The TCI state transmission parameter in the DCI, the RNTI value successfully descrambling the CRC, or both the TCI state transmission parameter and the RNTI value may, in accordance with a configuration possibly signaled in the RRC, point to a multi TRP TCI state table such as the Table 3 for two TRPs . Whether the DCI parameter and/or the RNTI are to be interpreted by the UE as pointing to a single TRP table (Table 2) or a multi-TRP table (Table 3) may be RRC configured.

Moreover as shown above, multi-TRP Table 3, in the column “TCI state”, may point to the TCI states of Table 2. In these case, since Table 3 refers to (depends on) Table 2, tables of both types may be configured or signaled via RRC. Alternatively, multi-TRP states may also be defined in the standard and statically configured. In the latter case, a multi-TRP table may be configured in the RRC which does not refer to single TRP states from a single-TRP TCI table, but may rather refer to statically configured multi-TRP states (e.g. to indexes of multi-TRP states in the static configuration).

Combination table based embodiments

Table 3 shown above maps index values to combinations of TCI states to be applied for combinations of TRPs. Therefore, Table 3 may be considered a combination table. In the following, several further examples and embodiments are disclosed in which combination tables are used to indicate values for multi-TRP communication. The disclosure shows the possibility to create or enable intermediate combination tables via RRC for multi-TRP signaling. A generic structure of the combination table may contains a number of indices wherein each index of a given table corresponds to a row and indicates a combination of different TRP IDs and a corresponding combination of indices of DCI bitmap field for a given parameter (such as DMRS port indication, TCI state, etc.). If the combination table is configured and enabled by RRC, then a corresponding bitmap in the DCI may be used to indicate the index of the new combination table instead of the original indication of the corresponding parameter/index (e.g. the index of the “value column of Table 1 or the “index column of Table 2”) for the single TRP case.

Table 4 exemplifies a possible generic structure of a single-TRP indication Table, and Table 5 shows a generic structure of a multi-TRP combination table.

Index	**Information for single TRP**

the content of the combination table. Table 7 is an example of a combination table for a two-TRP case, and Table 8 is an example of a combination table for a four-TRP case.

Index	**TRP combinations**	**Combination of Index of existing table for X**
0	TRP1	0
1	TRP2	1
2	TRP1, TRP2	0, 0
3	….	
…	….	
….	….	
M	TRP1, TRP2	2,3

Table 7: Two-TRP combination table for indication of parameter X

Index	**TRP combinations**	**Combination of Index of existing table for X**
0	TRP1	0
1	TRP2	1
2	TRP3	3
3	TRP4	0
4	TRP1, TRP4	1,4