Claims

[Claim 1] An abnormality determination system, comprising:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing system is a system for providing a plurality of services each of which is the predetermined service,

wherein the performance index acquisition module is configured to acquire the performance index of each of the plurality of services,

wherein the abnormality determination module is configured to execute the abnormality determination of at least one of the plurality of services based on the performance index of each of the plurality of services, and wherein the abnormality determination module is configured to execute the abnormality determination for each of the plurality of services that is a target of the abnormality determination, based on a relationship between the performance index of the each of the plurality of

services and an overall performance index of the plurality of services.

[Claim 2] An abnormality determination system, comprising:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing system is a system for providing a plurality of services each of which is the predetermined service,

wherein the performance index acquisition module is configured to acquire the performance index of each of the plurality of services,

wherein the abnormality determination module is configured to execute the abnormality determination of at least one of the plurality of services based on the performance index of each of the plurality of services, and

wherein the abnormality determination module is configured to execute the abnormality determination for each of the plurality of services that is a target of the abnormality

determination, based on a relationship between the performance index of the each of the plurality of services and the performance index of another of the plurality of services.

[Claim 3] An abnormality determination system, comprising:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system, and

a hardware index acquisition module configured to acquire a hardware index about hardware included in the service providing system,

wherein the abnormality determination module is configured to execute the abnormality determination based on the performance index and the hardware index, and

wherein the abnormality determination module is configured to:

determine whether the performance index satisfies a predetermined performance index criterion;

determine whether the hardware index satisfies a predetermined hardware index criterion; and

execute the abnormality determination so that a degree about the abnormality is lower when it is determined that the predetermined hardware index criterion is satisfied and that the predetermined performance index criterion is not satisfied, than when it is determined that the predetermined hardware index criterion and the predetermined performance index criterion are both satisfied.

[Claim 4] An abnormality determination system, comprising:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing system that is relatively old and called an old system and the service providing system that is relatively new and called a new system coexist, and

wherein the abnormality determination module is configured to execute the abnormality determination of the new system based on an old system index which is the performance index based on the old system.

[Claim 5] An abnormality determination system, comprising:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the performance index acquisition module is configured to acquire a payment index about payment in the predetermined service as the performance index, and

wherein the abnormality determination module is configured to execute the abnormality determination based on the payment index.

[Claim 6] The abnormality determination system according to any one of claims 1 to 5, wherein the abnormality determination module is configured to:

determine, for each of the plurality of services, whether the performance index of the each of the plurality of services satisfies an abnormality determination criterion about the abnormality determination; and

execute the abnormality determination based on a type of the performance index that satisfies the abnormality

determination criterion.

[Claim 7] The abnormality determination system according to any one of claims 1 to 6,

wherein the performance index acquisition module is configured to acquire, in real time, the performance index of the predetermined service that is in operation, and

wherein the abnormality determination module is configured to execute the abnormality determination in real time based on the performance index acquired in real time.

[Claim 8] The abnormality determination system according to any one of claims 1 to 7, wherein the abnormality determination module is configured to execute the abnormality determination with regard to an occurrence of the abnormality in a future based on the performance index.

[Claim 9] The abnormality determination system according to any one of claims 1 to 8, wherein the abnormality determination module is configured to execute the abnormality determination based on the performance index and a learning model that has learned a relationship between the performance index for training and an occurrence of the abnormality.

[Claim 10] The abnormality determination system according to claim 9,

wherein the service providing system is a system for providing a plurality of services each of which is the predetermined service,

wherein the learning model has learned a relationship between the performance index for training of each of the plurality of services and an occurrence of the abnormality,

wherein the performance index acquisition module is configured to acquire the performance index of each of the plurality of services, and

wherein the abnormality determination module is configured to execute the abnormality determination of at least one of the plurality of services, based on the performance index of each of the plurality of services and the learning model.

[Claim 11] The abnormality determination system according to any one of claims 1 to 10,

wherein the performance index acquisition module is configured to acquire a transaction index about transactions in an electronic commerce transaction service as the performance index, and

wherein the abnormality determination module is configured to execute the abnormality determination based on the transaction index.

[Claim 12] The abnormality determination system according to any one of claims 1 to 11,

wherein the performance index acquisition module is configured to acquire a membership index about membership of the predetermined service as the performance index, and

wherein the abnormality determination module is configured to execute the abnormality determination based on the membership index.

[Claim 13] An abnormality determination method, comprising:

a performance index acquisition step of acquiring, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination step of executing, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing method is a method for providing a plurality of services each of which is the predetermined service,

wherein the performance index acquisition step is configured to acquire the performance index of each of the plurality of services,

wherein the abnormality determination step is configured to execute the abnormality determination of at least one of the plurality of services based on the performance index of each of the plurality of services, and wherein the abnormality determination step is configured to execute the abnormality

determination for each of the plurality of services that is a target of the abnormality determination, based on a relationship between the performance index of the each of the plurality of services and an overall performance index of the plurality of services.

[Claim 14] An abnormality determination method, comprising:

a performance index acquisition step of acquiring, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination step of executing, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing method is a method for providing a plurality of services each of which is the predetermined service,

wherein the performance index acquisition step is configured to acquire the performance index of each of the plurality of services,

wherein the abnormality determination step is configured to execute the abnormality determination of at least one of the plurality of services based on the performance index of each of the plurality of services, and

wherein the abnormality determination step is configured to execute the abnormality determination for each of the

plurality of services that is a target of the abnormality determination, based on a relationship between the performance index of the each of the plurality of services and the performance index of another of the plurality of services.

[Claim 15] An abnormality determination method, comprising:

a performance index acquisition step of acquiring, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination step of executing, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system, and

a hardware index acquisition step configured to acquire a hardware index about hardware included in the service providing system,

wherein the abnormality determination step is configured to execute the abnormality determination based on the performance index and the hardware index, and

wherein the abnormality determination step is configured to:

determine whether the performance index satisfies a predetermined performance index criterion;

determine whether the hardware index satisfies a predetermined hardware index criterion; and

execute the abnormality determination so that a degree about the abnormality is lower when it is determined that the predetermined hardware index criterion is satisfied and that the predetermined performance index criterion is not satisfied, than when it is determined that the predetermined hardware index criterion and the predetermined performance index criterion are both satisfied.

[Claim 16] An abnormality determination method, comprising:

a performance index acquisition step of acquiring, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination step of executing, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing system that is relatively old and called an old system and the service providing system that is relatively new and called a new system coexist, and

wherein the abnormality determination step is configured to execute the abnormality determination of the new system based on an old system index which is the performance index based on the old system.

[Claim 17] An abnormality determination method, comprising:

a performance index acquisition step of acquiring, based

on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination step of executing, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the performance index acquisition step is configured to acquire a payment index about payment in the predetermined service as the performance index, and

wherein the abnormality determination step is configured to execute the abnormality determination based on the payment index.

[Claim 18] A program for causing a computer to function as:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing system is a system for providing a plurality of services each of which is the predetermined service,

wherein the performance index acquisition module is configured to acquire the performance index of each of the plurality of services,

wherein the abnormality determination module is configured to execute the abnormality determination of at least one of the plurality of services based on the performance index of each of the plurality of services, and wherein the abnormality determination module is configured to execute the abnormality determination for each of the plurality of services that is a target of the abnormality determination, based on a relationship between the performance index of the each of the plurality of services and an overall performance index of the plurality of services.

[Claim 19] A program for causing a computer to function as:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing system is a system for providing a plurality of services each of which is the

predetermined service,

wherein the performance index acquisition module is configured to acquire the performance index of each of the plurality of services,

wherein the abnormality determination module is configured to execute the abnormality determination of at least one of the plurality of services based on the performance index of each of the plurality of services, and

wherein the abnormality determination module is configured to execute the abnormality determination for each of the plurality of services that is a target of the abnormality determination, based on a relationship between the performance index of the each of the plurality of services and the performance index of another of the plurality of services.

[Claim 20] A program for causing a computer to function as:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system, and

a hardware index acquisition module configured to acquire

a hardware index about hardware included in the service providing system,

wherein the abnormality determination module is configured to execute the abnormality determination based on the performance index and the hardware index, and

wherein the abnormality determination module is configured to:

determine whether the performance index satisfies a predetermined performance index criterion;

determine whether the hardware index satisfies a predetermined hardware index criterion; and

execute the abnormality determination so that a degree about the abnormality is lower when it is determined that the predetermined hardware index criterion is satisfied and that the predetermined performance index criterion is not satisfied, than when it is determined that the predetermined hardware index criterion and the predetermined performance index criterion are both satisfied.

[Claim 21] A program for causing a computer to function as:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute,

based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the service providing system that is relatively old and called an old system and the service providing system that is relatively new and called a new system coexist, and

wherein the abnormality determination module is configured to execute the abnormality determination of the new system based on an old system index which is the performance index based on the old system.

[Claim 22] A program for causing a computer to function as:

a performance index acquisition module configured to acquire, based on a utilization situation about a service providing system for providing a predetermined service, a performance index about performance of the predetermined service; and

an abnormality determination module configured to execute, based on the performance index, abnormality determination with regard to an occurrence of abnormality in the service providing system,

wherein the performance index acquisition module is configured to acquire a payment index about payment in the predetermined service as the performance index, and

wherein the abnormality determination module is configured to execute the abnormality determination based on the payment

index.