In RAN1#103-e meeting, further agreements were made as below:

**Agreement**

For QCL /TCI related enhancement for enhanced inter-cell multi-TRP operations, support RRC configuration of non-serving cell information

* Non-serving cell information can be associated with the TCI state and/or QCL -info at least when “neighbor cell SSB” is used as “QCL referenceSignal ”

**Agreement**

The information provided by SSB-Configuration-r16/ssb-InfoNcell-r16 and/or MeasObject can be starting point for providing non-serving cell information

In RAN1#104-e meeting, further agreements were made as below:

**Agreement**

Non-serving cell information at least includes non-serving cell PCI to support inter-cell multi-DCI multi-TRP operation

**Conclusion**

Reuse Rel-15/16 QCL rule between the source and target RS/channel for non-serving cell RS/channel.

**Agreement**

At least following non-serving cell SSB information are needed in inter-cell MTRP operation

* SSB time domain position
* SSB transmission periodicity
* SSB transmission power

**Agreement**

Agree on scheme1

* Scheme1: PDSCH/PDCCH from non-serving cell (PCI) associated with TCI state and/or QCL-info is rate matched around non-serving cell SSB with the same PCI

**Conclusion**

The UE may assume received DL transmission from multiple TRP within a CP in FR1 and FR2.

* Note: This does not imply that RAN1 intends to ask RAN4 to tighten network synchronization requirements.

In RAN1#104b-e meeting, further agreements were made as below:

**Agreement**

* For intercell MTRP operation, 1 additional PCI different from the serving cell PCI is supported per CC
  + The additional PCI is the one associated with one or more TCI states that are activated for PDSCH/PDCCH, per CC.
  + Applicable at least for non-cross carrier QCL indication
* RAN1 to decide on the maximum number of PCIs different from the serving cell PCI per CC and/or across all CCs that can be RRC-configured for multi-DCI based inter-cell multi-TRP
* Above should be specified by reusing R15 QCL rules as concluded in RAN1#104-e

**Conclusion**

Configuration of CSI-RS for mobility as QCL source for intercell MTRP operation is not supported from Rel-17 specifcation point of view

In RAN1#106-e meeting, further agreements were made as below:

**Agreement**

Introduce a new RRC indicator/signalling (e.g., re-index the non-serving cell) to indicate the non-serving cell information that a TCI state/QCL information is associated with, where the new indicator/signaling is not the exact PCI value

* Detailed signalling design is up to RAN2

**Agreement**

Rel. 17 inter-cell MTRP, the maximum number of additional RRC -configured PCIs per CC is denoted X and can be reported as a UE capability

* For the report value of X, multiple candidate values including 1 is supported.
* The serving cell PCI is always associated with active TCI states, only 1 additional PCI can be associated with the active TCI States

**Agreement**

* For inter-cell mTRP , one PCI associated with one or more of activated TCI states for PDSCH/PDCCH is associated with one *CORESETPoolIndex* , another PCI associated with one or more of activated TCI states for PDSCH/PDCCH is associated with another *CORESETPoolIndex*

**Agreement**

For a CSI-RS QCLed with a neighboring cell SSB, the CSI-RS EPRE is calculated based on *powerControlOffsetSS* and the SSB transmission power in the neighboring cell information.

**Agreement**

LS to RAN2 on multi-TRP inter-cell is endorsed in R1-2108633.

In RAN1#106b-e meeting, further agreements were made as below:

**Agreement**

Support two independent X values (X1, X2) are reported as a UE capability for two different assumptions on additional SSB time domain position and periodicity with respect to serving cell SSB.

* X1 (Case 1)= The maximum number of configured additional PCIs when each configuration of SSB time domain positions and periodicity of the additional PCIs is the same as SSB time domain positions and periodicity of the serving cell PCI
* X2 (Case 2)= The maximum number of configured additional PCIs when the configurations of SSB time domain positions and periodicity of the additional PCIs is not according to Case 1
* Note: By definition, Case 1 and Case 2 cannot be enabled simultaneously
* Supported values for X1 and X2 include at least 0,1,2,3 and 7. FFS on other values
* This UE capability has FR1 and FR2 differentiation

**Updated Proposal 6:**

* Center frequency, SCS, SFN offset are assumed to be the same for SSBs from the serving cell and the configured SSBs with PCI different from the serving cell for inter-cell multi TRP operation.
* the information related to “SSB time domain position” for SSB with PCI different from the serving cell consists of ssb-PositionsInBurst

In RAN1#107-e meeting, further agreements were made as below:

**Agreement**

* UE is not required to monitor a Type0/0A/1[/2] CSS in a CORESET when the active TCI state is associated with a PCI different from serving cell PCI.

In RAN1#108-e meeting, further agreements were made as below:

**Agreement**

UE is not required to monitor a Type2 CSS in a CORESET when the active TCI state is associated with a PCI different from serving cell PCI.

**Agreement**

The following TP for TS 38.214 is endorsed for the editor’s CR.

5.1.5     Antenna ports quasi co-location

-----------------------------Unchanged part omitted--------------------------

For a CSI-RS resource in an *NZP-CSI-RS-ResourceSet* configured with higher layer parameter *repetition,* the UE shall expect that a TCI-State indicates one of the following quasi co-location type(s):

* ‘typeA’ with a CSI-RS resource in a *NZP-CSI-RS-ResourceSet* configured with higher layer parameter *trs-Info* and, when applicable, ‘typeD’ with the same CSI-RS resource, or
* ‘typeA’ with a CSI-RS resource in a *NZP-CSI-RS-ResourceSet* configured with higher layer parameter *trs-Info* and, when applicable, ‘typeD’ with a CSI-RS resource in a *NZP-CSI-RS-ResourceSet* configured with higher layer parameter *repetition*, or
* ‘typeC’ with an SS/PBCH block and, when applicable, ‘typeD’ with the same SS/PBCH block, the reference RS may additionally be an SS/PBCH block having a PCI different from the PCI of the serving cell. UE can assume center frequency, SCS, SFN offset are the same for SS/PBCH block from the serving cell and SS/PBCH block having a PCI different from the serving cell.

------------------------------------------End of Text Proposal#1 for TS 38.214--------------------------------------

**Agreement**

Following revisions on RRC are agreed. Include as part of LS to RAN2

* [The value *maxNrofAddionalPCI-r17* is 7.](#_Toc95761913)
* [Change the field name *ssb-ToMeasure* to *ssb-PositionInBurst* in *SSB-MTCAdditionalPCI-r17*.](#_Toc95761914)
* Add the SSB transmission power to *SSB-MTCAdditionalPCI-r17*

**Agreement**

The LS to RAN2 on RRC parameters update for IE *SSB-MTCAdditionalPCI-r17* is endorsed in R1-2202725.

**Agreement**

From RRC signaling perspective, the number of configured additional PCIs can be {1, 2, 3, 4, 5, 6, 7}

**Agreement**

For inter-cell mTRP, UE does not transmit PUCCH/PUSCH/PRACH in a slot or SRS in the symbols if in time domain the PUCCH/PUSCH/PRACH/SRS overlaps with an SSB of a serving cell PCI or an SSB associated with the active additional PCI.