CLAIMS

~~Claim 1~~

1. A communication control method for use in a small-or-medium-scale base station, comprising the steps of:

receiving a radio signal transmitted from a communication terminal or a large-scale base station;

acquiring information of the communication terminal or the large-scale base station by analyzing the radio signal;

selecting one operation range among a plurality of types of operation ranges based on the information of the communication terminal or the large-scale base station; and

communicating with the communication terminal in accordance with the operation range selected from among the plurality of types of operation ranges,

wherein the plurality of types of operation ranges include a first operation range for link reinforcement between the communication terminal and the large-scale base station, a second operation range for improving a capacity, a third operation range for extending communication coverage, and a fourth operation range in which the small-or-medium-scale base station operates a cell.

~~Claim 2~~

~~The communication control method according to claim 1,~~

~~wherein the plurality of types of operation ranges include a first operation range for link reinforcement between the communication terminal and the large-scale base station, a second operation range for improving a capacity, a third operation range for extending communication coverage, and a fourth operation range in which the small-or-medium-scale base station operates a cell.~~

~~Claim 3~~

2. The communication control method according to claim ~~2~~1,

wherein the step of selecting the operation range is a step of selecting the first operation range when link quality between the communication terminal and the large-scale base station is less than a predetermined standard.

~~Claim 4~~

3. The communication control method according to claim ~~3~~2,

wherein the step of selecting the operation range is a step of selecting the second operation range when a degree of congestion of traffic in the large-scale base station is greater than an upper limit.

~~Claim 5~~

4. The communication control method according to claim 43,

wherein the step of selecting the operation range is a step of selecting the third operation range when a distribution of the communication terminals is biased toward a cell edge of the large-scale base station.

~~Claim 6~~

5. The communication control method according to claim ~~5~~4,

wherein the step of selecting the operation range is a step of selecting the fourth operation range when the small-or-medium-scale base station and the communication terminal are out of a cell area of the large-scale base station.

~~Claim 7~~

6. The communication control method according to claim ~~6~~5,

wherein the first operation range includes a relay operation of communication between the large-scale base station and the communication terminal or a CoMP operation.

~~Claim 8~~

7. The communication control method according to claim ~~7~~6,

wherein the second operation range includes an overlay transmission operation.

~~Claim 9~~

8. The communication control method according to claim ~~8~~7,

wherein the third operation range includes the relay operation or an operation of operating a cell.

~~Claim 10~~

9. The communication control method according to claim ~~9~~8,

wherein the step of selecting the operation range is a step of selecting the operation range from the first operation range and the fourth operation range when a connection between the large-scale base station or a network, which manages the large-scale base station, and the small-or-medium-scale base station is only a wired connection.

~~Claim 11~~

10. The communication control method according to claim ~~10~~9,

wherein the step of selecting the operation range is a step of selecting the operation range from the first operation range, the second operation range, and the third operation range when the connection between the large-scale base station or the network, which manages the large-scale base station, and the small-or-medium-scale base station is only a wireless connection.

~~Claim 12~~

11. The communication control method according to claim ~~11~~10,

wherein the step of selecting the operation range is a step of selecting the operation range from the first operation range, the second operation range, the third operation range, and the fourth operation range when the connection between the large-scale base station or the network, which manages the large-scale base station, and the small-or-medium-scale base station is the wireless connection and the wired connection.

~~Claim 13~~

12 The communication control method according to claim ~~12~~11,

wherein the large-scale base station or the network, which manages the large-scale base station, performs interference avoidance control for avoiding interference caused due to communication by the small-or-medium-scale base station.

~~Claim 14~~

13. A small-or-medium-scale base station comprising:

a reception unit for receiving a radio signal transmitted from a communication terminal or a large-scale base station;

an information acquisition unit for acquiring information of the communication terminal or the large-scale base station by analyzing the radio signal;

a selection unit for selecting one operation range among a plurality of types of operation ranges based on the information of the communication terminal or the large-scale base station; and

a communication control unit for controlling communication with the communication terminal in accordance with the operation range selected from among the plurality of types of operation ranges,

wherein the plurality of types of operation ranges include a first operation range for link reinforcement between the communication terminal and the large-scale base station, a second operation range for improving a capacity, a third operation range for extending communication coverage, and a fourth operation range in which the small-or-medium-scale base station operates a cell.