

What is claimed is:

1. An information processing device comprising:

5 a first communication unit connectable to a terminal device which is connectable to a network and configured to communicate with the terminal device;

a second communication unit connectable to the network and configured to communicate via the network with a device connected to the network;

10 an information processing unit configured to encrypt information, when at least the first communication unit receives information from the terminal device, and to transmit the encrypted information to the network via the second communication unit, and the information processing unit configured to decrypt the encrypted information, when at least the second communication unit receives the encrypted information from the network, and to transmit the decrypted information to the terminal device via the first communication unit; and

15 a switching unit configured to directly connect a communication line between the first communication unit and the terminal device to another communication line between the second communication unit and the network, when the information processing unit comes into an inoperable state including at least electric power supply stop state, and to switch into a pass-through mode in which the terminal device and the network communicate directly with each other without through the information processing unit,

wherein if a counterpart information processing device comes into the pass-through mode where the counterpart information processing device includes a first communication unit, a second communication unit, an information processing unit, and a

switching unit, and where the counterpart information processing device is connected between the network and a counterpart terminal device with which the terminal device communicates via the network, then the information processing unit permits the counterpart information processing device to communicate with the counterpart terminal  
5 device, in a pass-through permission time period for which communication with the counterpart information processing device in the pass-through mode is permitted, on the basis of parameters related to a communication state of the counterpart information processing device and restrict the counterpart information processing device from communicating with the counterpart terminal device after the pass-through permission  
10 time period has elapsed.

2. The information processing device according to claim 1, wherein the information processing unit determines the pass-through permission time period on the basis of a communication risk for the counterpart terminal device, where the  
15 communication risk is acquired from a communication risk storage unit on the basis of values of the parameters associated with the counterpart information processing device, and where the communication risk storage unit stores the values of the parameters and the communication risks in association with each other.

20 3. The information processing device according to claim 1 or 2, wherein the parameters include a communication result of the counterpart information processing device, and

wherein the information processing unit determines the pass-through permission time period on the basis of the communication result.

4. The information processing device according to any one of the preceding claims, wherein the parameters include an estimated restoration time until the pass-through mode of the counterpart information processing device is released, and

5 wherein the information processing unit determines the pass-through permission time period on the basis of the estimated restoration time.

5. The information processing device according to any one of the preceding claims, wherein the parameters include an exploitability score indicating easiness of an  
10 attack over the network, and

wherein the information processing unit determines the pass-through permission time period on the basis of the exploitability score over the network.

6. The information processing device according to any one of the preceding  
15 claims, wherein the information processing unit detects whether the counterpart information processing device comes into the pass-through mode on the basis of at least one of a communication method in communication with the counterpart information processing device, an authentication mode, and identification information of the counterpart information processing device.

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7. The information processing device according to claim 6, further comprising:

a communication information storage unit that stores communication information including at least one of a communication method of communication with

the counterpart information processing device, an authentication method, and identification information of the counterpart information processing device,

wherein the information processing unit detects whether the counterpart information processing device comes into the pass-through mode on the basis of the  
5 communication information stored in the communication information storage unit.

8. An information processing system comprising:

a plurality of terminal devices; and

a plurality of information processing devices according to any one of the  
10 preceding claims, wherein the plurality of information processing devices is connected between the plurality of terminal devices and the network.