**3GPP TSG-RAN1 Meeting #110bis-eR1-221xxxx**

**eMeeting, October 10th-19th, 2022**

|  |
| --- |
|  |
| **CHANGE REQUEST** |
|  |
|  | **38.213** | **CR** | **---** | **rev** |  | **Current version:** | **17.3.0** |  |
|  |
| *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:***  | CR on PHR with unified TCI in TS 38.213 |
|  |  |
| ***Source to WG:*** | Moderator(ZTE), Lenovo, Samsung |
| ***Source to TSG:*** | RAN1 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** | 2022-10-17 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)Rel-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)**Rel-16 (Release 16)Rel-17 (Release 17)* |
|  |  |
| ***Reason for change:*** | In RAN1#109-e, an agreement was made on power control parameters (i.e., PL-RS, P0, alpha, closed loop index) for calculating Type 1 power headroom based on a reference PUSCH. However, the agreement is not reflected in the specification. This CR proposes to cature the agreement in 38.213.

|  |
| --- |
| **Agreement**To calculate the Type 1 power headroom based on a reference PUSCH, the UE uses the PUSCH power control parameters (i.e., PL-RS, P0, alpha, closed loop index) associated with the indicated joint/UL-TCI state. |

 |
|  |  |
| ***Summary of change:*** | Capture the texts related to the agreement on power control parameters for calculating the Type 1 power headroom based on a reference PUSCH. |
|  |  |
| ***Consequences if not approved:*** | How to determine the power control parameters for calculating the Type 1 power headroom based on a reference PUSCH is not clear if a UE is provided DLorJoint-TCIState or UL-TCIstate. |
|  |  |
| ***Clauses affected:*** | 7.7.1 |
|  |  |
|  | **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:*** |  |

#  7.7.1 Type 1 PH report

<Unchanged parts are omitted>

If the UE determines that a Type 1 power headroom report for an activated serving cell is based on a reference PUSCH transmission then, for PUSCH transmission occasion $i$ on active UL BWP $b$ of carrier $f$ of serving cell $c$, the UE computes the Type 1 power headroom report as

  [dB]

where $\tilde{P}\_{CMAX,f,c}(i)$ is computed assuming MPR=0 dB, A-MPR=0 dB, P-MPR=0 dB. TC = 0 dB. MPR, A-MPR, P-MPR and TC are defined in [8-1, TS 38.101-1], [8-2, TS 38.101-2] and [8-3, TS 38.101-3]. The remaining parameters are defined in clause 7.1.1 and, if *ul-powerControl* is not provided, $P\_{O\\_PUSCH,b,f,c}(j)$ and $α\_{b,f,c}\left(j\right)$ are obtained using $P\_{O\\_NOMINAL,PUSCH,f,c}\left(0\right)$ and *p0-PUSCH-AlphaSetId* *=* 0, $PL\_{b,f,c}(q\_{d})$ is obtained using *pusch-PathlossReferenceRS-Id =* 0, and $l=0$. If *ul-powerControl* is provided, $P\_{O\\_PUSCH,b,f,c}(j),$ $α\_{b,f,c}\left(j\right)$ and $l$ are obtained by *p0-Alpha-CLID-PUSCH-Set* associated with the indicated *TCI-State* or *TCI-UL-State*, $PL\_{b,f,c}(q\_{d})$ is obtained by PL-RS associated with the indicated *TCI-State* or *TCI-UL-State*.

<Unchanged parts are omitted>