municated with the other avatars, as determined by the judgment means.

[0011] According to another aspect of the present invention, there is provided an information processing method for presenting a 3-dimensional virtual space allowing an avatar of a plurality of avatars in the 3-dimensional virtual space being operated to communicate with one or more other avatars of the plurality of avatars. The information processing method includes a storage step, a judgment step, and a processing step. The storage step stores an indicator set to show whether information owned by the avatar can be communicated with the other avatars. The judgment step determines whether the information owned by the avatar can be communicated with the other avatars, based on the indicator stored at the storage step. The processing step processes the information to be communicated with the other avatars, as determined in the judgment step.

[0012] According to a further aspect of the present invention, there is provided a computer-readable medium for presenting a program executable by a computer to drive an information processing apparatus for presenting a 3-dimensional virtual space allowing an avatar of a plurality of avatars in the 3-dimensional virtual space being operated to communicate with one or more other avatars of the plurality of avatars,. The program carries out processing including a storage step, a judgment step, and a processing step. The storage step stores an indicator set to show whether information owned by the avatar can be communicated with the other avatars. The judgment step determines whether the information owned by the avatar can be communicated with the other avatars, based on the indicator stored at the storage step. The processing step processes the information to be communicated with the other avatars, as determined in the judgment step.

[0013] According to the present invention, an indicator set to show whether or not information owned by an avatar can be communicated with other avatars is stored and a judgement as to whether or not information owned by the avatar can be communicated with the other avatars is formed on the basis of the stored indicator. As a result, a plurality of clients are allowed to have experience of a 3-dimensional virtual space without unduly increasing the amount of processing of the system and the amount of communication of a transmission line.

[0014] A better understanding of the features and advantages of the present invention will be obtained by reference to the following detailed description of illustrative embodiments given by way of non-limitative example with reference to the drawings in which:

Fig. 1 is a block diagram showing a typical configuration of a system presenting a shared virtual space to which the present invention is applied;
Fig. 2 is a block diagram showing a typical configuration of a client PC employed in the system shown in Fig. 1;
Fig. 3 is an explanatory diagram used for describing the operation of the system shown in Fig. 1;
Fig. 4 is an explanatory diagram used for describing the operation of the system shown in Fig. 1;
Fig. 5 is an explanatory diagram used for describing the operation of the system shown in Fig. 1;
Fig. 6 is an explanatory diagram used for describing an aura;
Fig. 7 is an explanatory diagram used for describing processing to allow an avatar to share information with an object in an aura of the avatar;
Fig. 8 is an explanatory diagram used for describing a case in which a number of avatars exist in an aura;
Fig. 9 is an explanatory diagram used for describing an operation in which a guest avatar does not communicate information to a pilot avatar when being set so;
Fig. 10 is an explanatory diagram used for describing an information management table stored in a shared server for each avatar shown in Fig. 8;
Fig. 11 is a flowchart representing processing to share information with other avatars;
Figs. 12A-12B are flowcharts representing details of departure detection processing; and
Figs. 13A-13B are flowcharts representing details of inclusion detection processing.

[0015] Fig. 1 is a block diagram showing a typical configuration of a system presenting a shared virtual space to which the present invention is applied. It should be noted that the system cited in this specification means an entity obtained as a result of logically putting a plurality of apparatuses in a set without regard to whether or not the apparatuses are physically accommodated in a box.

[0016] As shown in Fig. 1, client PCs (personal computers) 1 to 3 are connected to the Internet 7 through IPs (Internet connection service providers) 4 to 6, respectively. In each of the client PCs 1 to 3, a VRML browser and a WWW browser are installed and ready to operate.

[0017] The client PCs 1 to 3 each have two functions, namely, a 3D-client function and a 2D-client function. The function for a 3D client is used to notify a shared server 12 periodically or if necessary of data such as information on the location of the client PC, to receive information shared by other 3D objects from the shared server 12 supplied thereto and to display it. On the other hand, the function for a 2D client is executed to transmit a request for information to a WWW server 10 in accordance with an HTTP, to receive a response to the request from the WWW server 10 and to display mainly 2-dimensional information. When a URL is included in information received from the shared server 12, the 3D-client issues a request for an access to the URL to the 2D client. At this request, the 2D-client makes an access to the URL (in actuality to the WWW server 10) to download data such as the shape of an object and forward