

CLAIMS

WHAT IS CLAIMED IS:

1. A method of wireless communications for a relay node, comprising:
receiving a configuration for a first radio channel with a first priority and a first priority ID, and receiving a configuration for a second radio channel with a second priority and a second priority ID;
receiving a configuration for a third radio channel with a first mapping to the first priority, and receiving a configuration for a fourth radio channel with a second mapping to the second priority;
forwarding packets from the third radio channel to the first radio channel based on the first mapping and inserting the first priority ID into a header in the packets from the third radio channel; and
forwarding packets from the fourth radio channel to the second radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the fourth radio channel.
2. The method of claim 1, wherein the first radio channel and the second radio channel are backhaul radio channels and the third radio channel and the fourth radio channel are access radio channels, wherein the configuration of the third radio channel includes a first bearer ID and the configuration of the fourth radio channel includes a second bearer ID.
3. The method of claim 1, wherein the first radio channel and the second radio channel are backhaul radio channels to a first peer, and wherein the third radio channel and the fourth radio channel are backhaul radio channels to a second peer.
4. The method of claim 1, wherein the first radio channel or the second radio channel is one of a cellular radio link control (RLC)-channel or a cellular radio bearer.
5. The method of claim 4, wherein the cellular radio bearer is a data radio bearer or a signaling radio bearer.

6. The method of claim 1, wherein the configuration of the first radio channel or the configuration of the second radio channel also includes a route-ID, the method further comprising inserting the route-ID into the header in packets forwarded on the corresponding radio channel.

7. The method of claim 1, further comprising inserting the header into the packets forwarded from the third radio channel to the first radio channel and into the packets forwarded from the fourth to the second radio channel, wherein the header carries the priority ID and a bearer ID.

8. The method of claim 7, further comprising removing a header from the packets forwarded from the first radio channel to the third radio channel and from the packets forwarded from the second radio channel to the fourth radio channel.

9. The method of claim 1, wherein the forwarding comprises forwarding packets arriving on the first radio channel or the second radio channel to the third radio channel or the fourth radio channel based on a bearer ID or a priority ID carried in a header of the packets.

10. The method of claim 1, wherein the configurations are received from an Integrated Access and Backhaul (IAB) control function or a central unit controller (CU-C).

11. The method of claim 1, further comprising:
forwarding packets from the first radio channel to the third radio channel based on the first mapping and inserting the first priority ID into a header in the packets from the first radio channel; and
forwarding packets from the second radio channel to the fourth radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the second radio channel.

12. A base station, comprising:
a memory; and
a processor in communication with the memory, wherein the processor is configured to:
receive a configuration for a first radio channel with a first priority and a first priority ID, and receiving a configuration for a second radio channel with a second priority and a second priority ID;
receive a configuration for a third radio channel with a first mapping to the first priority, and receiving a configuration for a fourth radio channel with a second mapping to the second priority;
forward packets from the third radio channel to the first radio channel based on the first mapping and inserting the first priority ID into a header in the packets from the third radio channel; and
forward packets from the fourth radio channel to the second radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the fourth radio channel.
13. The base station of claim 12, wherein the first radio channel and the second radio channel are backhaul radio channels and the third radio channel and the fourth radio channel are access radio channels, wherein the configuration of the third radio channel includes a first bearer ID and the configuration of the fourth radio channel includes a second bearer ID.
14. The base station of claim 12, wherein the first radio channel and the second radio channel are backhaul radio channels to a first peer, and wherein the third radio channel and the fourth radio channel are backhaul radio channels to a second peer.
15. The base station of claim 12, wherein the first radio channel or the second radio channel is one of a cellular radio link control (RLC)-channel or a cellular radio bearer.
16. The base station of claim 15, wherein the cellular radio bearer is a data radio bearer or a signaling radio bearer.

17. The base station of claim 12, wherein the configuration of the first radio channel or the configuration of the second radio channel also includes a route-ID, and the processor is configured to insert the route-ID into the header in packets forwarded on the corresponding radio channel.

18. The base station of claim 12, wherein the processor is configured to insert the header into the packets forwarded from the third radio channel to the first radio channel and into the packets forwarded from the fourth to the second radio channel, wherein the header carries the priority ID and a bearer ID.

19. The base station of claim 12, wherein the processor is configured to remove a header from the packets forwarded from the first radio channel to the third radio channel and from the packets forwarded from the second radio channel to the fourth radio channel.

20. The base station of claim 12, wherein the processor is configured to forward packets arriving on the first radio channel or the second radio channel to the third radio channel or the fourth radio channel based on a bearer ID or a priority ID carried in a header of the packets.

21. The base station of claim 12, wherein the configurations are received from an Integrated Access and Backhaul (IAB) control function or a central unit controller (CU-C).

22. The base station of claim 12, wherein the processor is configured to:
forward packets from the first radio channel to the third radio channel based on the first mapping and inserting the first priority ID into a header in the packets from the first radio channel; and
forward packets from the second radio channel to the fourth radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the second radio channel.

23. A base station, comprising:

means for receiving a configuration for a first radio channel with a first priority and a first priority ID, and receiving a configuration for a second radio channel with a second priority and a second priority ID;

means for receiving a configuration for a third radio channel with a first mapping to the first priority, and receiving a configuration for a fourth radio channel with a second mapping to the second priority;

means for forwarding packets from the third radio channel to the first radio channel based on the first mapping and inserting the first priority ID into a header in the packets from the third radio channel; and

means for forwarding packets from the fourth radio channel to the second radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the fourth radio channel.

24. A non-transitory computer-readable medium storing computer code executable by a processor for wireless communications, comprising one or more codes executable to:

receive a configuration for a first radio channel with a first priority and a first priority ID, and receiving a configuration for a second radio channel with a second priority and a second priority ID;

receive a configuration for a third radio channel with a first mapping to the first priority, and receiving a configuration for a fourth radio channel with a second mapping to the second priority;

forward packets from the third radio channel to the first radio channel based on the first mapping and inserting the first priority ID into a header in the packets from the third radio channel; and

forward packets from the fourth radio channel to the second radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the fourth radio channel.

25. A method of wireless communications for a donor node, comprising:

- receiving a configuration for a first backhaul radio channel with a first priority and a first priority ID, and receiving a configuration for a second backhaul radio channel with a second priority and a second priority ID;
- receiving a configuration for a first tunnel with a first bearer ID and a first mapping to the first priority, and receiving a configuration for a second tunnel with a second bearer ID and a second mapping to the second priority;
- forwarding packets from the first tunnel to the first backhaul radio channel based on the first mapping, and inserting the first priority ID into a header in the packets from the first tunnel; and
- forwarding packets from the second tunnel to the second backhaul radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the second tunnel.

26. The method of claim 25, wherein the first backhaul radio channel or the second backhaul radio channel is one of a cellular radio link control (RLC)-channel, a cellular data radio bearer, or a cellular signaling radio bearer.

27. The method of claim 25, wherein the configuration of the first backhaul radio channel or the second backhaul radio channel includes a route-ID, the method further comprising inserting the route-ID into a header in packets forwarded on the corresponding radio channel.

28. The method of claim 25, further comprising inserting a new header into the packets forwarded from the first tunnel to the first backhaul radio channel and from the second tunnel to the second backhaul radio channel, wherein the header carries the priority ID and the bearer ID.

29. The method of claim 25, further comprising removing a received header from packets forwarded from the first backhaul radio channel to the first tunnel and from the second backhaul radio channel to the second tunnel.

30. The method of claim 25, wherein packets arriving on the first backhaul radio channel or the second backhaul radio channel are forwarded to the first or second tunnel based on the bearer ID or the priority ID carried in a header of the packets.

31. The method of claim 25, wherein the configurations are received from an Integrated Access and Backhaul (IAB) control function or a central unit controller (CU-C).

32. A base station, comprising:
a memory; and
a processor in communication with the memory, wherein the processor is configured to: receive a configuration for a first backhaul radio channel with a first priority and a first priority ID, and receiving a configuration for a second backhaul radio channel with a second priority and a second priority ID;
receive a configuration for a first tunnel with a first bearer ID and a first mapping to the first priority, and receiving a configuration for a second tunnel with a second bearer ID and a second mapping to the second priority;
forward packets from the first tunnel to the first backhaul radio channel based on the first mapping, and inserting the first priority ID into a header in the packets from the first tunnel; and
forward packets from the second tunnel to the second backhaul radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the second tunnel.

33. The base station of claim 32, wherein the first backhaul radio channel or the second backhaul radio channel is one of a cellular radio link control (RLC)-channel, a cellular data radio bearer, or a cellular signaling radio bearer.

34. The base station of claim 32, wherein the configuration of the first backhaul radio channel or the second backhaul radio channel includes a route-ID, the method further comprising inserting the route-ID into a header in packets forwarded on the corresponding radio channel.

35. The base station of claim 32, wherein the processor is configured to insert a new header into the packets forwarded from the first tunnel to the first backhaul radio channel and from the second tunnel to the second backhaul radio channel, wherein the header carries the priority ID and the bearer ID.

36. The base station of claim 32, wherein the processor is configured to remove a received header from packets forwarded from the first backhaul radio channel to the first tunnel and from the second backhaul radio channel to the second tunnel.

37. The base station of claim 32, wherein packets arriving on the first backhaul radio channel or the second backhaul radio channel are forwarded to the first or second tunnel based on the bearer ID or the priority ID carried in a header of the packets.

38. The base station of claim 32, wherein the configurations are received from an Integrated Access and Backhaul (IAB) control function or a central unit controller (CU-C).

39. A base station, comprising:
means for receiving a configuration for a first backhaul radio channel with a first priority and a first priority ID, and receiving a configuration for a second backhaul radio channel with a second priority and a second priority ID;
means for receiving a configuration for a first tunnel with a first bearer ID and a first mapping to the first priority, and receiving a configuration for a second tunnel with a second bearer ID and a second mapping to the second priority;
means for forwarding packets from the first tunnel to the first backhaul radio channel based on the first mapping, and inserting the first priority ID into a header in the packets from the first tunnel; and
means for forwarding packets from the second tunnel to the second backhaul radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the second tunnel.

40. A non-transitory computer-readable medium storing computer code executable by a processor for wireless communications, comprising one or more codes executable to:

receive a configuration for a first backhaul radio channel with a first priority and a first priority ID, and receiving a configuration for a second backhaul radio channel with a second priority and a second priority ID;

receive a configuration for a first tunnel with a first bearer ID and a first mapping to the first priority, and receiving a configuration for a second tunnel with a second bearer ID and a second mapping to the second priority;

forward packets from the first tunnel to the first backhaul radio channel based on the first mapping, and inserting the first priority ID into a header in the packets from the first tunnel; and

forward packets from the second tunnel to the second backhaul radio channel based on the second mapping, and inserting the second priority ID into a header in the packets from the second tunnel.