CLAIMS

[Claim 1]

A railway operation information change system that changes information relating to railway operation displayed in a virtual space, by a computer including a processor and a memory, wherein

the processor

acquires information relating to a change operation via an avatar displayed in the virtual space, for virtual space display data created on a basis of the information relating to the railway operation and a visualization rule that defines visualization of data in order to display the data in the virtual space, and stores the acquired information in the memory,

determines a type of the change operation on a basis of the acquired information relating to the change operation,

creates candidate nodes that serve as change destinations of the change operation made to the virtual space display data, on a basis of the determined type and a data change rule that indicates a rule for the change operation according to the type and the information relating to the railway operation defined in advance, and stores the created candidate nodes in the memory, and

determines, on a basis of an operation on the created candidate node via the avatar, a node on which the change operation has been made out of the created candidate nodes, and updates the information relating to the railway operation that includes a node that satisfies a predetermined condition for the determined node.

[Claim 2]

The railway operation information change system according to claim 1, wherein

the processor

uses at least one of pieces of the information relating to the railway operation including operation plan information that indicates an operation plan for a train, track information relating to departure and arrival of the train, vehicle depot information relating to the train, vehicle operation information that allocates a vehicle to be used to the operation plan, a timetable diagram that indicates the operation plan, and proposed train operation adjustment plan information that is obtained by changing the operation plan, to acquire the change operation, to create the candidate nodes, and to update the information relating to the railway operation.

[Claim 3]

The railway operation information change system according to claim 1, wherein

the processor

outputs, in the determination, operation target type information that associates the type, operation target data that has been a target of the change operation, and the information relating to the railway operation including this operation target data with one another, and

creates the candidate nodes on a basis of the output operation target type information and the data change rule.

[Claim 4]

The railway operation information change system according to claim 1, wherein

the data change rule includes a changeable range of the change operation relating to the type, and

the processor

creates, on a basis of the type and the changeable range of the data change rule, a change destination candidate data range that indicates a range of the candidate nodes being the change destinations in the creation of the candidate nodes.

[Claim 5]

The railway operation information change system according to claim 4, wherein

the processor

examines a relationship to the change destination candidate data range for all of pieces of information

relating to the railway operation displayed as the virtual space display data.

[Claim 6]

The railway operation information change system according to claim 4, wherein

the processor

outputs, in the determination, operation target type information that associates the type, operation target data that has been a target of the change operation, and the information relating to the railway operation including this operation target data with one another, and

outputs, as the candidate nodes, data including at least change target data that is stored as the operation target data for applying the data change rule to the operation target data stored in the operation target type information to create the change destination candidate data range, a type of this change target data, change target belonging destination railway operation information that is information relating to the railway operation to which this change target data belongs, change destination candidate data that is calculated, through the change destination candidate data range, for each piece of data of the change target data, a type of this change destination candidate data, and change destination candidate belonging destination railway operation information being the

information relating to the railway operation to which the change destination candidate data belongs.

[Claim 7]

The railway operation information change system according to claim 6, wherein

the processor

updates, in the update of the information relating to the railway operation, for the information relating to the railway operation including the change target belonging destination railway operation information relating to the determined node, both of this change target belonging destination railway operation information and the change destination candidate belonging destination railway operation information.

[Claim 8]

A railway operation information management system formed by connecting, to one another via a network, a railway operation information change system that is formed of a computer including a processor and a memory and that changes information relating to railway operation displayed in a virtual space, a railway operation system that holds the information relating to the railway operation, and a user terminal that is operated by a user, wherein

the railway operation information change system

acquires the information relating to the railway

operation from the railway operation system via the network,

acquires, from the user terminal, information relating to a change operation via an avatar displayed in the virtual space, for virtual space display data created on a basis of the acquired information relating to the railway operation and a visualization rule that defines visualization of data in order to display the data in the virtual space,

determines a type of the change operation on a basis of the acquired information relating to the change operation,

creates candidate nodes that serve as change destinations of the change operation made to the virtual space display data, on a basis of the determined type and a data change rule that indicates a rule for the change operation according to the type and the information relating to the railway operation defined in advance, and

determines, on a basis of an operation on the created candidate node via the avatar from the user terminal, a node on which the change operation has been made out of the created candidate nodes, and updates the information relating to the railway operation that includes a node that satisfies a predetermined condition for the determined node.

[Claim 9]

A railway operation information change method of changing information relating to railway operation displayed in a virtual space, by a computer including a processor and a memory, wherein

the computer

acquires information relating to a change operation via an avatar displayed in the virtual space, for virtual space display data created on a basis of the information relating to the railway operation and a visualization rule that defines visualization of data in order to display the data in the virtual space,

determines a type of the change operation on a basis of the acquired information relating to the change operation,

creates candidate nodes that serve as change destinations of the change operation made to the virtual space display data, on a basis of the determined type and a data change rule that indicates a rule for the change operation according to the type and the information relating to the railway operation defined in advance, and

determines, on a basis of an operation on the created candidate node via the avatar, a node on which the change operation has been made out of the created candidate nodes, and updates the information relating to the railway

operation that includes a node that satisfies a predetermined condition for the determined node.