

CLAIMS

WHAT IS CLAIMED IS:

1. A method of wireless communication, the method comprising:
transmitting, to a user equipment (UE) on a control channel, one or more indications of one or more beam indexes corresponding to one or more beams; and
transmitting, to the UE, one or more reference signals through the one or more beams corresponding to the one or more beam indexes.
2. The method of claim 1, wherein the control channel comprises a physical downlink control channel (PDCCH), and the one or more indications are included in one or more bits of a downlink control information (DCI) message.
3. The method of claim 1, wherein the transmitting the one or more indications of the one or more beam indexes corresponding to the one or more beams comprises:
transmitting one or more beam indexes associated with one or more beam reference signals (BRSs), the one or more BRSs transmitted during a synchronization subframe.
4. The method of claim 1, wherein the transmitting the one or more indications of the one or more beam indexes corresponding to the one or beams comprises:
receiving, from the UE, one or more beam indexes corresponding to the one or more beams; and
transmitting the one or more beam indexes corresponding to the one or more beams based on the one or more beam indexes that are received most recently.
5. The method of claim 4, wherein the one or more beam indexes corresponding to the one or more beams are received on a physical uplink shared channel (PUSCH) or a physical uplink control channel (PUCCH).
6. The method of claim 5, wherein the one or more beam indexes corresponding to the one or more beams are transmitted based on the one or more beam indexes received through the PUSCH when more than two symbols are used for the reference signal transmission.

7. The method of claim 5, wherein the one or more beam indexes associated with one or more beams are transmitted based on the one or more beam indexes received through the PUCCH when two or fewer symbols are used for the reference signal transmission.

8. The method of claim 1, wherein the one or more reference signals include at least one of a channel state information reference signal (CSI-RS) or a beam refinement reference signal (BRRS).

9. The method of claim 8, wherein the transmitting the one or more indications of the one or more beam indexes associated with the one or more beams comprises:

transmitting the one or more beam indexes associated with the one or more beams through which at least one of the CSI-RSs was previously transmitted.

10. A base station comprising:

means for transmitting, to a user equipment (UE) on a control channel, one or more indications of one or more beam indexes corresponding to one or more beams; and

means for transmitting, to the UE, one or more reference signals through the one or more beams corresponding to the one or more beam indexes.

11. The base station of claim 10, wherein the control channel comprises a physical downlink control channel (PDCCH), and the one or more indications are included in one or more bits of a downlink control information (DCI) message.

12. The base station of claim 10, wherein the means for transmitting the one or more indications of the one or more beam indexes corresponding to the one or more beams is configured to transmit one or more beam indexes associated with one or more beam reference signals (BRSs), the one or more BRSs transmitted during a synchronization subframe.

13. The base station of claim 10, wherein the means for transmitting the one or more indications of the one or more beam indexes corresponding to the one or beams is configured to:

receive, from the UE, one or more beam indexes corresponding to the one or more beams; and

transmit the one or more beam indexes corresponding to the one or more beams based on the one or more beam indexes that are received most recently.

14. The base station of claim 13, wherein the one or more beam indexes corresponding to the one or more beams are received on a physical uplink shared channel (PUSCH) or a physical uplink control channel (PUCCH).

15. The base station of claim 14, wherein the one or more beam indexes corresponding to the one or more beams are transmitted based on the one or more beam indexes received through the PUSCH when more than two symbols are used for the reference signal transmission.

16. The base station of claim 14, wherein the one or more beam indexes associated with one or more beams are transmitted based on the one or more beam indexes received through the PUCCH when two or fewer symbols are used for the reference signal transmission.

17. The base station of claim 10, wherein the one or more reference signals include at least one of a channel state information reference signal (CSI-RS) or a beam refinement reference signal (BRRS).

18. The base station of claim 17, wherein the means for transmitting the one or more indications of the one or more beam indexes associated with the one or more beams is configured to transmit the one or more beam indexes associated with the one or more beams through which at least one of the CSI-RSs was previously transmitted.

19. A base station comprising:
a memory; and
at least one processor coupled to the memory and configured to:
transmit, to a user equipment (UE) on a control channel, one or more indications of one or more beam indexes corresponding to one or more beams; and

transmit, to the UE, one or more reference signals through the one or more beams corresponding to the one or more beam indexes.

20. The base station of claim 19, wherein the control channel comprises a physical downlink control channel (PDCCH), and the one or more indications are included in one or more bits of a downlink control information (DCI) message.

21. The base station of claim 19, wherein the transmission of the one or more indications of the one or more beam indexes corresponding to the one or more beams includes transmission of one or more beam indexes associated with one or more beam reference signals (BRSs), the one or more BRSs transmitted during a synchronization subframe.

22. The base station of claim 19, wherein the transmission of the one or more indications of the one or more beam indexes corresponding to the one or beams includes:

reception, from the UE, of one or more beam indexes corresponding to the one or more beams; and

transmission of the one or more beam indexes corresponding to the one or more beams based on the one or more beam indexes that are received most recently.

23. The base station of claim 22, wherein the one or more beam indexes corresponding to the one or more beams are received on a physical uplink shared channel (PUSCH) or a physical uplink control channel (PUCCH).

24. The base station of claim 23, wherein the one or more beam indexes corresponding to the one or more beams are transmitted based on the one or more beam indexes received through the PUSCH when more than two symbols are used for the reference signal transmission.

25. The base station of claim 23, wherein the one or more beam indexes associated with one or more beams are transmitted based on the one or more beam indexes received through the PUCCH when two or fewer symbols are used for the reference signal transmission.

26. The base station of claim 19, wherein the one or more reference signals include at least one of a channel state information reference signal (CSI-RS) or a beam refinement reference signal (BRRS).

27. The base station of claim 26, wherein the transmission of the one or more indications of the one or more beam indexes associated with the one or more beams includes transmission of the one or more beam indexes associated with the one or more beams through which at least one of the CSI-RSs was previously transmitted.

28. A computer-readable medium storing computer-executable code for wireless communication by a base station, comprising code to:
transmit, to a user equipment (UE) on a control channel, one or more indications of one or more beam indexes corresponding to one or more beams; and
transmit, to the UE, one or more reference signals through the one or more beams corresponding to the one or more beam indexes.