CLAIMS

[Claim 1]

A first radio receiving apparatus included in a plurality of radio receiving apparatuses that perform communication with a radio transmission apparatus using OFDMA transmission, comprising:

a reception unit that receives a resource reserving signal, and

a transmission unit that transmits a first resource reserving response signal to the radio transmission apparatus by using at least one radio resource with which the resource reserving signal is received, wherein

the resource reserving signal includes first information indicating that the resource reserving signal is addressed to the plurality of radio receiving apparatuses, and

at least part of information included in the first resource reserving response signal is the same common information as information included in the first resource reserving response signal transmitted by another of the radio receiving apparatuses.

[Claim 2]

The first radio receiving apparatus according to claim 1, wherein

the reception unit acquires the common information from the radio transmission apparatus.

[Claim 3]

The first radio receiving apparatus according to claim 2, wherein

a time period during which the transmission unit waits until the first resource reserving response signal is transmitted after receiving the resource reserving signal is equal to a time period during which the another of the radio receiving apparatuses waits until the first resource reserving response signal is transmitted after receiving the resource reserving signal.

[Claim 4]

The radio receiving apparatus according to claim 3, wherein

the transmission unit transmits the first resource reserving response signal at the same time as a time at which at least one of the plurality of radio receiving apparatuses transmits the first resource reserving response signal.

[Claim 5]

The radio receiving apparatus according to claim 4,

wherein

the transmission unit further transmits a second resource reserving response signal; and

the reception unit acquires, from the radio transmission apparatus, information indicating the radio resource with which the transmission unit transmits the second resource reserving response signal.

[Claim 6]

A radio transmission apparatus that performs communication with a plurality of radio receiving apparatuses using OFDMA transmission, comprising:

a transmission unit that transmits a resource reserving signal, and

a reception unit that receives a first resource reserving response signal transmitted by at least one radio receiving apparatus among the plurality of radio receiving apparatuses by using at least one radio resource with which the resource reserving signal is received, wherein

the resource reserving signal includes first information indicating that the resource reserving signal is addressed to the plurality of radio receiving apparatuses, and

at least part of information included in the first resource reserving response signal is common among the

plurality of radio receiving apparatuses.

[Claim 7]

The radio transmission apparatus according to claim 6, wherein

the transmission unit notifies the plurality of radio transmission apparatuses of the common information.

[Claim 8]

The radio transmission apparatus according to claim 7, wherein

the reception unit continues a reception operation for a predetermined time period after transmitting the resource reserving signal, and

the reception unit stops the reception operation in a case where no first resource reserving response signal transmitted by the plurality of radio transmission apparatuses is received for the predetermined time period.

[Claim 9]

A communication method for a first radio receiving apparatus included in a plurality of radio receiving apparatuses that perform communication with a radio transmission apparatus using OFDMA transmission, the communication method comprising the steps of:

receiving a resource reserving signal, and

transmitting a first resource reserving response signal to the radio transmission apparatus by using at least one radio resource with which the resource reserving signal is received, wherein

the resource reserving signal includes first information indicating that the resource reserving signal is addressed to the plurality of radio receiving apparatuses, and

at least part of information included in the first resource reserving response signal is the same common information as information included in the first resource reserving response signal transmitted by another of the radio receiving apparatuses.