

[CLAIMS]

[Claim 1]

An attention determination system comprising:

5 a human detection unit that obtains video information about a video including people within a space in which a display and a whiteboard are placed, and detects first locations which are locations of the people in the space, based on the video information obtained;

10 a head orientation detection unit that obtains the video information, and detects an orientation of a head of a subject among the people, based on the video information obtained; and

an attention determination unit that determines whether the subject is paying attention to communication among the people in the space, based on the first locations detected and the orientation of the head of the subject as detected, wherein

15 when one of the people other than the subject is speaking, the attention determination unit determines, as a period in which the subject pays attention to the communication, a period in which the head of the subject detected faces any of (i) one of the people other than the subject, (ii) the display, and (iii) the whiteboard.

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[Claim 2]

The attention determination system according to claim 1, wherein

a table is placed in the space, and

25 the human detection unit obtains the video information from a camera on the table.

[Claim 3]

30 The attention determination system according to claim 2, wherein

a plurality of cameras are placed in the space, and

the video information obtained by the human detection unit includes video information about a video captured by each of the plurality of cameras.

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[Claim 4]

The attention determination system according to claim 2, wherein

5 a sensor that measures a distance from the camera to the subject is placed in the space, and

the human detection unit detects the first locations based on the video information obtained and a result of detection by the sensor.

[Claim 5]

10 The attention determination system according to any one of claims 1 to 3, wherein

the human detection unit estimates a distance from the human detection unit to the subject, based on a size of the subject in the video, to detect the first locations.

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[Claim 6]

The attention determination system according to any one of claims 1 to 5, wherein

20 the attention determination unit further determines a period in which the head of the subject detected faces a person who is one of the people other than the subject and is not speaking, as a period in which the subject pays attention to the communication, when one of the people other than the subject is speaking.

25 [Claim 7]

A communication analysis system comprising:

the attention determination system according to any one of claims 1 to 6; and

30 a communication analysis unit that analyzes a quality of communication among the people in the space, based on whether the subject is paying attention determined.

[Claim 8]

35 The communication analysis system according to claim 7, further comprising:

a sound source detection unit that obtains sound information about a sound obtained in the space, and detects a second location which is a location of a sound source in the space, based on the sound information obtained; and

5 an utterance amount estimation unit that tracks the subject based on the first locations detected and the second location detected, and estimates an amount of utterance of the subject being tracked, wherein

10 the communication analysis unit analyzes the quality of the communication, based on whether the subject is paying attention determined and the amount of the utterance of the subject as estimated.

[Claim9]

15 An attention determination method comprising:

obtaining video information about a video including people within a space in which a display and a whiteboard are placed, and detecting first locations which are locations of the people in the space, based on the video information obtained;

20 obtaining the video information, and detecting an orientation of a head of a subject among the people, based on the video information obtained; and

determining whether the subject is paying attention to communication among the people in the space, based on the first locations detected and the orientation of the head of the subject detected, wherein

25 the determining whether the subject is paying attention includes determining a period in which the head of the subject detected faces any of one of the people other than the subject, the display, and the whiteboard, as a period in which the subject pays attention to the communication, when one of the people other than the subject is speaking.

[Claim 10]

35 The attention determination method according to claim 9,

wherein

the determining whether the subject is paying attention includes determining a period in which the head of the subject detected faces a person who is one of the people other than the
5 subject and is not speaking, as a period in which the subject pays attention to the communication, when one of the people other than the subject is speaking.

[Claim11]

10 A program for causing a computer to execute the attention determination method according to claim 9 or 10.