CLAIMS

[Claim 1]

A robot, comprising:

a communication means capable of communicating with a plurality of sensor devices provided in a room;

a movement means capable of moving in the room;

a detection means; and

a control means configured to receive first detection information detected by each of the plurality of sensor devices and second detection information detected by the detection means, discriminate, among the first detection information, detection information on the robot itself, from detection information on a mobile body other than the robot itself, and detect an action of the mobile body, using the discriminated detection information on the mobile body.

[Claim 2]

The robot according to claim 1, wherein

the plurality of sensor devices are home appliances, and

the communication means receives operation information of the home appliances.

[Claim 3]

The robot according to claim 1 or 2, wherein

the detection means includes a position sensor for detecting geometric information of a space in which the robot itself has moved, and

the robots includes a storage means for storing sensor position information indicating positions where the plurality of sensor devices are installed, and a correspondence relationship between geometric information of a space where the robot itself has moved and information on positions where the plurality of sensor devices are provided.

[Claim 4]

The robot according to claim 3, wherein

the control means stores, in the storage means, a position where a plurality of sensor devices are provided, as position information expressed by a coordinate system of a space that the robot itself has detected by the position sensor.

[Claim 5]

The robot according to claim 3 or 4, wherein

when the detection means detects information, the control means holds the detected information into the storage means, and diagnoses an abnormality state by comparing current information with past information held in the storage means.

[Claim 6]

The robot according to claim 5, wherein

when diagnosing as an abnormality state, the control means moves the robot itself to coordinates of a sensor device that has detected an abnormality, and diagnoses the abnormality.

[Claim 7]

The robot according to claim 6, comprising:

a sensor that diagnoses detail of an abnormality; and

an external communication means for communicating with an outside, wherein

when confirming an abnormality, the control means causes the external communication means to transmit confirmed abnormality information to an outside.

[Claim 8]

An action detection server, comprising:

a communication means capable of communicating with a plurality of sensor devices provided in a room and a robot including a movement means capable of moving in the room; and

a control means configured to receive first detection information detected by each of the plurality of sensor devices and second detection information detected by the robot, discriminate, among the first detection information, detection information on the robot, from detection

information on a mobile body other than the robot, and detect an action of the mobile body, using the discriminated detection information on the mobile body.

[Claim 9]

An action detection system built with

a plurality of sensor devices including a first sensor that detects information and a first communication means for transmitting information, and provided in anywhere in a room,

a robot including a second sensor that detects information, a second communication means for transmitting and receiving information, and a movement means capable of moving in the room, and

a server including a third communication means for transmitting and receiving information, the server configured to receive detection information detected by the first sensor of each of the plurality of sensor devices and detection information detected by the second sensor of the robot, discriminate, among the detection information detected by the first sensor, detection information on the robot, from detection information on a mobile body other than the robot, and detect an action of the mobile body, using the discriminated detection information on the mobile body.