people to understand the principle of the accident. In addition, the materials are not designed to reproduce accidents caused not by the worker's own operation but by the operation errors of surrounding workers, or accident phenomena caused by the interaction of multiple workers and the operations of multiple people in the vicinity. Hereinafter, the worker who actually executes the work and the person present in a position to be affected in the event of an accident (inappropriate event) will be referred to together as a party concerned.

[0006] The present invention has been made in view of the above circumstances and provided an information processing apparatus, a system and a program capable of understanding accidents caused by interactions among multiple parties even when multiple scenarios coexist in time and space.

Means for Solving Problems

[0007] According to the present invention, provided is an information processing apparatus configured to communicate with a first input/output device and a second input/output device, comprising: a storage unit storing VR space information and an inappropriate operation database, wherein the VR space information is information defining VR space shared and accessed by a first user that uses the first input/output device and a second user that uses the second input/output device, and the inappropriate operation database is a database defining inappropriate operation information, the inappropriate operation information being information representing an inappropriate operation that can cause an invisible inappropriate event; a reception unit configured to receive first operation information from the first input/output device and second operation information from the second input/output device, wherein the first operation information is information representing a first operation in a real space of the first user, and the second operation information is information representing a second operation in a real space of the second user; a determination unit configured to determine whether the first operation and the second operation configuring the inappropriate operation based on the VR space information, the first operation information, the second operation information, and the inappropriate operation information, wherein the inappropriate operation is configured by a combination of the first operation and the second operation; a transmission unit configured to transmit occurrence information representing the occurrence of the inappropriate event to the first input/output device or the second input/output device when it is determined that the inappropriate operation is configured and a reflection unit configured to reflect the first operation in a first space to a second space, wherein the VR space includes the first space and the second space, and the first space and the second space are different spaces and each integrally configure one VR space.

[0008] The information processing apparatus according to the present invention can prepares the inappropriate operation database (a database that defines an inappropriate operation in the VR space) and determines the occurrence of the invisible inappropriate event based on the VR space information, the first and second operation information

CLAIMS

1. An information processing apparatus configured to communicate with a first input/output device and a second input/output device, comprising:

a storage unit storing VR space information and an inappropriate operation database, wherein:

the VR space information is information defining VR space shared and accessed by a first user that uses the first input/output device and a second user that uses the second input/output device, and

the inappropriate operation database is a database defining inappropriate operation information, the inappropriate operation information being information representing an inappropriate operation that can cause an invisible inappropriate event;

a reception unit configured to receive first operation information from the first input/output device and second operation information from the second input/output device, wherein:

the first operation information is information representing a first operation in a real space of the first user, and

the second operation information is information representing a second operation in a real space of the second user;

a determination unit configured to determine whether the first operation and the second operation configuring the inappropriate operation based on the VR space information, the first operation information, the second operation information, and the inappropriate operation information, wherein:

the inappropriate operation is configured by a combination of the first operation and the second operation;

a transmission unit configured to transmit occurrence information representing the occurrence of the inappropriate event to the first input/output device or the second input/output device when it is determined that the inappropriate operation is configured; and

a reflection unit configured to reflect the first operation in a first space to a second space, wherein:

the VR space includes the first space and the second space, and

the first space and the second space are different spaces and each integrally configure one VR space.

2. The information processing apparatus according to claim 1, wherein:

the first operation or the second operation includes an operation of operating an actual object in the real space corresponding to the VR space.

3. The information processing apparatus according to any one of claims 1 or 2, wherein:

the inappropriate operation is an operation in an environment having factors that may cause harmful effect on human body, and is defined for at least one of (1) to (3),

(1) a combination of a plurality of predetermined objects,

(2) a combination of a plurality of predetermined operations,

(3) a combination of the predetermined object and operation.

4. The information processing apparatus according to claim 3, wherein:

the (1) is defined for at least one of an arrangement distance of a particular object among the plurality of objects, or a state change of a particular object among the plurality of objects.

5. The information processing apparatus according to claim 3 or 4, wherein:

the (2) is defined for at least one of an execution order of a particular operation among the plurality of operations, or an execution interval of the particular operation.

6. The information processing apparatus according to any one of claims 3 to 5, wherein:

the (3) is defined for at least one of that the operation is executed within a predetermined range from the object, or that the operation is executed within a predetermined time after the object is opened.

7. A system, comprising:

an information processing apparatus, a first input/output device, and a second input/output device, wherein:

the information processing apparatus is configured to communicate with the first input/output device and the second input/output device, having

a storage unit storing VR space information and an inappropriate operation database, wherein:

the VR space information is information defining VR space shared and accessed by a first user that uses the first input/output device and a second user that uses the second input/output device, and

the inappropriate operation database is a database defining inappropriate operation information, the inappropriate operation information being information representing an inappropriate operation that can cause an invisible inappropriate event;

a reception unit configured to receive first operation information from the first input/output device and second operation information from the second input/output device, wherein:

the first operation information is information representing a first operation in a real space of the first user, and

the second operation information is information representing a second operation in a real space of the second user;

a determination unit configured to determine whether the first operation and the second operation configuring the inappropriate operation based on the VR space information, the first operation information, the second operation information, and the inappropriate operation information, wherein:

the inappropriate operation is configured by a combination of the first operation and the second operation;

a transmission unit configured to transmit occurrence information representing the occurrence of the inappropriate event to the first input/output device or the second input/output device when it is determined that the inappropriate operation is configured; and

a reflection unit configured to reflect the first operation in a first space to a second space, wherein the VR space includes the first space and the second space, and

the first space and the second space are different spaces and each integrally configure one VR space, wherein:

the first input/output device and the second input/output device are configured to present the occurrence information to the first user and the second user.

8. The system according to claim 7, comprising:

a space definition member configured to be arranged in a real space corresponding to the VR space, wherein:

the first operation and the second operation include an operation of operating the space definition member.

9. A program configured to allow a computer capable of communicating with a first input/output device and a second input/output device to function as:

a storage unit storing VR space information and an inappropriate operation database, wherein

the VR space information is information defining VR space shared and accessed by a first user that uses the first input/output device and a second user that uses the second input/output device, and

the inappropriate operation database is a database defining inappropriate operation information, the inappropriate operation information being information

representing an inappropriate operation that can cause an invisible inappropriate event;

a reception unit configured to receive first operation information from the first input/output device and second operation information from the second input/output device, wherein

the first operation information is information representing a first operation in a real space of the first user, and

the second operation information is information representing a second operation in a real space of the second user;

a determination unit configured to determine whether the first operation and the second operation configuring the inappropriate operation based on the VR space information, the first operation information, the second operation information, and the inappropriate operation information, wherein

the inappropriate operation is configured by a combination of the first operation and the second operation;

a transmission unit configured to transmit occurrence information representing the occurrence of the inappropriate event to the first input/output device or the second input/output device when it is determined that the inappropriate operation is configured; and

a reflection unit configured to reflect the first operation in a first space to a second space, wherein

the VR space includes the first space and the second space, and

the first space and the second space are different spaces and each integrally configure one VR space.