Claims:

1. A communication terminal for communicating with a base station, the communication terminal comprising:

a priority control section that controls a priority of control information to be transmitted to the base station in accordance with a priority of medium access control (MAC) control information which indicates a priority individually assigned to plural pieces of MAC control information and a priority individually assigned to plural pieces of signaling resource bearers (SRB) for transmitting radio resource control (RRC) control information; and

a transmission message generation section that generates a transmission message in accordance with the control of the priority control section in consideration with the priority of control information.

2. The communication terminal as claimed in claim 1, further comprising a reception section that receives information for controlling the priority of the control information from the base station.

3. The communication terminal as claimed in claim 2, wherein

the priority of the MAC control information has been previously determined, and

the priority control section controls the priority including the SRB by using the information for controlling the priority received from the base station.

4. A communication method in a communication terminal for communicating with a base station, the communication method comprising the steps of:

controlling a priority of control information to be transmitted to the base station in accordance with a priority of MAC control information which indicates a priority individually assigned to plural pieces of MAC control information and a priority individually assigned to plural pieces of SRB for transmitting RRC control information; and

generating a transmission message in accordance with the control of the priority control section in consideration with the priority of control information.

5. The communication method as claimed in claim 4, further comprising a step of receiving information for controlling the priority of the control information from the base station.

6. The communication method as claimed in claim 5, wherein

the priority of the MAC control information has been previously determined, and

the priority including the SRB is controlled by using the information for controlling the priority received from the base station.

7. A communication terminal for communicating with a base station in accordance with a defined procedure, the communication terminal comprising:

a priority control section configured to define a relationship between MAC (Medium Access Control) control information priorities, which are respectively assigned to a plurality of MAC control information elements, and radio bearer (RB) priorities respectively assigned to a DRB (Data Radio Bearer) and each of a plurality of SRBs (Signalling Radio Bearers), wherein the plurality of SRBs convey RRC (Radio Resource Control) messages or NAS (Non-Access Stratum) messages, the priority control section being further configured to compare the MAC control information priorities with the priorities of the SRBs; and

a transmission message generation section configured to control transmission of information so as to transmit information on an SRB having a higher priority earlier than a MAC control information element having a lower priority in accordance with the relationship between the MAC and SRB priorities defined by the priority control section.

8. The communication terminal according to claim 7, further comprising a reception section configured to receive from the base station a configuration information element that defines the RB priorities, whereas the MAC control information priorities are fixed.

9. The communication terminal according to claim 7, wherein: the MAC control information elements include a Terminal Identifier, a Buffer Status Report, and a Channel Status Information, wherein the MAC control information elements have MAC

priorities in decreasing order from the Terminal Identifier, the Buffer Status Report, and the Channel Status Information, and the transmission message generation section transmits information on the DRB or SRB having a higher priority, or a MAC control information element having a higher MAC control information priority, earlier in accordance with the priorities of the DRB; and the SRBs; and the MAC control information priorities of the Terminal Identifier, the Buffer Status Report, and the Channel Status Information.

10. The communication terminal according to claim 7, further comprising a priority table section configured to store information regarding the MAC control information priorities, wherein: the reception section receives boundary information indicating a boundary of the MAC control information priorities, and the priority control section references the boundary information to define the relationship between the MAC control information priorities and the priorities respectively assigned to the DRB and the plurality of SRBs.

11. The communication terminal according to claim 7, wherein: the priority control section specifies the MAC control information priorities in response to a use reason for a RACH procedure.

12. The communication terminal according to claim 7, wherein: the reception section receives information, which is required for determining the MAC control information priorities and the priorities of the SRBs, from the base station, and the priority control section references the received information to determine the priorities of the SRBs and the MAC priorities.

13. The communication terminal according to claim 12, wherein: the information required for determining the MAC control information priorities and the priorities of the SRBs contains information indicating whether or not a service is received in which a packet loss increases due to a path switching delay, information indicating whether or not a handover is a handover within the base station, and information indicating whether or not a handover is a handover between base stations.

14. A communication method in a communication terminal for communicating with a base station, the communication method comprising:

defining a relationship between MAC (Medium Access Control) control information priorities, which are respectively assigned to a plurality of MAC control information elements, and radio bearer (RB) priorities respectively assigned to a DRB (Data Radio Bearer) and each of a plurality of SRBs (Signalling Radio Bearers), wherein the plurality of SRBs convey RRC (Radio Resource Control) messages or NAS (Non-Access Stratum) messages, the priority control section being further configured to compare the MAC control information priorities with the priorities of the SRBs

controlling transmission of information so as to transmit information on an SRB having a higher priority earlier than a MAC control information element having a lower priority in accordance with the relationship between the MAC and SRB priorities defined by the priority control section

15. The communication method as claimed in claim 14, further comprising receiving from the base station information for controlling the priorities of the MAC control information elements, the DRBs and the SRBs.

16. The method of claim 14, wherein the message comprises plural MAC control elements, and wherein the plural MAC control elements include a terminal identifier and a buffer status report (BSR).

17. The method of claim 16, wherein the terminal identifier is a controlling radio network temporary ID (C-RNTI).

18. The method of claim 14, wherein the transmission message is included in a random access Channel (RACH) procedure.

19. A base station for communicating with a communication terminal, the base station being configured to assign priorities to plural MAC (Medium Access Control) control elements and to transmit the priorities of the MAC control information to the communication terminal.

20. The base station as claimed in claim 19, wherein the priorities of the MAC control information are previously determined and the base station is configured to transmit information of boundary between MAC control information having a higher priority than SRB (Signalling Radio Bearer) and MAC control information having a lower priority than the SRB to the communication terminal.

21. The base station as claimed in claim 19, wherein the base station is configured to transmit the plural MAC (Medium Access Control) control elements in a transmission message included in a random access Channel (RACH) procedure, and wherein the base station is configured to assign the priorities of the MAC control information responsive to a use reason of a RACH procedure.

22. The base station as claimed in claim 19, wherein the base station is configured to transmit the plural MAC (Medium Access Control) control elements is a transmission message included in a random access Channel (RACH) procedure, and the base station is further configured to determine precedence of MAC control information relative to SRB (Signalling Radio Bearer) based on size of the transmission message.

23. A method in a base station which communicates with a communication terminal, the method comprising:

assigning priorities to plural MAC (Medium Access Control) control elements; and

transmitting the priorities of the MAC control elements to the communication terminal.

24. The method of claim 23, wherein the priorities of the MAC control elements are previously determined and the method further comprises transmitting information of boundary between MAC control elements having a higher priority than SRB (Signalling Radio Bearer) and MAC control elements having a lower priority than the SRB to the communication terminal.

25. The method of claim 23, wherein the base station is configured to transmit the plural MAC (Medium Access Control) control elements is a transmission message

included in a random access Channel (RACH) procedure, and wherein the method further comprises assigning the priorities of the MAC control elements responsive to a use reason of a RACH procedure.

26. The method of claim 23, wherein the base station is configured to transmit the plural MAC (Medium Access Control) control elements is a transmission message included in a random access Channel (RACH) procedure, and the method further comprises determining precedence of MAC control elements relative to SRB (Signalling Radio Bearer) based on size of the transmission message.

Claims:

1. A communication terminal for communicating with a base station, the communication terminal comprising:

a priority control section that controls a priority of control information to be transmitted to the base station in accordance with a priority of medium access control (MAC) control information which indicates a priority individually assigned to plural MAC control elements and a priority individually assigned to plural signaling resource bearers (SRBs) for transmitting radio resource control (RRC) control information; and

a transmission message generation section that generates a transmission message in accordance with the control of the priority control section in consideration with the priority of control information.

2. The communication terminal as claimed in claim 1, further comprising a reception section that receives information for controlling the priority of the control information from the base station.

3. The communication terminal as claimed in claim 2, wherein the priorities of the plural MAC control elements have been previously determined, and

the priority control section uses the information for controlling the priority received from the base station to control the priorities assigned to the SRBs.

4. A communication method in a communication terminal for communicating with a base station, the communication method comprising the steps of:

controlling a priority of control information to be transmitted to the base station in accordance with a priority of MAC control information which indicates a priority individually assigned to plural MAC control elements and a priority individually assigned to plural signaling resource bearers (SRBs) for transmitting RRC control information; and

generating a transmission message in accordance with the control of the priority control section in consideration with the priority of control information.

5. The communication method as claimed in claim 4, further comprising a step of receiving information for controlling the priority of the control information from the base station.

6. The communication method as claimed in claim 5, wherein priorities of the plural MAC control elements have been previously determined, and

the priorities assigned to the plural SRBs is controlled by using the information for controlling the priority received from the base station.

7. A communication terminal for communicating with a base station in accordance with a defined procedure, the communication terminal comprising:

a priority control section configured to define a relationship between MAC (Medium Access Control) control information priorities, which are respectively assigned to a plurality of MAC control information elements, and radio bearer (RB) priorities respectively assigned to a DRB (Data Radio Bearer) and each of a plurality of SRBs (Signalling Radio Bearers), wherein the plurality of SRBs convey RRC (Radio Resource Control) messages or NAS (Non-Access Stratum) messages, the priority control section being further configured to compare the MAC control information priorities with the priorities of the SRBs; and

a transmission message generation section configured to control transmission of information so as to transmit information on an SRB having a higher priority earlier than a MAC control information element having a lower priority in accordance with the relationship between the MAC and SRB priorities defined by the priority control section.

8. The communication terminal according to claim 7, further comprising a reception section configured to receive from the base station a configuration information element that defines the RB priorities, whereas the MAC control information priorities are fixed.

9. The communication terminal according to claim 7, wherein: the MAC control information elements include a Terminal Identifier, a Buffer Status Report, and a Channel Status Information, wherein the MAC control information elements have MAC

priorities in decreasing order from the Terminal Identifier, the Buffer Status Report, and the Channel Status Information, and the transmission message generation section transmits information on the DRB or SRB having a higher priority, or a MAC control information element having a higher MAC control information priority, earlier in accordance with the priorities of the DRB; and the SRBs; and the MAC control information priorities of the Terminal Identifier, the Buffer Status Report, and the Channel Status Information.

10. The communication terminal according to claim 7, further comprising a priority table section configured to store information regarding the MAC control information priorities, wherein: the reception section receives boundary information indicating a boundary of the MAC control information priorities, and the priority control section references the boundary information to define the relationship between the MAC control information priorities and the priorities respectively assigned to the DRB and the plurality of SRBs.

11. The communication terminal according to claim 7, wherein: the priority control section specifies the MAC control information priorities in response to a use reason for a RACH procedure.

12. The communication terminal according to claim 7, wherein: the reception section receives information, which is required for determining the MAC control information priorities and the priorities of the SRBs, from the base station, and the priority control section references the received information to determine the priorities of the SRBs and the MAC priorities.

13. The communication terminal according to claim 12, wherein: the information required for determining the MAC control information priorities and the priorities of the SRBs contains information indicating whether or not a service is received in which a packet loss increases due to a path switching delay, information indicating whether or not a handover is a handover within the base station, and information indicating whether or not a handover is a handover between base stations.

14. A communication method in a communication terminal for communicating with a base station, the communication method comprising:

defining a relationship between MAC (Medium Access Control) control information priorities, which are respectively assigned to a plurality of MAC control information elements, and radio bearer (RB) priorities respectively assigned to a DRB (Data Radio Bearer) and each of a plurality of SRBs (Signalling Radio Bearers), wherein the plurality of SRBs convey RRC (Radio Resource Control) messages or NAS (Non-Access Stratum) messages, the priority control section being further configured to compare the MAC control information priorities with the priorities of the SRBs

controlling transmission of information so as to transmit information on an SRB having a higher priority earlier than a MAC control information element having a lower priority in accordance with the relationship between the MAC and SRB priorities defined by the priority control section

15. The communication method as claimed in claim 14, further comprising receiving from the base station information for controlling the priorities of the MAC control information elements, the DRBs and the SRBs.

16. The method of claim 14, wherein the message comprises plural MAC control elements, and wherein the plural MAC control elements include a terminal identifier and a buffer status report (BSR).

17. The method of claim 16, wherein the terminal identifier is a controlling radio network temporary ID (C-RNTI).

18. The method of claim 14, wherein the transmission message is included in a random access Channel (RACH) procedure.