**Agreement List 9.2.4 (Rel-19 Asymmetric DL sTRP/UL mTRP)**

# ~~Crossed out in red~~ = superseded by later agreements

# Issue 1: PL offset

[116] **Agreement**

For the asymmetric DL sTRP/UL mTRP deployment scenarios, support to associate a UL TCI state with a PL offset:

* When a UL TCI state associated with a PL offset is applied for the PUSCH/PUCCH/SRS transmission, the UE shall calculate the Tx power of the PUSCH/PUCCH/SRS based on the DL PL RS and PL offset associated with this UL TCI state.
	+ Reuse the legacy uplink power control formulation by replacing legacy PL with UL PL which is derived from the DL PL RS and the PL offset.
	+ ~~FFS: The UE can update UL PL in a way that new UL PL = current UL PL + an update delta indicated by the NW.~~
* Note: it does not intend to increase the number of maintained PLs per cell.
* ~~FFS: whether to support associating joint TCI state (if supported) with a PL offset.~~

Further study whether/how to apply a PL offset on PDCCH-order PRACH transmission too.

* ~~FFS: how to determine the Tx beam of PRACH towards UL TRP~~
* Note: this does not imply to support 2 TA for single-DCI based system.

[116] **Agreement**

~~Down-select one from the following alternatives:~~

* ~~Alt1: Use only RRC to update the PL offset associated with the UL TCI state~~
* ~~Alt2: In addition to RRC, MAC-CE can be used to update the PL offset associated with the UL TCI state~~
	+ ~~FFS: Details on MAC CE~~

[116] **Agreement**

For the asymmetric DL sTRP/UL mTRP deployment scenarios, separate DL/UL TCI state mode of Rel-17/18 unified TCI framework can be configured for both FR1 and FR2.

* Joint TCI state mode can be configured at least for FR1

[116bis] **Agreement**

For FR1, a joint TCI state can be associated with a PL offset.

* When a joint TCI state associated with a PL offset is applied for the PUSCH/PUCCH/SRS transmission, the UE shall calculate the Tx power of the PUSCH/PUCCH/SRS based on the DL PL RS and PL offset associated with this joint TCI state.
	+ Reuse the legacy uplink power control formulation by replacing legacy PL with a PL which is derived from the DL PL RS and the PL offset.
	+ ~~FFS: The UE can update UL PL in a way that new UL PL = current UL PL + an update delta indicated by the NW.~~

[116bis] **Agreement**

Support applying PL offset on PDCCH-order PRACH towards a UL TRP in FR1.

* Note: The DL reference timing determination for PDCCH-order PRACH transmission to an UL TRP is still based on the DL RS defined in current RAN4 specification
* Above is subject to a separate UE capability signaling

[116bis] **Agreement**

~~Consider and down-select one from the following alts for indicating a PL offset for PDCCH-order PRACH transmission at least for FR1.~~

* ~~Alt1: RRC configures multiple PL offset values in PRACH-Config and PDCCH-order DCI indicates one of them through one DCI field.~~
* ~~Alt2: PDCCH order DCI indicates one PL offset value~~
* ~~Alt3: The PL offset associated with one of the indicated joint/UL TCI state for UL TRP in unified TCI framework is applied on the PDCCH-order PRACH transmission~~
* ~~Alt4: The PDCCH order DCI indicates one TCI state associated with a PL offset and the associated PL offset is applied on the PRACH transmission.~~
* ~~Alt5: RRC configures one PL offset value for PRACH and the PDCCH order DCI indicates whether this PL offset value is applied on PRACH transmission or not.~~

~~Note: Other alternatives are not precluded~~

[116bis] **Agreement**

~~For the association between PL offset and joint/UL TCI state, consider and down-select one from the following Alts:~~

* ~~Alt1a: One PL offset value is configured in a joint or UL TCI state by RRC only~~
* ~~Alt1b: One PL offset value is configured in a joint or UL TCI state by RRC. A MAC CE can update the PL offset value(s) for joint or UL TCI state(s).~~
* ~~Alt2a: A list of PL offset configurations is configured by RRC in BWP/CC and each PL offset configuration contains one PL offset value. One new RRC parameter is introduced in a joint or UL TCI state to indicate one of the configured PL offset configurations.~~
* ~~Alt2b: A list of PL offset configurations is configured by RRC in BWP/CC and each PL offset configuration contains one PL offset value. One new RRC parameter is introduced in a joint or UL TCI state to indicate one of the configured PL offset configurations. A MAC CE can update the association between a joint or UL TCI state and PL offset configuration~~
* ~~Alt3: A list of PL offset configurations is configured by RRC in BWP/CC and each PL offset configuration contains one PL offset value. A MAC CE can activate/indicate one PL offset configuration for each activated joint or UL TCI state. In each joint or UL TCI state, the initial PL offset value is 0dB.~~
* ~~Alt4: A list of PL offset values is provided in a joint or UL TCI state by RRC. Each PL offset value is applied to a corresponding measured PL range.~~

~~Other alternatives are not precluded.~~

[117] **Agreement**

~~For indicating a PL offset for PDCCH-order PRACH transmission at least for FR1, further study and down-select one from the Alt1 and Alt3 by RAN1#118 meeting:~~

* ~~Alt1: RRC configures multiple PL offset values [in PRACH-Config] and PDCCH-order DCI indicates one of them through one DCI field~~
* ~~Alt3: The PL offset associated with one of the indicated joint/UL TCI state for UL TRP in unified TCI framework is applied on the PDCCH-order PRACH transmission~~
* ~~FFS: the details of DCI field design.~~

[117] **Agreement**

For the association between PL offset and joint/UL TCI state, support the following

* Alt1b: One PL offset value is configured in a joint or UL TCI state by RRC, where different PL offset values can be configured to different joint or UL TCI states. A MAC CE can update the PL offset value(s) for joint or UL TCI state(s).

[117] **Conclusion**

There is no consensus on the following proposal:

**Proposal 1.6:** Support to update a UL PL for a joint/UL TCI state as follows:

* When this joint/UL TCI state is activated and it is not in the current active TCI state list, a UL PL is calculated as: UL PL = PL estimated from DL PL RS – the value of PL offset.
* When this joint/UL TCI state is activated and it is in the current active TCI state list, the UE updates the UL PL as: new UL PL = current UL PL + the updated delta indicated by the NW.

[117] **Agreement**

For the asymmetric DL sTRP/UL mTRP scenarios, study and decide the value range and candidate values of PL offset value

[117] **Agreement**

~~For the asymmetric DL sTRP/UL mTRP scenarios, study whether/how to consider PL offset in PHR calculation, including Type 1 PHR based on actual PUSCH transmission, Type 1 PHR based on reference PUSCH, Type 3 PHR based on actual SRS and Type 3 PHR based on reference SRS~~

[117] **Conclusion**

For the asymmetric DL sTRP/UL mTRP deployment scenario, reuse the rel-17 unified TCI/ICBM and rel-18 unified TCI framework:

* When rel-17 unified TCI/ICBM is configured:
	+ For FR1: one joint TCI state or {one DL TCI state + one UL TCI state} can be applied.
	+ For FR2: {one DL TCI state + one UL TCI state} can be applied.
* When rel-18 unified TCI is configured:
	+ For FR1: up to two joint TCI states or {one DL TCI state + up to two UL TCI state} can be applied.
	+ For FR2: {one DL TCI state + up to two UL TCI states} can be applied.

[118]**Agreement**

For indicating a PL offset for PDCCH-order PRACH transmission at least for FR1, support **Alt3**:

* Alt3: The PL offset associated with one of the indicated joint/UL TCI state for UL TRP in unified TCI framework is applied on the PDCCH-order PRACH transmission
	+ FFS the detailed design of DCI format: e.g., how to indicate one of the indicated joint/UL TCI states or whether to apply the PL offset in the indicated TCI state or not.

[118]**Agreement**

For the asymmetric DL sTRP/UL mTRP scenarios, the value range of PL offset includes at least [-10, 60] dB

* ~~FFS: Extending the range to lower than -10dB~~
* Step size is 4dB

[118]**Agreement**

For the asymmetric DL sTRP/UL mTRP scenarios, support to include PL offset in the calculation of Type 1 PHR based on actual PUSCH transmission and Type 1 PHR based on reference PUSCH

[118] **Agreement**

~~Study whether to support Type 3 PHR reporting in a serving cell/BWP where the UE is configured with two separate SRS CLPC adjustment states.~~

* ~~Continue to study whether to support including PL offset in the calculation of Type 3 PHR.~~

[118] **Agreement**

* ~~Study whether/how to apply PL offset for SRS resource set when the SRS resource set is not configured with TCI state~~
* ~~Study whether/how to apply one of the two separate SRS CLPC adjustment states on the SRS resource set when the SRS resource set is not configured with TCI state~~
	+ ~~E.g., defining i0 as the default CLPC for SRS resource set in this case. E.g,, configure one of the separate SRS CLPC adjustment states to the SRS resource set.~~

[118bis] **Agreement**

The lower limit of the value range of PL offset is extended to -12 dB

[118bis] **Agreement**

For indicating PL offset for PDCCH-order PRACH, introduce a new 1-bit DCI field in DCI format 1\_0:

* This DCI field exists when the corresponding RRC parameter (which is a new RRC used to configure the presence of this 1-bit DCI field) is enabled and at least one TCI state is configured with PL offset.
* When one joint/UL TCI state is indicated in Rel-17 unified TCI,
	+ the bit field index 0 of this field indicates that PL offset is not included in the PRACH transmission power calculation
	+ the bit field index 1 of this field indicates that the PL offset associated with the indicated TCI state is included in the PRACH transmission power.
* FFS: Whether the bit field can be used to indicate other information
* FFS: When two joint/UL TCI states are indicated in Rel-18 unified TCI

[118bis] **Agreement**

For indicating PL offset for PDCCH-order PRACH, when two joint/UL TCI states are indicated in Rel-18 unified TCI, down-select one from the following Alts for the 1-bit DCI field in DCI 1\_0 which indicates the application of PL offset on PRACH transmission:

* Alt2:
	+ the bit field index 0 of this field indicates that the PL offset associated in the first indicated joint/UL TCI state is included in the PRACH transmission power calculation
	+ the bit field index 1 of this field indicates that the PL offset associated in the second indicated joint/UL TCI state is included in the PRACH transmission power calculation.
	+ FFS: Whether a restriction that only one of the indicated joint/UL TCI states can be configured with PL offset is needed.

FFS: If other information can be indicated by this same 1-bit DCI field for the PDCCH-order PRACH transmission

[119] **Agreement**

Support to apply PL offset on PDCCH-order PRACH in FR2

* The design for applying PL offset on PDCCH-order PRACH in FR1 is fully reused here.

Note: there is no extra enhancement for Tx beam determination for PDCCH-order PRACH in FR2 in Rel-19

[119] **Agreement**

The answer to the **Question 1** in LS R1-2409353 is:

* From the perspective of UE: if UE is configured with PL offset in joint/UL TCI state(s), UE does not expect to receive SSB from UL TRP(s), else, UE may expect to receive SSB from UL TRP(s).

[120] **Conclusion**

There is no RAN1 consensus to support the following proposal:

Support the UE to report either Type1 PHR or Type 3 PHR in a serving cell configured with one UL carrier and two separate SRS CLPC adjustment states. The UE determines to report Type1 PHR or Type 3 PHR according to:

* UE provides the Type 1 PHR if both the Type 1 PHR and the Type 3 PHR are based on respective actual transmissions or on respective reference transmissions.
* UE provides the PHR that is based on a respective actual transmission if either the Type 1 PHR or the Type 3 PHR is based on a respective reference transmission.

This is subject to UE capability.

This is feature is enabled by one new RRC parameter.

[120] **Conclusion**

There is no consensus to introduce the restriction that only one of the indicated joint/UL TCI states can be configured with PL offset.

[120] **Conclusion**

There is no consensus to include PL offset in Type 3 PHR calculation.

[120] **Conclusion**

In asymmetric DL sTRP/UL mTRP deployment scenario, the PDCCH-order PRACH to UL TRP is CFRA.

# Issue 2: separate SRS CLPC

[116] **Agreement**

To facilitate the asymmetric DL sTRP/UL mTRP deployment scenarios, support two closed-loop PC adjustment states for SRS in one CC, both of which are separate from that of the PUSCH.

[116] **Agreement**

~~Study how to indicate TPC command for those two SRS CLPC adjustment states through DCI when the UE is configured two SRS CLPC adjustment states, down-select from the following options:~~

* ~~Option 1: enhance the legacy DCI format 2\_3 of higher layer parameter~~ *~~srs-TPC-PDCCH-Group~~* ~~= typeA;~~
* ~~Option 2: enhance the legacy DCI format 2\_3 of higher layer parameter~~ *~~srs-TPC-PDCCH-Group~~* ~~= typeB;~~
* ~~Option 3: enhance the legacy DCI format 2\_3 of higher layer parameter~~ *~~srs-TPC-PDCCH-Group~~* ~~= typeA and typeB;~~
* ~~Option 4: enhance DCI format 1\_1 and/or 0\_1 to indicate TPC for SRS CLPC adjustment states~~
* ~~Option 5: enhance the legacy DCI format 2\_3 by introducing a new Type for higher layer parameter srs-TPC-PDCCH-Group~~
* ~~Option 6: new DCI format to indicate TPC for SRS CLPC adjustment states~~
* ~~Other options are not precluded.~~

~~For the Options1, 2, 3 and 5, consider at least the following Alts as possible examples:~~

* ~~Alt1: In DCI format 2\_3, add one additional TPC command for each CC configured with two SRS CLPC adjustment states,~~
	+ ~~the first TPC command is associated with the first SRS CLPC adjustment state and the second TPC command is associated with the second SRS CLPC adjustment state.~~
* ~~Alt2: Introduce one 1-bit closed-loop-indicator field for each TPC command in DCI format 2\_3~~
	+ ~~This 1-bit closed-loop-indicator indicates the first SRS CLPC adjustment state or the second SRS CLPC adjustment state.~~
* ~~Alt3: use two different TPC-SRS-RNTIs for DCI format 2\_3:~~
	+ ~~DCI format 2\_3 with CRC scrambled with the first TPC-SRS-RNTI and the second TPC-SRS-RNTI indicates the TPC command for the first and second SRS CLPC adjustment state, respectively.~~
* ~~Alt4: Implicit method:~~

[116] **Agreement**

~~To support two SRS CLPC adjustment states, study and possibly down-select at least one from the following Alts:~~

* ~~Alt1: SRS CLPC adjustment state is associated with SRS resource set~~
* ~~Alt2: When the parameter~~ *~~srs-PowerControlAdjustmentStates~~* ~~is set to 'separateClosedLoop',~~ *~~closedLoopIndex-r17~~* ~~in the TCI state indicates one of the SRS CLPC adjustment states~~
* ~~Alt3: Add one extra parameter in~~ *~~P0AlphaSet-r17~~* ~~of TCI state to indicate one of those two SRS CLPC adjustment states~~
* ~~Alt4: SRS CLPC adjustment state is associated with SRS resource usage type~~

~~Note: Other alternatives are not precluded~~

[116bis] **Agreement**

For a UE configured with two SRS CLPC adjustment states, support **Alt2** for indicating one of the SRS CLPC adjustment states to SRS:

* Alt2: When the parameter srs-PowerControlAdjustmentStates is set to 'separateClosedLoop', closedLoopIndex-r17 for SRS in the TCI state indicates one of the SRS CLPC adjustment states
	+ The candidate value of i0 and i1 in *closedLoopIndex-r17* for SRS refers to the first and the second CLPC adjustment state separate from PUSCH, respectively

Ericsson raised concerns on Alt2 due to potential issues with beam management

[116bis] **Agreement**

For indicating TPC command for those two SRS CLPC adjustment states through DCI when the UE is configured with two SRS CLPC adjustment states, support **Option3**:

* Option 3: enhance the legacy DCI format 2\_3 of higher layer parameter *srs-TPC-PDCCH-Group* = typeA and typeB;

[116bis] **Agreement**

For enhancing DCI format 2\_3 for indicating TPC command for two SRS CLPC adjustment states, support **Alt2**:

* Alt2: Introduce one 1-bit closed-loop-indicator field for each TPC command in DCI format 2\_3
	+ This 1-bit closed-loop-indicator indicates the first SRS CLPC adjustment state or the second SRS CLPC adjustment state.

 Note: this 1-bit indicator is present for the CC where two SRS CLPC adjustment states are configured.

[116bis] **Agreement**

For the asymmetric DL sTRP/UL mTRP deployment scenarios, study whether and how to indicate TPC command for SRS CLPC adjustment states through DCI format 1\_1 and/or 0\_1 when the UE is configured two SRS CLPC adjustment states.

[117] **Agreement**

In Rel-19, the value range of starting bit of block in DCI format 2-3 is extended from 1~31 to 1~X.

* ~~FFS the value of X>31~~

~~FFS: Condition under which the above is applicable~~

[117] **Agreement**

Introduce a new RRC parameter per BWP/CC to indicate that two separate SRS CLPC adjustment states are configured for SRS in a BWP/CC

[118] **Agreement**

~~About the extended value range 1~X of starting bit of blocks in DCI format 2\_3 in Rel-19, down-select one from the following Alts in RAN1#118bis:~~

* ~~Alt1: X = 45 (to be captured in RAN2 spec)~~
	+ ~~This feature is a separate UE capability and is appliable to any rel-19 UE who supports this UE capability, regardless this UE supports two separate SRS CLPC adjustment states or not.~~
	+ ~~Note: X=45 can be used for operations in FR1 in shared spectrum or FR2-2 and X = 43 otherwise~~
* ~~Alt2: X = 44 (to be captured in RAN2 spec)~~
	+ ~~This feature is only applicable to UE who is configured with two separate SRS CLPC adjustment states.~~
	+ ~~Note: X=44 can be used for operations in FR1 in shared spectrum for FR2-2 and X = 42 otherwise~~
* ~~Above extended value range is applied to~~ *~~startingBitOfFormat2-3~~*~~.~~

[118bis] **Agreement**

About the extended value range 1~X of starting bit of blocks in DCI format 2\_3 in Rel-19, **support Alt1**:

* Alt1: X = 45 (to be captured in RAN2 spec)
	+ This feature is a separate UE capability and is appliable to any Rel-19 UE who supports this UE capability, regardless this UE supports two separate SRS CLPC adjustment states or not.
	+ Note: X=45 can be used for operations in FR1 in shared spectrum or FR2-2 and X = 43 otherwise

[118bis] **Agreement**

Support DCI format 1\_1 to indicate TPC command for SRS CLPC adjustment state(s) separate from PUSCH:

* (**Working Assumption**) Introduce a 2-bit TPC command field to indicate TPC command for SRS associated with separate SRS CLPC adjustment state where:
	+ The 2-bit TPC command field is present if UE reports supporting a dedicated UE capability, and a corresponding RRC parameter is configured (which is a new RRC to enable this).
* (**Working Assumption**) Introduce a 1-bit SRS close-loop indicator to indicate one of the two separate SRS CLPC adjustment states for the TPC command
	+ The 1-bit SRS close-loop indicator is present if UE reports supporting another dedicated UE capability and a corresponding RRC parameter is configured (which is a new RRC to enable this) and two separate SRS CLPC adjustment states are configured.

[119] **Agreement**

The working assumption part of the following previous agreement is confirmed.

Support DCI format 1\_1 to indicate TPC command for SRS CLPC adjustment state(s) separate from PUSCH:

* (**Working Assumption**) Introduce a 2-bit TPC command field to indicate TPC command for SRS associated with separate SRS CLPC adjustment state where:
	+ The 2-bit TPC command field is present if UE reports supporting a dedicated UE capability, and a corresponding RRC parameter is configured (which is a new RRC to enable this).
* (**Working Assumption**) Introduce a 1-bit SRS close-loop indicator to indicate one of the two separate SRS CLPC adjustment states for the TPC command
	+ The 1-bit SRS close-loop indicator is present if UE reports supporting another dedicated UE capability and a corresponding RRC parameter is configured (which is a new RRC to enable this) and two separate SRS CLPC adjustment states are configured.

[119] **Agreement**

For an SRS resource set not configured with *followUnifiedTCI-StateSRS*, regarding how to determine the PL offset and the CLPC adjustment state, down-select from the following Alts:

* Alt1: The PL offset and CLPC adjustment state indicated by the TCI state configured to the SRS resource with lowest ID (i.e., reusing the rule specified in Rel-17) and no extra enhancement.
* Alt2: The PL offset and CLPC adjustment state indicated by the TCI state configured to the SRS resource with lowest ID (i.e., reusing the rule specified in Rel-17), the SRS with lowest ID is always configured with one joint/UL TCI state, the “*referenceSignal*” in a UL TCI state is optional.
* Alt3:
	+ When the SRS resource with lowest ID is configured with a TCI state, The PL offset and CLPC adjustment state indicated by that TCI state are applied to those SRS resources (i.e., reusing the rule specified in Rel-17)
	+ Otherwise, one of the two separate SRS CLPC adjustment states and one PL offset are configured in the SRS resource set, and they are applied on the SRS resources.
* Alt4:
	+ When the SRS resource with lowest ID is configured with a TCI state, The PL offset and CLPC adjustment state indicated by that TCI state are applied to those SRS resources (i.e., reusing the rule specified in Rel-17)
	+ Otherwise, one PL offset and one CLPC adjustment state are applied on the SRS resources.
		- FFS how to define the PL offset and CLPC adjustment state

[120] **Agreement**

* The legacy TPC application mechanisms specified in legacy spec are reused for the TPC command for separate SRS CLPC adjustment state(s) indicated in DCI format 1\_1 in Rel-19 and the TPC command for separate SRS CLPC adjustment states indicated in DCI format 2\_3 in Rel-19.
	+ One example specification changes in TS38.213 can be

|  |
| --- |
| 7.3.1 UE behavior \*\*\* Unchanged parts are omitted \*\*\** $δ\_{SRS,b,f,c}(m)$ is jointly coded with other TPC commands in a PDCCH with DCI format 2\_3, as described in clause 11.4 or provided by TPC command field XXX in a PDCCH with DCI format 1\_1

\*\*\* Unchanged parts are omitted \*\*\** $h\_{b,f,c}(i)=δ\_{SRS,b,f,c}(i)$ if the UE is not configured for PUSCH transmissions on active UL BWP $b$ of carrier $f$ of serving cell $c$, or if *srs-PowerControlAdjustmentStates* indicates separate power control adjustment states between SRS transmissions and PUSCH transmissions, and *tpc-Accumulation* is provided, and the UE detects a DCI format 2\_3 or DCI format 1\_1 carrying DCI field XXX $K\_{SRS,min}$ symbols before a first symbol of SRS transmission occasion $i$, where absolute values of $δ\_{SRS,b,f,c}$ are provided in Table 7.1.1-1

\*\*\* Unchanged parts are omitted \*\*\* |

* Note: how to capture this in specification is up to editor.
* In Rel-19, the TPC command for separate SRS CLPC adjustment state(s) indicated in DCI format 1\_1 and the TPC command for separate SRS CLPC adjustment states indicated in DCI format 2\_3 are applicable to periodic SRS, semi-persistent SRS and aperiodic SRS.

[120] **Agreement**

Study whether/how to reset the CLPC of PUSCH/PUCCH/SRS based on the following alternatives (including if any enhancement is necessary and other alternatives are not precluded)

* Alt1: For a UE configured with two TAGs, when the UE receives a RAR of a PDCCH-order PRACH, according to the new 1-bit DCI field PL offset indication in DCI format 1\_0:
	+ When there is one indicated joint/UL TCI state in Rel-17 Unified TCI:
		- If the 1-bit DCI field is 0, the UE resets the CLPC that is different from the CLPC associated with the indicated joint/UL TCI state.
		- If the 1-bit DCI field is 1, the UE resets the CLPC associated with the indicated joint/UL TCI state.
	+ When there are two indicated joint/UL TCI states in Rel-18 Unified TCI:
		- If the 1-bit DCI field is 0, the UE resets the CLPC associated with the first indicated joint/UL TCI state;
		- If the 1-bit DCI field is 1, the UE resets the CLPC associated with the second indicated joint/UL TCI state
* Alt 2: For a UE configured with two TAGs, one TAG ID is indicated in the RAR
	+ The UE resets the closed loop power control adjustment state associated with a joint/UL TCI state associated with the indicated TAG.

# Issue 3: 2 TA

[118bis] **Agreement**

Support 2TA for the asymmetric DL sTRP/UL mTRP deployment scenarios:

* Remove the restriction that *coresetPoolIndex* needs to be configured for the 2TA feature.
* One downlink reference timing is supported and applied to both TAGs.
	+ (FFS) Note: UE autonomous TA adjustment is only applicable to the first TAG
* One single *n-TimingAdvanceoffset* is configured and applied to both TAGs.
* Any of the TCI states can be associated with any one of the two TAGs.
* The RAR carrying TA adjustment for those 2 TAGs is reused for Rel-19 2TA
* The MAC CE based TA adjustment for 2 TAGs is reused for Rel-19 2TA.
* Introduce the optional UE capability of “Overlapping UL transmission reduction” for Rel-19 2TA
	+ If UE does not report this UE capability, UE does not expect two UL transmissions associated with different TAGs are overlapped.
* FFS: UE does not expect that in intra-slot TDM PUSCH type-B repetition transmission, two consecutive repetitions associated with different TAGs are overlapped.

[119] **Agreement**

For a UE supporting the UE capability of “Overlapping UL transmission reduction” of Rel-19 2TA:

* The overlapping duration of the latter one of two overlapping UL transmissions is reduced, where the two overlapped UL transmissions are associated with two TAGs.

[120] **Agreement**

For a UE provided with *SSB-MTC-AddtionalPCI* and not configured with multi-DCI based mTRP, support to reuse the DCI field ‘PRACH association indicator’ in DCI format 1\_0 to indicate PL RS for PDCCH-order PRACH:

* The bit field index 0 of this field indicates the DL RS that DMRS of PDCCH order DCI is QCLed with is used as PL RS for PRACH;
* The bit field index 1 of this field is mapped to the additional PCI associated with the active TCI states and indicates the indicated SSB in this DCI is used as PL RS for PRACH:
	+ In this case, the PRACH configuration associated with addition PCI is used.
* This DCI field is present when the corresponding RRC parameter is configured and multi-DCI based mTRP is not configured.

# Stop