

CLAIMS

1. An instrument control device comprising:
 - a communication unit that communicates with a human sensor that detects the presence of a person in a predetermined area based on a temperature change in the
 - 5 predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation; and
 - an instrument operation control unit that causes the instrument to start the predetermined operation when the human sensor detects the presence of a person and that
 - 10 stops the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag.
2. The instrument control device according to Claim 1, further comprising:
 - 15 an adjustment control unit that changes a predetermined adjustment item of the predetermined operation when the predetermined operation of the instrument started by the instrument operation control unit is executed and the tag-corresponding communication device is communicating with the tag.
- 20 3. The instrument control device according to Claim 2,
 - wherein the human sensor is installed in each of a plurality of predetermined areas,
 - the instrument is installed in each of the plurality of predetermined areas,
 - the instrument control device further comprises a control information storage
 - 25 unit that stores control information indicating at least an association among the human

sensor, the instrument, a user carrying the tag, and an adjustment parameter corresponding to the adjustment item, and

the adjustment control unit changes the adjustment item of the instrument associated with the user carrying the tag according to the adjustment parameter associated with the user carrying the tag based on the control information when the predetermined operation of the instrument started by the instrument operation control unit is executed and the tag-corresponding communication device is communicating with the tag.

4. The instrument control device according to Claim 1, wherein the human sensor is installed in each of a plurality of predetermined areas,

the instrument is installed in each of the plurality of predetermined areas, the instrument control device further comprises a control information storage unit that stores control information indicating at least an association among the human sensor, the instrument, and a user carrying the tag, and

the instrument operation control unit starts the predetermined operation of the instrument associated with the human sensor having detected the presence of a person based on the control information and stops the predetermined operation of the instrument associated with the human sensor having detected the absence of a person based on the control information when the tag carried by the user associated with the human sensor having detected the absence of a person is not communicating.

5. An instrument control system comprising:
a human sensor that detects the presence of a person in a predetermined area

based on a temperature change in the predetermined area;

a tag-corresponding communication device that communicates with a tag positioned in the predetermined area; and

an instrument control device that controls instrument that performs a predetermined operation,

wherein the instrument control device includes an instrument operation control unit that causes the instrument to start the predetermined operation when the human sensor detects the presence of a person and that stops the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag.

6. An instrument control method comprising:

communicating with a human sensor that is installed to detect the presence of a person in a predetermined area based on a temperature change in the predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation;

causing the instrument to start the predetermined operation when the human sensor detects the presence of a person; and

stopping the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag.

7. A program for causing a computer to execute:

communicating with a human sensor that is installed to detect the presence of a person in a predetermined area based on a temperature change in the predetermined area,

a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation;

causing the instrument to start the predetermined operation when the human sensor detects the presence of a person; and

- 5 stopping the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag.

CLAIMS

1. An instrument control device comprising:

a communication unit that communicates with a human sensor that detects the presence of a person in a predetermined area based on a temperature change in the predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation;

an instrument operation control unit that causes the instrument to start the predetermined operation when the human sensor detects the presence of a person and that stops the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag; and

an adjustment control unit that changes a predetermined adjustment item of the predetermined operation when the predetermined operation of the instrument started by the instrument operation control unit is executed and the tag-corresponding communication device is communicating with the tag,

wherein the human sensor is installed in each of a plurality of predetermined areas,

the instrument is installed in each of the plurality of predetermined areas,

the instrument control device further comprises a control information storage unit that stores control information indicating at least an association among the human sensor, the instrument, a user carrying the tag, and an adjustment parameter corresponding to the adjustment item, and

the adjustment control unit changes the adjustment item of the instrument associated with the user carrying the tag according to the adjustment parameter associated with the user carrying the tag based on the control information when the predetermined operation of the instrument started by the instrument operation control unit is executed and the tag-corresponding communication device is communicating with the tag.

2. An instrument control device comprising:

a communication unit that communicates with a human sensor that detects the presence of a person in a predetermined area based on a temperature change in the predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation; and

an instrument operation control unit that causes the instrument to start the predetermined operation when the human sensor detects the presence of a person and that

stops the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag,

wherein the human sensor is installed in each of a plurality of predetermined areas,

the instrument is installed in each of the plurality of predetermined areas,

the instrument control device further comprises a control information storage unit that stores control information indicating at least an association among the human sensor, the instrument, and a user carrying the tag, and

the instrument operation control unit starts the predetermined operation of the instrument associated with the human sensor having detected the presence of a person based on the control information and stops the predetermined operation of the instrument associated with the human sensor having detected the absence of a person based on the control information when the tag carried by the user associated with the human sensor having detected the absence of a person is not communicating.

3. An instrument control system comprising:

a human sensor that detects the presence of a person in a predetermined area based on a temperature change in the predetermined area;

a tag-corresponding communication device that communicates with a tag positioned in the predetermined area; and

the instrument control device according to claim 1 or 2.

4. An instrument control method comprising:

communicating with a human sensor that is installed to detect the presence of a person in a predetermined area based on a temperature change in the predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation;

causing the instrument to start the predetermined operation when the human sensor detects the presence of a person;

stopping the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag;

changing a predetermined adjustment item of the predetermined operation when the predetermined operation of the instrument that has been started is executed and the tag-corresponding communication device is communicating with the tag,

wherein the human sensor is installed in each of a plurality of predetermined areas,

wherein the instrument is installed in each of the plurality of predetermined areas;

storing control information indicating at least an association among the human sensor, the instrument, a user carrying the tag, and an adjustment parameter corresponding to the adjustment item; and

changing the adjustment item of the instrument associated with the user carrying the tag according to the adjustment parameter associated with the user carrying the tag based on the control information when the predetermined operation of the instrument that has been started is executed and the tag-corresponding communication device is communicating with the tag.

5. An instrument control method comprising:

communicating with a human sensor that is installed to detect the presence of a person in a predetermined area based on a temperature change in the predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation;

causing the instrument to start the predetermined operation when the human sensor detects the presence of a person;

stopping the predetermined operation of the instrument when the absence of a

person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag;

wherein the human sensor is installed in each of a plurality of predetermined areas,

the instrument is installed in each of the plurality of predetermined areas;

storing control information indicating at least an association among the human sensor, the instrument, and a user carrying the tag; and

starting the predetermined operation of the instrument associated with the human sensor having detected the presence of a person based on the control information and stops the predetermined operation of the instrument associated with the human sensor having detected the absence of a person based on the control information when the tag carried by the user associated with the human sensor having detected the absence of a person is not communicating.

6. A program for causing a computer to execute:

communicating with a human sensor that is installed to detect the presence of a person in a predetermined area based on a temperature change in the predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation;

causing the instrument to start the predetermined operation when the human sensor detects the presence of a person; and

stopping the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag;

changing a predetermined adjustment item of the predetermined operation when the predetermined operation of the instrument that has been started is executed and the tag-corresponding communication device is communicating with the tag,

wherein the human sensor is installed in each of a plurality of predetermined areas,

wherein the instrument is installed in each of the plurality of predetermined areas;

storing control information indicating at least an association among the human sensor, the instrument, a user carrying the tag, and an adjustment parameter corresponding to the adjustment item; and

changing the adjustment item of the instrument associated with the user carrying the tag according to the adjustment parameter associated with the user carrying the tag based on the control information when the predetermined operation of the instrument that has been started is executed and the tag-corresponding communication device is

communicating with the tag.

7. A program for causing a computer to execute:

communicating with a human sensor that is installed to detect the presence of a person in a predetermined area based on a temperature change in the predetermined area, a tag-corresponding communication device that communicates with a tag positioned in the predetermined area, and instrument that performs a predetermined operation;

causing the instrument to start the predetermined operation when the human sensor detects the presence of a person; and

stopping the predetermined operation of the instrument when the absence of a person is detected by the human sensor and the tag-corresponding communication device is not communicating with the tag;

wherein the human sensor is installed in each of a plurality of predetermined areas,

the instrument is installed in each of the plurality of predetermined areas;

storing control information indicating at least an association among the human sensor, the instrument, and a user carrying the tag; and

starting the predetermined operation of the instrument associated with the human sensor having detected the presence of a person based on the control information

and stops the predetermined operation of the instrument associated with the human sensor having detected the absence of a person based on the control information when the tag carried by the user associated with the human sensor having detected the absence of a person is not communicating.