

CLAIMS

1. A method for wireless communications by a user equipment, UE (120), comprising:
receiving (305) one or more transport blocks, TBs, from a plurality of transmission reception points, TRPs (110), wherein:
each of the one or more TBs comprises a plurality of code blocks, CBs; and
for one or more of the plurality of CBs, all bits of the CB are received from a same TRP;
determining a mapping of the plurality of CBs to the plurality of TRPs and/or layers at the plurality of TRPs; and
decoding (310) the one or more TBs based on the determined mapping,
wherein determining the mapping comprises receiving an implicit indication of the mapping via at least one of: a number of the layers at the plurality of TRPs or demodulation reference signal, DMRS, port group information for the plurality of TRPs.
2. The method of claim 1, wherein:
the one or more TBs correspond to a physical downlink shared channel, PDSCH, transmission; and
the one or more TBs are received from the plurality of TRPs at least as a non-coherent joint transmission, NC-JT.
3. The method of claim 1 or 2, wherein the bits of the one or more of the CBs are received from the TRP via a plurality of layers.
4. The method of any of claims 1 to 3, wherein the bits of the CBs received from one of the plurality of TRPs associated with a same TB are scrambled.
5. The method of any of claims 1 to 4, wherein:
the plurality of TRPs comprises N TRPs;
the plurality of CBs for each of the one or more TBs comprises N sets of one or more CBs;
and
one set of the N sets of one or more CBs is received from each of the N TRPs.

6. The method of claim 5, wherein:
the N TRPs comprise two TRPs;
the one or more TBs comprise one TB;
a first set of one or more CBs is received from a first TRP via a first number of layers;
a second set of one or more CBs is received from a second TRP via a second number of layers; and
a total number of the first and second number of layers is at least two, three, or four layers.

7. The method of claim 5, wherein:
the N TRPs comprise two TRPs;
the one or more TBs comprise two TBs;
a first set of one or more CBs of a first TB is received from a first TRP via a first number of layers;
a second set of one or more CBs of a second TB is received from the first TRP via a second number of layers;
a third set of one or more CBs of the first TB is received from a second TRP via a third number of layers;
a fourth set of one or more CBs of the second TB is received from the second TRP via a fourth number of layers;
a total number of the first, second, third, and fourth number of layers is at least five, six, seven, or eight layers;
a total number of the first and third sets of CBs is the total number of CBs within the first TB; and
a total number of the second and fourth sets of CBs is the total number of CBs within the second TB.

8. The method of any of claims 1 to 4, wherein:
the plurality of TRPs comprises two TRPs;
the one or more TBs comprise two TBs;

the plurality of CBs of a first TB is received from a first TRP via a first number of layers;
the plurality of CBs of a second TB is received from a second TRP via a second number of layers; and
a total number of the first and second number of layers is at least five, six, seven, or eight layers.

9. The method of any of claims 1 to 8, wherein:
the CBs of a same TB are received via at least one of: layers or TRPs having a same modulation and coding scheme, MCS; and
the CBs of different TBs are received via at least one of: layers or TRPs having a different MCS.

10. The method any of claims 1 to 9, wherein CBs in a same CB group, CBG, are received from a same TRP.

11. The method of any of claims 1 to 4 and 8, wherein:
at least one of: bits for at least one other CB of the plurality of CBs or CBs in at least one CB group, CBG, are received from different TRPs; and
the at least one CB or CBG comprises a last CB or CBG of the TB for one or more of the plurality of CBs.

12. The method of any of claims 1 to 11, wherein the multiple TRPs are associated with different demodulation reference signal, DMRS, port groups.

13. An apparatus for wireless communications, comprising:
a processor (804); and
a memory (812) configured to store instructions that, when executed by the processor, cause the processor to perform the method of any one of claims 1 to 12.