**Proposal 5.1**: On Rel.17 enhancements to facilitate MPE mitigation, in RAN1#104b-e, further discuss to down-select at least one or combine from the following options:

* Opt 1A. {Rel.16 P-MPR based (beam/panel-level)} + Virtual PHR or a modified version
  + The modified version may be associated with each activated UL TCI or, if applicable, joint TCI, or associated with each of the reported SSBRI(s)/CRI(s) and/or panel indication (if configured) from candidate pool, if reported.
  + The reporting reuses the event-driven mechanisms from the Rel-16 P-MPR reporting
  + FFS: how to determine the virtual PHR or the modified version.
* Opt 1D. {Rel.16 P-MPR based (beam/panel-level)}
  + The reporting reuses the event-driven mechanisms from the Rel-16 P-MPR reporting
* Opt 2A. {SSBRI(s)/CRI(s) and/or panel indication} + L1-RSRP [L1-SINR] or a modified version that accounts for MPE effect associated with each of the reported SSBRI(s)/CRI(s) and/or panel indication (if configured)
  + FFS: How panel-level L1-RSRP [L1-SINR] is reported if L1-RSRP [L1-SINR] is associated with panel
  + FFS: Whether/how to account for MPE effect in L1-RSRP [L1-SINR] report, e.g. by using scaled L1-RSRP [L1-SINR]
  + FFS: Whether/how to enhance existing beam reporting format to support Option 2A
  + FFS: When multiple SSBRIs/CRIs and their corresponding metrics are reported in the same reporting instance, whether to allow mixture between the SSBRI(s)/CRI(s)) intended for MPE mitigation and for DL beam reporting
  + FFS: Whether the reporting is UE-initiated (event-driven) and/or NW-initiated
  + FFS: If Opt2A is selected and there is no consensus on a modified L1-RSRP definition, at least the Rel-15 L1-RSRP definition is reused and virtual PHR may be added

FFS: If gNB acknowledges MPE report from UE for UE-initiated (event-driven) reporting

FFS: If differential report is supported when multiple UL beams are reported in the same report

**Proposal 2.1**: On Rel.17 multi-beam measurement/reporting enhancements for L1/L2-centric inter-cell mobility and inter-cell mTRP,

* On the value of K (defined in RAN1#104-e as the number of beam qualities associated at least with non-serving cell(s) can be reported in a single CSI reporting instance),
  + For the supported maximum value(s) of K, down-select at least one from the following candidates {4, 8, 16}
  + FFS: whether the maximum value of K is a UE capability
* Periodic, semi-persistent, and aperiodic reporting (and the respective measurements) are supported.
  + Note: Semi-persistent and aperiodic reporting (and their respective measurements) are NW-initiated
* At least for aperiodic reporting, in one reporting instance, depending on NW configuration, beam(s) associated with a non-serving cell can be mixed with that associated with serving-cell
  + FFS: whether this applies to periodic and semi-persistent
  + FFS: How to report the K beams and corresponding qualities if the Tx power among the non-serving cell and with serving-cell is not the same
  + Note: The supported numbers of non-serving cells (in terms of measurement/reporting) have not yet been decided. The above description doesn’t imply only one non-serving cell is allowed to be configured for measurement. Nor does this imply that only one non-serving cell is allowed in one reporting instance.

**Proposal 2.2**: On Rel.17 multi-beam measurement/reporting enhancements for L1/L2-centric inter-cell mobility and inter-cell mTRP, event-based (UE-initiated) measurement/reporting without CSI request from the NW are supported

* FFS: Definition of triggering event
* Event-based (UE-initiated) measurement/reporting is treated with lower priority

**Proposal 4.1**: On Rel.17 enhancements to facilitate UE-initiated panel activation and selection, for CSI/beam measurement/reporting, down select and/or modify from the following candidates:

* Opt1-1: A panel entity corresponds to a reported CSI-RS and/or SSB resource index in a beam reporting instance
  + The correspondence between a panel entity and a reported CSI-RS and/or SSB resource index is informed to NW
    - FFS: How to inform through CSI/beam reporting framework
  + FFS: Detailed design of the correspondence including the conveyed information
  + Note: the correspondence between a CSI-RS and/or SSB resource index and a panel entity is determined by the UE (analogous to Rel-15/16)
* Opt1-2: A panel entity is referring to a new panel ID within CSI/beam reports
  + FFS: Detailed design of the new panel ID including the information conveyed by the new panel ID
  + Note: The association between the new panel ID and the panel entity is determined by the UE
* Opt1-3: No additional specification support
* The duration in which the above panel entity reference is valid and the respective setting are FFS

Note: “panel entity” is only used for discussion purpose

**Proposal 1.4**: On the setting of UL PC parameters except for PL-RS (P0, alpha, closed loop index) for Rel.17 unified TCI framework, for each of PUSCH, PUCCH, and SRS, in RAN1#105-e, strive to down-select or combine from the following alternatives:

* AltA. The setting of (P0, alpha, closed loop index) is also associated with UL or (if applicable) joint TCI state
* AltB. The setting of (P0, alpha, closed loop index) is also included with UL or (if applicable) joint TCI state
* AltC. The setting of (P0, alpha, closed loop index) is determined as in Rel-16 without enhancement
* Note: It has been agreed that the setting of (P0, alpha, closed loop index) is associated with UL channel or UL RS (therefore the setting is channel- and signal-specific)

In RAN1#105-e, for each of the PUSCH, PUCCH, and SRS, if no consensus can be reached among the above 3 alternatives, the setting of (P0, alpha, closed loop index) will neither be associated with nor included in UL or (if applicable) joint TCI state.

**Proposal 1.5**: On Rel.17 unified TCI framework, in RAN1#105-e, further discuss to down select or combine from the following two alternatives for PL-RS (note: the text below is based on the agreed description in RAN1#104-e):

* Alt1. PL-RS can be included in UL TCI state or (if applicable) joint TCI state.
* Alt2. PL-RS can be associated with (but not included in) UL TCI state or (if applicable) joint TCI state
  + FFS: Exact association mechanism
* Depending on the final outcome, FFS on exact association mechanism and whether to support a unified mechanism for the setting of (P0, alpha, closed loop index) and PL-RS, if PL-RS can be associated with (but not included in) UL TCI state or (if applicable) joint TCI state

The support of the above PL-RS (the outcome of the above down selection or combining) is a UE optional feature.

* If not supported, or if a UE is configured with neither PL-RS in UL/joint TCI state nor the association between PL-RS and UL/joint TCI state, the UE estimates path-loss based on the periodic DL-RS provided as a source RS for determining spatial TX filter in UL or (if applicable) joint TCI state
  + FFS: If the PL-RS used for the UL RS provided as a source RS for determining spatial TX filter in UL or (if applicable) joint TCI state can also be used for path-loss estimation. And if so, how to select between the periodic DL-RS and the PL-RS used for the UL RS
  + [The total maintained PL RS # per CC is no more than 4]
* FFS: UE capability for maximum number of active PL-RS across CCs per band

The above behavior is optionally supported by the UE for Rel-17 unified TCI framework.