

## CLAIMS

What is claimed is:

1. A method, comprising:  
receiving, by a network device of a communication network, information comprising a multiple transmission time interval uplink grant with cyclic redundancy check bits scrambled by a radio network temporary identifier;  
based on the information, determining, by the network device, a subset of data transmissions of a previous burst of data transmissions to be retransmitted by the network device; and  
based on the determining, performing by the network device retransmission of the subset of data transmissions using scheduled resources of the uplink grant.
2. The method of claim 1, wherein the subset of data transmissions is of at least one physical uplink shared channel transmission of the previous burst of data transmissions to be retransmitted.
3. The method of claim 1, wherein information comprising the uplink grant comprises at least one process identification value associated with the previous burst of data transmissions to be retransmitted and a number of transmission time intervals scheduled by the uplink grant.
4. The method of claim 3, wherein based on the uplink grant having cyclic redundancy check bits scrambled with a configured scheduled radio network temporary identifier, the network device is including configured grant-uplink control information for each data transmission of the subset and the retransmission is using a scheduled resource of the uplink grant associated with a process identification value for each data transmission.
5. The method of claim 3, wherein based on the uplink grant having cyclic redundancy check bits scrambled with a cell radio network temporary identifier, the retransmission is using scheduled resources of the uplink grant associated with

consecutive process identity values starting with an initial process identity value indicated by the at least one process identification value, wherein the process identity values are one of determined or received by the network device.

6. The method of claim 3, wherein the at least one process identification value of the uplink grant is identifying for the retransmission one of subframe, slot, or symbol of different transmission time intervals of a previously configured grant burst.

7. The method of claim 3, wherein the at least one process identification value is a first process identification value indicative for a first transmission of the retransmissions.

8. The method of claim 3, wherein the at least one process identification value is indicative of a time offset relative to a first slot of the uplink grant, wherein the time offset is identifying a first subframe, slot, or symbol for a first transmission of the retransmission.

9. The method according to any one of claims 7 or 8, wherein the process identity of at least one further retransmission other than the first transmission of the subset of data transmissions is determined implicitly based on a first process identity of the at least one process identification value of the information and a number of transmission time intervals scheduled by the uplink grant.

10. The method of claim 2, wherein based on the information indicating a number of transmissions associated with the uplink grant is exceeding the number of retransmissions of the previous burst of data transmissions, the network device is using at least one transmission associated with the uplink grant for transmitting a data with a process identity value other than the process identity values corresponding to processes used for the retransmissions.

11. The method of claim 2, wherein based on the information indicating a number of transmissions associated with the grant is different than a number of transmissions transmitted in the previous burst of data transmissions by the network device, the

network device ignores a new data indicator of the uplink grant and retransmits the previous burst of data transmissions.

12. The method according to any one of claims 7-11, wherein the at least one process identification value comprises at least one hybrid automatic repeat request process identity.

13. The method of claim 1, wherein the information is received from a network node associated with the communication network.

14. An apparatus, comprising:

means for receiving information comprising a multiple transmission time interval uplink grant with cyclic redundancy check bits scrambled by a radio network temporary identifier;

means, based on the information, for determining, by a network device of a communication network, a subset of data transmissions of a previous burst of data transmissions to be retransmitted by the network device; and

means, based on the determining, for performing by the network device retransmission of the subset of data transmissions using scheduled resources of the uplink grant.

15. The apparatus of claim 14, wherein the subset of data transmissions is of at least one physical uplink shared channel transmission of the previous burst of data transmissions to be retransmitted.

16. The apparatus of claim 14, wherein information comprising the uplink grant comprises at least one process identification value associated with the previous burst of data transmissions to be retransmitted and a number of transmission time intervals scheduled by the uplink grant.

17. The apparatus of claim 16, wherein based on the uplink grant having cyclic redundancy check bits scrambled with a configured scheduled radio network temporary identifier, the network device is including configured grant-uplink control

information for each data transmission of the subset and the retransmission is using a scheduled resource of the uplink grant associated with a process identification value for each data transmission.

18. The apparatus of claim 16, wherein based on the uplink grant having cyclic redundancy check bits scrambled with a cell radio network temporary identifier, the retransmission is using scheduled resources of the uplink grant associated with consecutive process identity values starting with an initial process identity value indicated by the at least one process identification value.

19. The apparatus of claim 16, wherein the at least one process identification value of the uplink grant is identifying for the retransmission one of subframe, slot, or symbol of different transmission time intervals of a previously configured grant burst.

20. The apparatus of claim 16, wherein the at least one process identification value is a first process identification value indicative for a first transmission of the retransmissions.

21. The apparatus of claim 16, wherein the at least one process identification value is indicative of a time offset relative to a first slot of the uplink grant, wherein the time offset is identifying a first subframe, slot, or symbol for a first transmission of the retransmission.

22. The apparatus according to any one of claims 17 or 18, wherein the process identification of at least one further retransmission other than the first transmission of the subset of data transmissions is determined implicitly based on a first process identification of the at least one process identification value and a duration in the uplink grant.

23. The apparatus of claim 14, wherein based on the information indicating a number of transmissions associated with the uplink grant is exceeding the number of retransmissions of the previous burst of data transmissions, the network device is using at least one transmission associated with the uplink grant for transmitting a data

with a process identity value other than the process identity values corresponding to processes used for the retransmissions.

24. The apparatus of claim 14, wherein based on the information indicating a number of transmissions associated with the grant is different than a number of transmissions transmitted in the previous burst of data transmissions by the network device, the network device ignores a new data indicator of the uplink grant and retransmits the previous burst of data transmissions.

25. The apparatus according to any one of claims 15 to 23, wherein the at least one process identification value comprises at least one hybrid automatic repeat request process identity.

26. The apparatus of claim 14, wherein the information is received from a network node associated with the communication network.

27. A method, comprising:

determining, by a network node of a communication network, information comprising a multiple transmission time interval uplink grant with cyclic redundancy check bits scrambled by a radio network temporary identifier to identify a subset of data transmissions of a previous burst of data transmissions to be retransmitted by a network device; and

based on the determining, sending the information towards the network device for use in retransmission of the subset of data transmissions using scheduled resources of the uplink grant.

28. The method of claim 27, wherein the subset of data transmissions is of at least one physical uplink shared channel transmission of the previous burst of data transmissions to be retransmitted.

29. The method of claim 27, wherein information comprising the uplink grant comprises at least one process identification value associated with the previous burst of data transmissions to be retransmitted and a number of transmission time intervals

scheduled by the uplink grant.

30. The method of claim 29, wherein the uplink grant having the cyclic redundancy check bits scrambled with a configured scheduled radio network temporary identifier to cause the network device to include configured grant-uplink control information for each data transmission of the subset and to use a scheduled resource of the uplink grant associated with a process identification value for each data transmission of the retransmission.

31. The method of claim 29, wherein the uplink grant is having the cyclic redundancy check bits scrambled with a cell radio network temporary identifier to cause the network device to use for the retransmission scheduled resources of the uplink grant associated with consecutive process identity values starting with an initial process identity value indicated by the at least one process identification value in the uplink grant.

32. The method of claim 29, wherein the at least one process identification value is identifying for the retransmission one of subframe, slot, or symbol of different transmission time intervals of a previously configured grant burst.

33. The method of claim 29, wherein the at least one process identification value is a first process identification value indicative for a first transmission of the retransmissions.

34. The method of claim 29, wherein the at least one process identification value is indicative of a time offset relative to a first slot of the uplink grant, wherein the time offset is identifying a first subframe, slot, or symbol for a first transmission of the retransmission.

35. The method according to any one of claims 30 or 31, wherein the process identity of at least one further retransmission other than the first transmission of the subset of data transmissions is determined implicitly based on a first process identity of the at least one process identification value and a duration in the uplink grant.

36. The method according to any one of claims 32 to 35, wherein the at least one process identification value comprises at least one hybrid automatic repeat request process identity.

37. An apparatus, comprising:

means for determining, by a network node of a communication network, information comprising a multiple transmission time interval uplink grant with cyclic redundancy check bits scrambled by a radio network temporary identifier to identify a subset of data transmissions of a previous burst of data transmissions to be retransmitted by a network device; and

means, based on the determining, for sending the information towards the network device for use in retransmission of the subset of data transmissions using scheduled resources of the uplink grant.

38. The apparatus of claim 37, wherein the subset of data transmissions is of at least one physical uplink shared channel transmission of the previous burst of data transmissions to be retransmitted.

39. The apparatus of claim 37, wherein information comprising the uplink grant comprises at least one process identification value associated with the previous burst of data transmissions to be retransmitted and a number of transmission time intervals scheduled by the uplink grant.

40. The apparatus of claim 37, wherein the uplink grant is having the cyclic redundancy check bits scrambled with a configured scheduled radio network temporary identifier to cause the network device to include configured grant-uplink control information for each data transmission of the subset and to use a scheduled resource of the uplink grant associated with a process identification value for each data transmission of the retransmission.

41. The apparatus of claim 37, wherein the uplink grant is having the cyclic redundancy check bits scrambled with a cell radio network temporary identifier to

cause the network device to use for the retransmission scheduled resources of the uplink grant associated with consecutive process identity values starting with an initial process identity values indicated by the at least one process identification value in the uplink grant.

42. The apparatus of claim 39, wherein the at least one process identification value of the uplink grant is identifying for the retransmission one of subframe, slot, or symbol of different transmission time intervals of a previously configured grant burst.

43. The method of claim 39, wherein the at least one process identification value is a first process identification value indicative for a first transmission of the retransmissions.

44. The apparatus of claim 39, wherein the at least one process identification value is indicative of a time offset relative to a first slot of the uplink grant, wherein the time offset is identifying a first subframe, slot, or symbol for a first transmission of the retransmission.

45. The apparatus according to any one of claims 40 or 41, wherein a process identity of at least one further retransmission other than the first transmission of the subset of data transmissions is determined implicitly based on a first process identity of the at least one process identification value and a duration in the uplink grant.

46. The apparatus according to any one of claims 42 to 45, wherein the at least one process identification value comprises at least one hybrid automatic repeat request process identity.

47. A communication system comprising the apparatus in accordance with any one of the claims 11 to 26 and the apparatus in accordance with any one of the claims 37 to 46.

48. A computer program comprising program code for executing the method according to any of claims 1 to 10 or 27 to 36.

49. The computer program according to claim 48, wherein the computer program is a computer program product comprising a computer-readable medium bearing computer program code embodied therein for use with a computer.