Companies are to share their inputs on the excel spreadsheet in /tsg\_ran/WG1\_RL1/TSGR1\_106-e/Inbox/drafts/8.1.1/RRC/ herein.

## Inputs on initial version

Please share your inputs, if any, in the following table

Table 1 Inputs: Initial version

|  |  |
| --- | --- |
| **Company** | **Input** |
| Apple | **For QCL-Info\_r17, we suggest we add some clarification for SRI*** **SRS ResourceId (SRS for beam management, only applicable for UL TCI)**

**We are not sure whether the following PC parameters are needed, but it seems we can reuse legacy prameters?*** **p0\_Alpha\_CLIdPUSCHSet**
* **p0\_Alpha\_CLIdPUCCHSet**
* **p0\_Alpha\_CLIdSRSSet**
* **p0\_Alpha\_CLIdSetId**

**We are not sure whether we need to introduce the following parameters. It seems legacy CSI report framework already cover the following aspects*** **InterCellBeamMetrics**
* **InterCellMeasurementRS**
* **InterCellReportType**

**Regarding the change of CORESET TCI list, we think some discussion is needed. Currently unified TCI is applied for multiple channels, and it should be selected from the TCI state pool in PDSCH-Config instead of the pool in CORESET*** **ControlResourceSet**

**Regarding the following parameters, we are not sure whether we need to create a new structure for Rel-17 or not (It seems this is a RAN2 problem?). But what we need seems to be numberOfN only. In addition, we think it is not necessary to introduce numberOfM.*** **mpe-Reporting-FR2-r17**
* **MPE-Config-FR2-r17**
* **mpe-ProhibitTimer-r17**
* **mpe-Threshold-r17**
* **numberOfN**
* **numberOfM**
 |
| OPPO | In “TCI-State\_r17”: suggest to add one parameter to indicate the ul tx filer, instead of mixing the ul tx spatial filter in QCL-TypeD. Because apparently, in UL TCI state, there is no QCL information:* ul-Tx-SpatialFilter: to indicate UL Tx spatial filter for UL

In “QCL-Info\_r17”: sugges to clarify that SRS is used for UL Tx spatial filter only, similar to comments by Apple.The following 3 RRC parameters for inter-cell beam measurement are not needed because in current CSI report framework, we only need to introduce SSB asscoaited other PCI in CSI configuraiton:* InterCellBeamMetrics
* InterCellMeasurementRS
* InterCellReportType

About the “ControlResourceSet”: our understanding is we do not need update it. The current RRC parameter tci-StatesPDCCH-ToAddlist is for per-CORESET-MAC CE-based beam indication method in rel15/16. In rel17 unfied TCI, we do not need this RRC any more.Regarding the MPE issue:* The following RRC parameters are not needed because the current RRC parameter can be reused:
	+ mpe-Reporting-FR2-r17
	+ MPE-Config-FR2-r17
	+ mpe-ProhibitTimer-r17
	+ mpe-Threshold-r17
* The RRC parameter “numberOfM” is not needed, at least for current moment.
 |
| MediaTek | Regarding “tci-StateType”, not sure why this parameter is needed? If it is used to differentiate contents of the “referenceSignal” in “QCL-Info\_r17”, it seems we can directly introduce two papameters (e.g., DL\_Joint\_TCI\_state and UL\_TCI\_state) under the “referenceSignal” of “QCL-Info\_r17”, and remove “tci-StateType”.Regarding the QCL types and source RS types supported by “TCI-State\_r17”, according the following agreement, all types of DL RSs can be configured as a target DL RS of TCI-State\_r17, even they don't share the same the same indicated Rel-17 TCI state(s) as UE-dedicated reception on PDSCH and for UE-dedicated reception on all or subset of CORESETs in a CC. Therefore, we see all possible QCL types and source RS types still need to be supported in by “TCI-State\_r17”. For example, for a TRS, TCI-State\_r17 needs to provide an SSB with as source RS with QCL-TypeC. The QCL restrictions or usages can be captured in the corresponding notes.**Agreement**The following working assumption is confirmed with revision in RED.On Rel.17 unified TCI framework, for any DL RS that does not share the same indicated Rel-17 TCI state(s) as UE-dedicated reception on PDSCH and for UE-dedicated reception on all or subset of CORESETs in a CC, but can be configured as a target DL RS of a Rel-17 DL TCI (hence the Rel-17 DL TCI state pool), Rel-17 mechanism(s) which reuse the Rel-15/16 TCI state update signaling/configuration design(s) are used to update/configure such DL RS(s) with Rel-17 TCI state(s).* Applies for both intra-cell and inter-cell beam indication

In summary, we suggest the followings:

|  |  |
| --- | --- |
| TCI-State\_r17 | Release 17 TCI state includes the following fields:**tci-StateId\_r17****~~tci-StateType~~****qcl-Type1** of type QCL-Info\_r17 for QCL Type D for DL or UL Tx spatial filter for UL**qcl-Type2** of type QCL-Info\_r17 for QCL Type A ~~[~~or QCL-TypeB~~]~~ or QCL-TypeC for DL |
| tci-StateId\_r17 | Release 17 TCI state ID |
| ~~tci-StateType~~ | ~~Type of TCI state: DL only, or UL only, or Joint (note: DL only+UL only is only a matter of indication, not type)~~ |
| QCL-Info\_r17 | Release 17 QCL info for the unified TCI framework. Includes the following fields**cell****bwp-Id****referenceSignal** choice of { **DL\_Joint\_TCI\_state** { NZP-CSI-RS-ResourceId ~~(CSI-RS for beam management or CSI-RS for tracking)~~ SSB-Index } **UL\_TCI\_state** { NZP-CSI-RS-ResourceId ~~(CSI-RS for beam management or CSI-RS for tracking)~~ SSB-Index SRS ResourceId ~~(SRS for beam management)~~}**qcl-Type** ENUMERATED{typeA, ~~[~~typeB~~]~~, typeC, typeD}[**pathloss RS** - if included in TCI state - for UL TCI state or Joint TCI state choice ofSSB-IndexNZP-CSI-RS (periodic CSI-RS)]Note for DL\_Joint\_TCI\_state: For a TCI-State\_r17 indicated at least for UE-dedicated reception on PDSCH and for UE-dedicated reception on all or subset of CORESETs in a CC, only CSI-RS for beam management or CSI-RS for tracking can be configured as source with QCL-TypeD.Note for UL\_TCI\_state: This can be configured only for UL TCI for determining UL TX spatial filter, and only CSI-RS for beam management, CSI-RS for tracking, SRS for beam management, or SSB can be configured as the source RS**.** |

 Regarding “p0\_Alpha\_CLIdPUCCHSet”, it seems we don't need alpha for PUCCH?Regarding the change in “ControlResourceSet”, share same view with Apple and OPPO. |
| NTT Docomo | Regarding “tci-StateType”, we agree with MediaTek’s modification.Regarding to TCI-State\_r17, based on TS38.214, the current spec. implies qcl-Type2 is QCL type D, because it says (if configured). *The quasi co-location relationship is configured by the higher layer parameter qcl-Type1 for the first DL RS, and qcl-Type2 for the second DL RS (if configured).*Hence, the following texts are not correct. Also, there is no need to mention which qcl-Type is QCL-Type D in TS38.331, and hence we suggest to remove the following text (same as Rel.15).qcl-Type1 of type QCL-Info\_r17 ~~for QCL Type D for DL or UL Tx spatial filter for UL~~qcl-Type2 of type QCL-Info\_r17 ~~for QCL Type A [or QCL-TypeB] for DL~~Regarding the QCL types and source RS types, we agree with MediaTek that QCL type C and B should be added.Regarding the MPE issue* share same view with Apple and OPPO that “numberOfM” is not needed

even if numberOfM is remained this note need to be revised “Note: TBD whether this field may be removed, e.g. when M=1 ~~N=M~~. Because according to the working assumption, M is the number of SSBRI/CRI for each P-MPR value, and N is the number of P-MPR value. |
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## Inputs on version 01

Please share your inputs, if any, in the following table

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