CLAIMS

1. A transport system comprising~~:~~ a plurality of transport vehicle~~s~~ that travel~~s~~ along a track~~,~~ and a controller that controls each of the transport vehicle~~s~~, ~~wherein~~

(a) wherein the controller is configured to:

(i) receive a plurality of transport instructions, each transport instruction identifying a designated article, a designated pickup port, and a designated unloading port; and

(ii) receive closure information for parts of the track to determine whether any part of the track is not secured for transport;

(b) wherein, for each transport instruction, the controller is configured to:

(i) select a designated transport vehicle;

(ii) generate a direct transport instruction defining a direct traveling route along the track between:

(1) the designated pickup port of the transport instruction; and

(2) the designated unloading port of the transport instruction;

(iii) identify a specified indirect point located along the track between:

(1) the designated pickup port of the transport instruction; and

(2) the designated unloading port of the transport instruction;

(iv) generate a first indirect transport instruction defining a first indirect traveling route along the track between:

(1) the designated pickup port of the transport instruction; and

(2) the specified indirect point of the transport instruction; and

(iv) generate a second indirect transport instruction defining a second indirect traveling route along the track between:

(1) the specified indirect point of the transport instruction; and

(2) the designated unloading port of the transport instruction;

(c) wherein, for each transport instruction, assignment of the first indirect transport instruction by the controller causes the designated transport vehicle to:

(i) pick up the designated article at the designated pickup port of the transport instruction; and

(ii) travel with the designated article from the designated pickup port of the transport instruction to the specified indirect point of the transport instruction;

(d) wherein, for each transport instruction, assignment of the second indirect transport instruction by the controller causes the designated transport vehicle to:

(i) travel with the designated article from the specified indirect point of the transport instruction to the designated unloading port of the transport instruction; and

(ii) unload the designated article at the designated unloading port of the transport instruction;

(e) wherein, for each transport instruction, the controller assigns ~~a~~ the first indirect transport instruction instead of ~~a~~ the direct transport instruction, ~~to cause the transport vehicle to pick up an article at a pickup port and travel to a specified point on the downstream side of the pickup port in a traveling direction of the transport vehicle at which a traveling route can be secured on the track, in a case where a~~ if the controller receives closure information for any part of

the track along the direct traveling route of the transport instruction ~~for the transport vehicle from a pickup port to an unloading port designated by the transport instruction cannot be secured on the track,~~; and

(f) wherein, for each transport instruction, the controller assigns ~~a~~ the second indirect transport instruction ~~to cause the transport vehicle to travel from the specified point to the unloading port and unload the article at the unloading port, in a case where a traveling route from the specified point to the unloading port~~unless the controller receives closure information for any part of the track along the second indirect traveling route of the transport instruction when the designated transport vehicle is proximate to the specified indirect point ~~can be secured at the point in time at which the transport vehicle approaches or reaches the specified point~~.

2. The transport system according to claim 1, wherein

the first indirect transport instruction is an instruction to cause the designated transport vehicle to travel to the specified indirect point and hold but not unload the designated article.

3. The transport system according to claim 1 or 2, wherein

the specified indirect point is set immediately before a branching part or a merging part on the track.

4. The transport system according to claim 3, wherein

in the case where the specified indirect point is set immediately before the branching part,

the branching part is a branching part closest to the designated pickup port.

5. The transport system according to any one of claims 1 to 4, wherein

the controller determines whether or not to assign the first indirect transport instruction and the second indirect transport instruction, according to the type of at least one of the designated pickup port and the designated unloading port.

6. The transport system according to claim 5, wherein

the controller assigns the first indirect transport instruction and the second indirect transport instruction to the designated transport vehicle in the case where the designated pickup port is a load port of a processing apparatus.

7. The transport system according to claim 5, wherein

the controller assigns the first indirect transport instruction and the second indirect transport instruction to the designated transport vehicle in the case where the designated pickup port is a load port of a stocker.

8. The transport system according to claim 5, wherein

the controller assigns the first indirect transport instruction and the second indirect transport instruction in the case where the designated pickup port is a buffer, on which ~~an~~ the designated article can be placed, and the designated unloading port is a load port of a processing apparatus, and the controller does not assign the first indirect transport instruction and the second indirect transport instruction in the case where the designated pickup port is the buffer and the designated unloading port is other than a load port of a processing apparatus.

9. The transport system according to any one of claims 1 to 8, wherein

the controller is a transport controller that controls ~~a~~ the plurality of the transport vehicles, or an in-vehicle controller fitted in ~~the~~ each of the transport vehicles.

10. A method for controlling a plurality of transport vehicles that travel along a track with a controller that controls each of the transport vehicles,

(a) wherein the method includes use of the controller to execute the steps of:

(i) receiving a plurality of transport instructions, each transport instruction identifying a designated article, a designated pickup port, and a designated unloading port; and

(ii) receiving closure information for parts of the track to determine whether any part of the track is not secured for transport;

(b) wherein, for each transport instruction, the controller is configured to:

(i) select a designated transport vehicle;

(ii) generate a direct transport instruction defining a direct traveling route along the track between:

(1) the designated pickup port of the transport instruction; and

(2) the designated unloading port of the transport instruction;

(iii) identify a specified indirect point located along the track between:

(1) the designated pickup port of the transport instruction; and

(2) the designated unloading port of the transport instruction;

(iv) generate a first indirect transport instruction defining a first indirect traveling route along the track between:

(1) the designated pickup port of the transport instruction; and

(2) the specified indirect point of the transport instruction; and

(iv) generate a second indirect transport instruction defining a second indirect traveling route along the track between:

(1) the specified indirect point of the transport instruction; and

(2) the designated unloading port of the transport instruction;

(c) wherein, for each transport instruction, assignment of the first indirect transport instruction by the controller causes the designated transport vehicle to:

(i) pick up the designated article at the designated pickup port of the transport instruction; and

(ii) travel with the designated article from the designated pickup port of the transport instruction to the specified indirect point of the transport instruction;

(d) wherein, for each transport instruction, assignment of the second indirect transport instruction by the controller causes the designated transport vehicle to:

(i) travel with the designated article from the specified indirect point of the transport instruction to the designated unloading port of the transport instruction; and

(ii) unload the designated article at the designated unloading port of the transport instruction;

(e) wherein, for each transport instruction, the controller assigns the first indirect transport instruction instead of the direct transport instruction, if the controller receives

closure information for any part of the track along the direct traveling route of the transport instruction; and

(f) wherein, for each transport instruction, the controller assigns the second indirect transport instruction unless the controller receives closure information for any part of the track along the second indirect traveling route of the transport instruction when the designated transport vehicle is proximate to the specified indirect point.

~~10. A transport control method for controlling a transport vehicle traveling along a track, the method comprising:~~

~~assigning a first transport instruction, instead of a transport instruction, to cause the transport vehicle to pick up an article at a pickup port and travel to a specified point on the downstream side of the pickup port in a traveling direction of the transport vehicle at which a traveling route can be secured on the track, in a case where a traveling route for the transport vehicle from a pickup port to an unloading port designated by the transport instruction cannot be secured on the track; and~~

~~assigning a second transport instruction to cause the transport vehicle to travel from the specified point to the unloading port and unload the article at the unloading port, in a case where a traveling route from the specified point to the unloading port can be secured at the point in time at which the transport vehicle approaches or reaches the specified point.~~