsetResult***  Indicates the frame boundary difference between the PCell and the NR cell as an integer value according to TS 38.215 [89]. |
| ***rsrpResult***  Measured RSRP result of an NR cell. |