CLAIMS

1. A display system comprising:

an acquirer configured to acquire a first detection value and a second detection value from a temperature sensor and a humidity sensor, respectively, the temperature sensor and the humidity sensor being both included in a ventilator configured to ventilate a room;

an estimator configured to estimate, based on the first detection value and the second detection value that are acquired by the acquirer, a predicted mean vote distribution representing a distribution of predicted mean votes in a height direction in the room; and

a controller configured to make a display device present the predicted mean vote distribution estimated by the estimator,

the estimator being configured to estimate, based on the first detection value and the second detection value, a spatial temperature on a ceiling surface of the room and a spatial humidity on the ceiling surface of the room, respectively, and thereby estimate, based on the spatial temperature and spatial humidity thus estimated, the predicted mean vote distribution in the height direction in the room.

2. The display system of claim 1, wherein

at least one of an air inlet or an air outlet of the ventilator is provided through the ceiling surface,

the spatial temperature and the spatial humidity are estimated by the estimator at an identical position, and

the identical position is a position where a straight-line distance from either the air inlet or the air outlet provided through the ceiling surface is equal to or shorter than a predetermined distance.

3. The display system of claim 1 or 2, further comprising a determiner configured to determine whether a representative value derived from the predicted mean vote distribution falls outside of a preset range, wherein

the controller is configured to, when the determiner decides that the representative value fall outside of the preset range, make the display device display a notification image notifying a user that the representative value falls outside of the preset range.

4 The display system of claim 3, wherein

the representative value is any one of a maximum value, a minimum value, or an average value of the predicted mean vote distribution.

5. The display system of claim 1 or 2, further comprising a determiner configured to determine whether a predicted mean vote at an arbitrary point in the height direction in the room in the predicted mean vote distribution falls outside of a preset range, wherein

the controller is configured to, when the determiner decides that the predicted mean vote at the arbitrary point fall outside of the preset range, make the display device display a notification image notifying a user that the predicted mean vote at the arbitrary point falls outside of the preset range.

6. The display system of any one of claims 1 to 5, further comprising a calculator configured to calculate a proportion of a period in which the representative value derived from the predicted mean vote distribution falls within a preset range to an arbitrarily set period, wherein

the controller is configured to make the display device present the proportion.

7. The display system of any one of claims 1 to 5, further comprising a calculator configured to calculate a proportion of a period in which a predicted mean vote at an arbitrary point in the height direction in the room in the predicted mean vote distribution falls within a preset range to an arbitrarily set period, wherein

the controller is configured to make the display device present the proportion.

8. A display system comprising:

an acquirer configured to acquire a first detection value and a second detection value from a temperature sensor and a humidity sensor, respectively, the temperature sensor and the humidity sensor being both included in a ventilator configured to ventilate a room;

an estimator configured to estimate, based on the first detection value and the second detection value that are acquired by the acquirer, a predicted mean vote distribution representing a distribution of predicted mean votes in a height direction in the room; and

a controller configured to make a display device present the predicted mean vote distribution estimated by the estimator,

the estimator being configured to estimate the predicted mean vote distribution by the following Equations (1) to (7):

$$Tr = \alpha 1 \times Ts + c1 \quad (1)$$

$$Hr = \alpha 2 \times Hs + c2 \quad (2)$$

$$Th = \alpha 3 \times h + c3 \quad (3)$$

$$Hh = \alpha 4 \times h + c4 \quad (4)$$

$$c3 = Tr - Lrf \times \alpha 3 \quad (5)$$

$$c4 = Hr - Lrf \times \alpha 4 \quad (6)$$

$$Tmrt = Th \quad (7)$$

where α1, α2, α3, α4, c1, c2, c3, and c4 are respective coefficients;

h is a height [m] above a floor;

Lrf is a height [m] of a ceiling;

V is an air speed [m/s];

Ts is the first detection value [^{o}C] provided by the temperature sensor;

Tr is an estimated spatial temperature [^{o}C] on a ceiling surface;

Th is an estimated spatial temperature [^{o}C] at the height h above the floor;

Tmrt is a mean radiant temperature [^{o}C];

Hs is the second detection value [%] provided by the humidity sensor;

Hr is an estimated humidity [%] on the ceiling surface; and

Hh is an estimated humidity [%] at the height h above the floor.

9. A display method comprising:

an acquisition step including acquiring a first detection value and a second detection value from a temperature sensor and a humidity sensor, respectively, the temperature sensor and the humidity sensor being both included in a ventilator configured to ventilate a room;

an estimation step including estimating, based on the first detection value and the second detection value that are acquired in the acquisition step, a predicted mean vote

distribution representing a distribution of predicted mean votes in a height direction in the room; and

a presentation step including making a display device present the predicted mean vote distribution estimated in the estimation step,

the estimation step including estimating, based on the first detection value and the second detection value, a spatial temperature on a ceiling surface of the room and a spatial humidity on the ceiling surface of the room, respectively, and thereby estimate, based on the spatial temperature and spatial humidity thus estimated, the predicted mean vote distribution in the height direction in the room.

10. A display method comprising:

an acquisition step including acquiring a first detection value and a second detection value from a temperature sensor and a humidity sensor, respectively, the temperature sensor and the humidity sensor being both included in a ventilator configured to ventilate a room;

an estimation step including estimating, based on the first detection value and the second detection value that are acquired in the acquisition step, a predicted mean vote distribution representing a distribution of predicted mean votes in a height direction in the room; and

a presentation step including making a display device present the predicted mean vote distribution estimated in the estimation step,

the estimation step including estimating the predicted mean vote distribution by the following Equations (1) to (7):

$$Tr = \alpha 1 \times Ts + c1 \quad (1)$$

$$Hr = \alpha 2 \times Hs + c2 \quad (2)$$

$$Th = \alpha 3 \times h + c3 \quad (3)$$

$$Hh = \alpha 4 \times h + c4 \quad (4)$$

$$c3 = Tr - Lrf \times \alpha 3 \quad (5)$$

$$c4 = Hr - Lrf \times \alpha 4 \quad (6)$$

$$Tmrt = Th \quad (7)$$

where α1, α2, α3, α4, c1, c2, c3, and c4 are respective coefficients;

h is a height [m] above a floor;

Lrf is a height [m] of a ceiling;

V is an air speed [m/s];

Ts is the first detection value [°C] provided by the temperature sensor;

Tr is an estimated spatial temperature [°C] on a ceiling surface;

Th is an estimated spatial temperature [°C] at the height h above the floor;

Tmrt is a mean radiant temperature [°C];

Hs is the second detection value [%] provided by the humidity sensor;

Hr is an estimated humidity [%] on the ceiling surface; and

Hh is an estimated humidity [%] at the height h above the floor.

11. A program designed to cause one or more processors to perform the display method of claim 9 or 10.