

WHAT IS CLAIMED IS:

1. An unauthorized-communication detecting apparatus comprising:

a processor; and

a storage device storing a program which causes the processor to function as:

a measuring unit that measures a transition of a communication state value between the unauthorized-communication detecting apparatus and a client apparatus;

a transition pattern storage unit that stores a transition pattern of the communication state value; and

an unauthorized-communication detecting unit that detects unauthorized communication of the client apparatus on the basis of the transition pattern and a transition of the measured communication state value,

wherein the transition pattern stored in the transition pattern storage unit is a transition pattern being acquired during a standby state during which the application software of the client apparatus is not performing communication with the outside.

2. The unauthorized-communication detecting apparatus according to claim 1, wherein the communication state value is usable communication bandwidths or occupied communication bandwidths.

3. The unauthorized-communication detecting apparatus according to claim 1, wherein the unauthorized-communication detecting unit selects a portion of the transition of the measured communication state value on the basis of correlation values relative to the transition pattern, and in a case where the difference between the selected portion and the transition pattern satisfies a predetermined condition, the unauthorized-communication detecting unit detects the unauthorized communication of the client apparatus.

4. The unauthorized-communication detecting apparatus according to claim 1,

wherein the program stored in the storage device causes the processor to further function as an acquiring unit that acquires communication environment information of the client apparatus from the client apparatus,

wherein the transition pattern storage unit stores the transition pattern in association with the communication environment information of the client apparatus, and

the unauthorized-communication detecting unit detects the unauthorized communication of the client apparatus on the basis of the transition pattern associated with the acquired communication environment information, and the transition of the measured communication state value.

5. The unauthorized-communication detecting apparatus according to claim 4, wherein the communication environment information represents at least one of a position of the client apparatus and communication unit of the client apparatus.

6. A non-transitory computer readable medium storing a program causing a computer to execute an unauthorized-communication detecting process, the process comprising:

measuring a transition of a communication state value between the unauthorized-communication detecting apparatus and a client apparatus;

storing a transition pattern of the communication state value; and

detecting unauthorized communication of the client apparatus on the basis of the transition pattern and a transition of the measured communication state value,

wherein the stored transition pattern is a transition pattern being acquired during a standby state during which the application software of the client apparatus is not performing communication with the outside.

7. An unauthorized-communication detecting apparatus comprising:

a processor; and

a storage device storing a program which causes the processor to function as:

a measuring unit that measures a transition of a communication state value between the unauthorized-communication detecting apparatus and a client apparatus;

a transition pattern storage unit that stores a transition pattern of the communication state value; and

an unauthorized-communication detecting unit that detects unauthorized communication of the client apparatus on the basis of the transition pattern and a transition of the measured communication state value,

wherein the transition pattern stored in the transition pattern storage unit is a transition pattern being acquired while only communication necessary to support operation and use of the client apparatus is performed by system software.