

has been demanded. Thus, the present disclosure proposes a novel and improved communication control device, radio communication device, communication control method, and radio communication method which can realize communication in which orthogonal resources and non-orthogonal resources are selectively used.

Solution to Problem

[0007a] According to a first aspect of the present invention, there is provided a control device comprising: circuitry configured to communicate with a radio communication device of a radio communication system equipped to use a plurality of alternative access schemes, the plurality of alternative access schemes including at least one of a multiple access scheme that uses orthogonal resources and a multiple access scheme that uses non-orthogonal resources, and allocate resources according to a selected access scheme of the plurality of alternative access schemes.

[0007b] According to a second aspect of the present invention, there is provided a radio communication device comprising: circuitry configured to perform radio communications using a plurality of alternative access schemes, the plurality of alternative access schemes including at least one of a multiple access scheme that uses orthogonal resources and a multiple access scheme that uses non-orthogonal resources, and control a radio communication device to perform radio communication using allocated resources for the access schemes selected for use by the circuitry.

[0007c] According to a third aspect of the present invention, there is provided a communication control method comprising: using circuitry to perform communications with a radio communication device of a radio communication system equipped to use a plurality of alternate access schemes, the plurality of alternate access schemes including at least one of a multiple access scheme that uses orthogonal resources and a multiple access scheme that uses non-orthogonal resources; and allocating with the circuitry resources according to a selected access scheme of the plurality of alternative access schemes.

[0008] Disclosed herein is a communication control device including: a communication unit configured to perform communication with a radio communication device of a radio communication system in which communication is possible using a plurality of access schemes including at least one of the access schemes of a multiple access scheme that uses orthogonal resources and a multiple access scheme that uses non-orthogonal resources; and a control unit configured to perform allocation of resources relating to the access schemes to be used by the radio communication device.

[0009] Disclosed herein is a radio communication device including: a radio communication unit configured to perform radio communication using one or more access schemes of at least either a multiple access scheme that uses orthogonal resources or a multiple access scheme that uses non-orthogonal resources; and a control unit configured to control the radio communication unit to perform radio communication using allocated resources for the access schemes to be used by the radio communication unit.

[0010] Disclosed herein is a communication control method including: performing communication with a radio communication device of a radio communication system in which communication is possible using a plurality of access schemes including at least one of the access schemes of a multiple access scheme that uses orthogonal resources and a multiple access scheme that uses non-orthogonal resources; and performing allocation of resources relating to the access schemes to be used by the radio communication device with a processor.

[0011] Disclosed herein is a radio communication method including: performing radio communication using one or more access schemes of at least either a multiple access scheme that uses orthogonal resources or a multiple access scheme that uses non-orthogonal resources; and controlling, with a processor, the radio communication to be performed using allocated resources for the access schemes to be used during the radio communication.

Advantageous Effects of Invention

[0012] According to embodiments of the present invention, communication in which orthogonal resources and non-orthogonal resources are selectively used can be realized. Note that the effects described above are not necessarily limited, and along