【CLAIMS】

1. A method performed by a radio unit (RU), the method comprising:

receiving, from a distributed unit (DU), a control plane (C-plane) message comprising section information for user equipment (UE) scheduling information and section extension information for a group configuration of multiple ports, wherein:

the section information comprises information on a resource region of a section description and a UE identifier, and

the section extension information comprises information on a beam group type, information on the number of one or more ports indicated by the section extension information, and a UE identifier per port; and

in a case that a UE identifier of a specified port is set to 0x7FFF in the C-plane message, identifying that the resource region is not allocated for the specified port.

2. The method of claim 1,

wherein the multiple ports share the section information in the RU,

wherein the multiple ports include a representative port and the one or more ports indicated by the section extension information,

wherein information on the beam group type is '10b', and

wherein the UE identifier per port includes a UE identifier of each port of the one or more ports indicated by the section extension information.

3. The method of claim 1,

wherein the UE identifier of the specified port is included in the section information or the section extension information,

wherein the section information corresponds to a section type 5,

wherein the section extension information corresponds to a section extension 10, and

wherein the UE identifier of the specified port is indicated by 15-bit.

4. The method of claim 1,

wherein the information on the resource region comprises:

information on a start physical resource block (PRB) of the section description, and

information on the number of continuous PRBs of the section description, and

wherein the UE identifier of the specified port set to 0x7FFF indicates that a layer corresponding to the specified port is not scheduled within the PRBs of the section description.

5. The method of claim 1, further comprising:

obtaining beamforming weight,

wherein a set of UE identifiers of the section information and the section extension information is associated with UEs and layers of a UE that are co-scheduled in a multi-user (MU)-multiple input multiple output (MIMO) scheduling,

wherein the beamforming weight is obtained based on channel information of at least part of the set of UE identifiers, and

wherein the beamforming weight is obtained, based on a non-scheduling of the resource region of the specified port.

6. A method performed by a distributed unit (DU), the method comprising:

setting a UE identifier of a specified port, which is not scheduled, to 0x7FFF; and

transmitting, to a radio unit (RU), a control plane (C-plane) message comprising section information for user equipment (UE) scheduling information and section extension information for a group configuration of multiple ports,

wherein:

the section information comprises information on resource region of section description and UE identifier, and

the section extension information comprises information on a beam group type, information on the number of one or more ports indicated by the section extension information, and a UE identifier per port, and

wherein the UE identifier of the specified port in the C-plane message indicates that the resource region is not allocated for the specified port.

7. The method of claim 6,

wherein the multiple ports share the section information,

wherein the multiple ports include a representative port and the one or more ports indicated by the section extension information,

wherein information on the beam group type is ‘10b’,

wherein the UE identifier per port includes a UE identifier of each port of the one or more ports,

wherein the UE identifier of the specified port is included in the section information or the section extension information,

wherein the section information corresponds to a section type 5,

wherein the section extension information corresponds to a section extension 10, and

wherein the UE identifier of the specified port is indicated by 15-bit.

8. The method of claim 6,

wherein the information on the resource region comprises:

information on a start physical resource block (PRB) of the section description, and

information on the number of continuous PRBs of the section description, and

wherein the UE identifier of the specified port set to 0x7FFF indicates that a layer corresponding to the specified port is not scheduled within the PRBs of the section description.

9. The method of claim 6,

wherein a set of UE identifiers of the section information and the section extension information is associated with UEs and layers of a UE that are co-scheduled in a multi-user (MU)-multiple input multiple output (MIMO) scheduling,

wherein channel information of at least part of the set of UE identifiers is used for a calculation of a beamforming weight, and

wherein the beamforming weight is calculated, based on a non-scheduling of the resource region of the specified port.

10. A radio unit (RU), the electronic device comprising:

memory comprising instructions;

at least one transceiver configured to transmit signals or receive signals on a fronthaul interface; and

at least one processor,

wherein the instructions cause, when executed by the at least one processor, the RU to:

receive, from a distributed unit (DU), a control plane (C-plane) message comprising section information for user equipment (UE) scheduling information and section extension information for a group configuration of multiple ports, wherein:

the section information comprises information on a resource region of a section description and a UE identifier, and

the section extension information comprises information on a beam group type, information on the number of one or more ports indicated by the section extension information, and a UE identifier per port; and

in a case that a UE identifier of a specified port is set to 0x7FFF in the C-plane message, identify that the resource region is not allocated for the specified port.

11. The RU of claim 10,

wherein the instructions cause, when executed by the at least one processor, the RU to perform operations according to claims 2 to 5.

12. A distributed unit (DU), the electronic device comprising:

memory comprising instructions;

at least one transceiver configured to transmit signals or receive signals on a fronthaul interface; and

at least one processor,

wherein the instructions cause, when executed by the at least one processor, the DU to:

set a UE identifier of a specified port, which is not scheduled, to 0x7FFF, and

transmit, to a radio unit (RU), to a control plane (C-plane) message comprising section information for user equipment (UE) scheduling information and section extension information for a group configuration of multiple ports,

wherein:

the section information comprises information on resource region of section description and UE identifier, and

the section extension information comprises information on a beam group type, information on the number of one or more ports indicated by the section extension information, and a UE identifier per port, and

wherein the UE identifier of the specified port in the C-plane message indicates that the resource region is not allocated for the specified port.

13. The DU of claim 12,

wherein the instructions cause, when executed by the at least one processor, the DU to perform operations according to claims 6 to 9.

14. A non-transitory computer-readable medium, comprising memory storing a program comprising instructions, and

wherein the instructions cause, when executed by a processor of a radio unit (RU), the RU to:

receive, from a distributed unit (DU), a control plane (C-plane) message comprising section information for user equipment (UE) scheduling information and section extension information for a group configuration of multiple ports, wherein:

the section information comprises information on a resource region of a section description and a UE identifier, and

the section extension information comprises information on a beam group type, information on the number of one or more ports indicated by the section extension information, and a UE identifier per port; and

in a case that a UE identifier of a specified port is set to 0x7FFF in the C-plane message, identify that the resource region is not allocated for the specified port.

15. A non-transitory computer-readable medium, comprising memory storing a program comprising instructions,

wherein the instructions cause, when executed by a processor of a distributed unit (DU), the DU to:

set a UE identifier of a specified port, which is not scheduled, to 0x7FFF, and

transmit, to a radio unit (RU), to a control plane (C-plane) message comprising section information for user equipment (UE) scheduling information and section extension information for a group configuration of multiple ports,

wherein:

the section information comprises information on resource region of section description and UE identifier, and

the section extension information comprises information on a beam group type, information on the number of one or more ports indicated by the section extension information, and a UE identifier per port, and

wherein the UE identifier of the specified port in the C-plane message indicates that the resource region is not allocated for the specified port.