CLAIMS

1. An information processing device comprising:

a first communication unit configured to transmit and receive data to and from a measurement device configured to measure, in a first transport mechanism configured to transport articles to an external device, a distance to each part in a predetermined region including the articles transported by the first transport mechanism;

a second communication unit configured to transmit and receive data to and from a speed control mechanism configured to control a transport speed of a second transport mechanism configured to transport the articles to the first transport mechanism;

a third communication unit configured to transmit and receive data to and from an angle control mechanism configured to control an angle between the first transport mechanism and the second transport mechanism; and

a processor configured to:

acquire distance information indicating the distance to each part in the predetermined region from the measurement device through the first communication unit;

set a transport speed of the second transport mechanism based on the acquired distance information; and

transmit speed information indicating the set transport speed of the second transport mechanism to the

speed control mechanism through the second communication unit,

wherein the processor is configured to transmit, if the articles overlap in the second transport mechanism, angle information indicating a predetermined angle as an angle between the first transport mechanism and the second transport mechanism to the angle control mechanism through the third communication unit.

2. The information processing device according to claim 1,

wherein the processor is configured to:

calculate a volume of the articles based on the distance information; and

set a transport speed of the second transport mechanism based on the volume.

3. The information processing device according to claim 2,

wherein the processor is configured to:

specify a number of the articles based on the distance information; and

set a transport speed of the second transport mechanism based further on the number.

4. The information processing device according to claim 3,

wherein the processor is configured to:

calculate a density of the articles based on the distance information; and

set a transport speed of the second transport mechanism based further on the density.

5. The information processing device according to claim 4,

wherein the processor is configured to:

calculate a flow rate of the articles based on the volume, the number, and the density; and

set a transport speed of the second transport mechanism based on the flow rate.

6. The information processing device according to claim 5,

wherein the processor is configured to:

set, if the flow rate is smaller than a reference amount, a transport speed faster than a current transport speed of the second transport mechanism as the transport speed of the second transport mechanism; and

set, if the flow rate is greater than the reference amount, a transport speed slower than the current transport speed of the second transport mechanism as the transport speed of the second transport mechanism.

7. The information processing device according to claim any one of claims 1 to 6,

wherein the processor is configured to detect overlapping of the articles based on the distance information.

8. The information processing device according to any one of claims 1 to 7,

wherein the processor is configured to:

acquire a two-dimensional image obtained by capturing an image of the region from the measurement device through the first communication unit; and

set a transport speed of the second transport mechanism based further on the two-dimensional image.

9. The information processing device according to any one of claims 1 to 8,

wherein the external device is a singulator.

10. The information processing device according to any one of claims 1 to 9,

wherein the first transport mechanism and the second transport mechanism are belt conveyors.

11. A program executed by a processor,

the program causing the processor to realize:

a function of acquiring, in a first transport mechanism configured to transport articles to an external device, distance information indicating a distance to each part in a predetermined region including the articles transported by the first transport mechanism;

a function of setting a transport speed of a second transport mechanism configured to transport the articles to the first transport mechanism based on the acquired distance information;

a function of setting an angle between the first transport mechanism and the second transport mechanism as a predetermined angle if the articles overlap in the second transport mechanism;

a function of transmitting speed information indicating the set transport speed of the second transport mechanism to a speed control mechanism configured to control the transport speed of the second transport mechanism; and

a function of transmitting angle information indicating the predetermined angle to an angle control mechanism configured to control the angle between the first transport mechanism and the second transport mechanism.