WHAT IS CLAIMED IS:

1. A method (300) implemented by a device (110, 1000, 1200), comprising:

broadcasting (210, 310) essential system information (430, 520, 530, 610, 630) and a resource configuration of a demand channel, the essential system information being required to access a cell (112) of the device;

monitoring (220, 340), on the demand channel, a request for at least a part of optional system information other than the essential system information; and

in response to receiving (250, 350) the request, broadcasting (260, 360) the part of the optional system information.

2. The method of claim 1, wherein the demand channel is a common channel shared by terminals (120-1, 120-2, 120-3) in the cell.

3. The method of claim 1 or 2, wherein broadcasting the essential system information and the resource configuration of the demand channel comprises:

broadcasting (210, 310) the resource configuration of the demand channel and at least a part of the essential system information (430, 520, 610) in an access information table (AIT) (410).

4. The method of claim 1 or 2, wherein broadcasting the essential system information comprises:

broadcasting (210, 310) semi-static system information (520) of the essential system information with a first period; and

broadcasting (210, 310) dynamic system information (530, 630) of the essential system information with a second period shorter than the first period, the dynamic system information including the resource configuration of the demand channel.

5. The method of claim 1 or 2, further comprising:

broadcasting (210, 310) a configuration of a resource zone (620, 620-1, 620-2, 620-3) with the essential system information,

wherein broadcasting the part of the optional system information comprises broadcasting (260, 360) the part of the optional system information in the resource zone.

6. The method of claim 1 or 2, wherein broadcasting the part of the optional system information comprises:

broadcasting (260, 360) an indicator in a predefined resource zone (620, 620-1, 620-2, 620-3) to indicate existence of the part of the optional system information; and

broadcasting (260, 360) the part of the optional system information in the predefined resource zone.

7. The method of claim 1 or 2, wherein broadcasting essential system information and the resource configuration of the demand channel comprises:

broadcasting (210, 310) the resource configuration of the demand channel as a part of the essential system information (430, 530, 610, 630).

8. The method of claim 1 or 2, wherein the resource configuration of the demand channel includes at least one of the following: a period of the demand channel, a time offset with respect to a reference signal (420), or a frequency offset with respect to the reference signal.

9. The method of claim 1 or 2, further comprising:

determining (305) the resource configuration of the demand channel based on at least one of the following: beamforming of the device, or grouping of terminals (120-1, 120-2, 120-3) in the cell.

10. The method of claim 1 or 2, wherein monitoring the request comprises:

monitoring (220, 340) a sequence as the request, the sequence being common to a plurality of terminals (120-1, 120-2, 120-3) in the cell.

11. A method (700, 800) implemented by a terminal (120-1, 120-2, 120-3, 1100, 1200), comprising:

receiving (230, 710) essential system information (430, 520, 530, 610, 630) and a resource configuration of a demand channel that are broadcasted by a device (110, 1000, 1200), the essential system information being required to access a cell (112) of the device; and

receiving (270, 730, 840) at least a part of optional system information other than

the essential system information, the part of the optional system information being broadcasted by the device in response to a request that is sent on the demand channel according to the resource configuration.

12. The method of claim 11, further comprising:

sending (720, 830) the request for the part of the optional system information on the demand channel according to the resource configuration.

13. The method of claim 12, wherein sending the request comprises:

checking (810), in a resource zone (620, 620-1, 620-2, 620-3), the part of the optional system information that is requested by a further terminal (120-2, 120-3); and

sending (720, 830) the request to the device in response to missing (820) the part of the optional system information in the resource zone.

14. The method of claim 12 or 13, wherein sending the request comprises:

sending (720, 830) a sequence as the request, the sequence being common to the terminal (120-1) and a further terminal (120-2, 120-3) in the cell.

15. The method of any one of claims 11 to 13, wherein the demand channel is a common channel shared by the terminal (120-1) and a further terminal (120-2, 120-3) in the cell.

16. The method of any one of claims 11 to 13, wherein receiving the essential system information and the resource configuration of the demand channel comprises:

receiving (230, 710) an access information table (AIT) (410) that is broadcasted by the device, the AIT including the resource configuration of the demand channel and at least a part of the essential system information (430, 520, 610).

17. The method of any one of claims 11 to 13, wherein receiving essential system information comprises:

receiving (230, 710) semi-static system information (520) of the essential system information that is broadcasted by the device with a first period; and

receiving (230, 710) dynamic system information (530, 630) of the essential system information that is broadcasted by the device with a second period shorter than the first

period, the dynamic system information including the resource configuration of the demand channel.

18. The method of any one of claims 11 to 13, further comprising:

receiving (230, 710) a configuration of a resource zone (620, 620-1, 620-2, 620-3) that is broadcasted by the device with the essential system information,

wherein receiving at least a part of optional system information comprises receiving (270, 730, 840) the part of the optional system information in the resource zone.

19. The method of any one of claims 11 to 13, wherein receiving the part of the optional system information comprises:

in response to receiving an indicator in a predefined resource zone, receiving (270, 730, 840) the part of the optional system information in the predefined resource zone, the indicator indicating existence of the part of the optional system information in the predefined resource zone.

20. The method of any one of claims 11 to 13, wherein receiving the resource configuration of the demand channel comprises:

receiving (230, 710) the resource configuration of the demand channel included in the essential system information.

21. The method of any one of claims 11 to 13, wherein the resource configuration of the demand channel includes at least one of the following: a period of the demand channel, a time offset with respect to a reference signal (420), or a frequency offset with respect to the reference signal.

22. The method of any one of claims 11 to 13, wherein the resource configuration of the demand channel is determined based on at least one of the following: beamforming of the device, or grouping of the terminal (120-1) and further terminals (120-2, 120-3) in the cell.

23. A device (110, 1000), comprising:

a transceiver (1010) configured to broadcast (210, 310) essential system information (430, 520, 530, 610, 630) and a resource configuration of a demand channel, the essential

system information being required to access a cell (112) of the device; and

a controller (1020) configured to monitor (220, 340), on the demand channel, a request for at least a part of optional system information other than the essential system information,

the transceiver being further configured to broadcast (260, 360) the part of the optional system information in response to receiving (250, 350) the request.

24. The device of claim 23, wherein the demand channel is a common channel shared by terminals (120-1, 120-2, 120-3) in the cell.

25. The device of any of claims 23-24, wherein the transceiver is configured to broadcast (210, 310) the resource configuration of the demand channel and at least a part of the essential system information (430, 520, 610) in an access information table (AIT) (410).

26. The device of claim 23 or 24, wherein the transceiver is configured to:

broadcast (210, 310) semi-static system information (520) of the essential system information with a first period; and

broadcast (210, 310) dynamic system information (530, 630) of the essential system information with a second period shorter than the first period, the dynamic system information including the resource configuration of the demand channel.

27. The device of claim 23 or 24, wherein the transceiver is further configured to broadcast (210, 310) a configuration of a resource zone (620, 620-1, 620-2, 620-3) with the essential system information, and

wherein the transceiver is configured to broadcast (260, 360) the part of the optional system information in the resource zone.

28. The device of claim 23 or 24, wherein the transceiver is configured to:

broadcast (260, 360) an indicator in a predefined resource zone (620, 620-1, 620-2, 620-3) to indicate existence of the part of the optional system information; and

broadcast (260, 360) the part of the optional system information in the predefined resource zone.

29. The device of claim 23 or 24, wherein the transceiver is configured to

broadcast (210, 310) the resource configuration of the demand channel as a part of the essential system information (430, 530, 610, 630).

30. The device of claim 23 or 24, wherein the resource configuration of the demand channel includes at least one of the following: a period of the demand channel, a time offset with respect to a reference signal (420), or a frequency offset with respect to the reference signal.

31. The device of claim 23 or 24, wherein the controller is further configured to determine (305) the resource configuration of the demand channel based on at least one of the following: beamforming of the device, or grouping of terminals (120-1, 120-2, 120-3) in the cell.

32. The device of claim 23 or 24, wherein the controller is configured to monitor (220, 340) a sequence as the request, the sequence being common to a plurality of terminals (120-1, 120-2, 120-3) in the cell.

33. A terminal (120-1, 120-2, 120-3, 1100) comprising:

a receiver (1100) configured to:

receive (230, 710) essential system information (430, 520, 530, 610, 630) and a resource configuration of a demand channel that are broadcasted by a device (110, 1000, 1200), the essential system information being required to access a cell (112) of the device; and

receive (270, 730, 840) at least a part of optional system information other than the essential system information, the part of the optional system information being broadcasted by the device in response to a request that is sent on the demand channel according to the resource configuration.

34. The terminal of claim 33, further comprising:

a transmitter (1120) configured to send (720, 830) the request for the part of the optional system information on the demand channel according to the resource configuration.

35. The terminal of claim 34, further comprising:

a controller (1130) configured to check (810), in a resource zone (620, 620-1, 620-2, 620-3), the part of the optional system information that is requested by a further terminal (120-2, 120-3),

wherein the transmitter is configured to send (720, 830) the request to the device in response to missing (820) the part of the optional system information in the resource zone.

36. The terminal of claim 34 or 35, wherein the transmitter is configured to send (720, 830) a sequence as the request, the sequence being common to the terminal (120-1) and a further terminal (120-2, 120-3) in the cell.

37. The terminal of any one of claims 33 to 35, wherein the demand channel is a common channel shared by the terminal (120-1) and a further terminal (120-2, 120-3) in the cell.

38. The terminal of any one of claims 33 to 35, wherein the receiver is configured to receive (230, 710) an access information table (AIT) (410) that is broadcasted by the device, the AIT including the resource configuration of the demand channel and at least a part of the essential system information (430, 520, 610).

39. The terminal of any one of claims 33 to 35, wherein the receiver is configured to:

receive (230, 710) semi-static system information (520) of the essential system information that is broadcasted by the device with a first period; and

receive (230, 710) dynamic system information (530, 630) of the essential system information that is broadcasted by the device with a second period shorter than the first period, the dynamic system information including the resource configuration of the demand channel.

40. The terminal of any one of claims 33 to 35, wherein the receiver is further configured to receive (230, 710) a configuration of a resource zone (620, 620-1, 620-2, 620-3) that is broadcasted by the device with the essential system information; and

wherein the receiver is configured to receive (270, 730, 840) the part of the optional system information in the resource zone.

41. The terminal of any one of claims 33 to 35, wherein the receiver is configured to:

in response to receiving an indicator in a predefined resource zone, receive (270, 730, 840) the part of the optional system information in the predefined resource zone, the indicator indicating existence of the part of the optional system information in the predefined resource zone.

42. The terminal of any one of claims 33 to 35, wherein the receiver is configured to receive (230, 710) the resource configuration of the demand channel included in the essential system information.

43. The terminal of any one of claims 33 to 35, wherein the resource configuration of the demand channel includes at least one of the following: a period of the demand channel, a time offset with respect to a reference signal (420), or a frequency offset with respect to the reference signal.

44. The terminal of any one of claims 33 to 35, wherein the resource configuration of the demand channel is determined based on at least one of the following: beamforming of the device or grouping of the terminal (120-1) and further terminals (120-2, 120-3) in the cell.

45. A device (1200) comprising:

a processor (1210) and a memory (1220), the memory containing program (1230) including instructions executable by the processor, the processor being configured to cause the device to perform the method (300) according to claim 1 or 2.

46. A terminal (1200) comprising:

a processor (1210) and a memory (1220), the memory containing program (1230) including instructions executable by the processor, the processor being configured to cause the terminal to perform the method (700, 800) according to any one of claims 11 to 13.

47. A computer readable storage medium (1220) storing instructions which, when executed on a processor (1210) of a device (1200), cause the device to perform the method (300) according to claim 1 or 2.

48. A computer readable storage medium (1220) storing instructions which, when executed on a processor (1210) of a terminal (1200), cause the terminal to perform the method (700, 800) according to any one of claims 11 to 13.