has never been sufficient.

SOLUTION TO PROBLEM

[0006] Embodiments of the present invention seek to provide a system including an identifier and a corrector. The identifier is configured to identify second position information from a plurality of pieces of position information of a terminal device. The plurality of pieces of position information are obtained via a position information obtainer before first position information of the terminal device. The first position information is obtained via the position information obtainer. The second position information is used for correcting the first position information. The corrector is configured to correct the first position information based on the second position information identified by the identifier.

[0006a] There is disclosed a system comprising:

an identifier configured to identify second position information from a plurality of pieces of position information of a terminal device, the plurality of pieces of position information being obtained via a position information obtainer before first position information of the terminal device, the first position information being obtained via the position information obtainer, the second position information being used for correcting the first position information; and

a corrector configured to correct the first position information based on the second position information identified by the identifier.

[0006b] Another aspect of the present invention provides an information processing device comprising:

an identifier configured to identify second position information from a plurality of pieces of position information of a terminal device, the plurality of pieces of position information being obtained via a position information obtainer before first position information of the terminal device, the first position information being obtained via the position information obtainer, the second position information being used for correcting the first position information; and

a corrector configured to correct the first position information based on the second position information identified by the identifier.

[0006c] There is also disclosed an information processing method executed by a system, the method comprising:

an identifying step of identifying second position information from a plurality of pieces of position information of a terminal device, the plurality of pieces of position information being obtained via a position information obtainer before first position information of the terminal device, the first position information being obtained via the position information obtainer, the second position

information being used for correcting the first position information; and

a correcting step of correcting the first position information based on the second position information identified in the identifying step.

[0006d] There is also disclosed an information processing method executed by an information processing device, the method comprising:

an identifying step of identifying second position information from a plurality of pieces of position information of a terminal device, the plurality of pieces of position information being obtained via a position information obtainer before first position information of the terminal device, the first position information being obtained via the position information obtainer, the second position information being used for correcting the first position information; and

a correcting step of correcting the first position information based on the second position information identified in the identifying step.

[0006e] There is also disclosed a computer-readable storage medium that stores a program to cause a computer to execute:

an identifying step of identifying second position information from a plurality of pieces of position information of a terminal device, the plurality of pieces of position information being obtained via a position information obtainer before

first position information of the terminal device, the first position information being obtained via the position information obtainer, the second position information being used for correcting the first position information; and

a correcting step of correcting the first position information based on the second position information identified in the identifying step.

[0006f] An aspect of the present disclosure provides a system comprising:

a first obtainment means configured to obtain a first position information of a terminal device via a position information obtainment means;

a second obtainment means configured to obtain a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtainment means configured to obtain a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtainment means configured to obtain a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from

the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtainment means configured to obtain an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correction means configured to correct the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[0006g] Another aspect of the present disclosure provides a system comprising:

a first obtainment means configured to obtain a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtainment means configured to obtain a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correction means configured to correct the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein the correction means sets a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, as the second position information of the terminal device after correction.

[0006h] Another aspect of the present disclosure provides an information processing device comprising:

a first obtainment means configured to obtain a first position information of a terminal device via a position information obtainment means;

a second obtainment means configured to obtain a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtainment means configured to obtain a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtainment means configured to obtain a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtainment means configured to obtain an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position

information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correction means configured to correct the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[0006i] Another aspect of the present disclosure provides an information processing device comprising:

a first obtainment means configured to obtain a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtainment means configured to obtain a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correction means configured to correct the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein the correction means sets a position moved by a movement distance obtained by multiplying

the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, as the second position information of the terminal device after correction.

[0006j] Another aspect of the present disclosure provides an information processing method executed by a system, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtaining step of obtaining a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtaining step of obtaining a movement distance and a movement direction from a position

indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtaining step of obtaining an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correcting step of correcting the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[0006k] Another aspect of the present disclosure provides an information processing method executed by

a system, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correcting step of correcting the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein in the correcting step, a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, is set as the second position information of the terminal device after correction.

[0006l] Another aspect of the present disclosure provides an information processing method executed by an information processing device, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtaining step of obtaining a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtaining step of obtaining a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtaining step of obtaining an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correcting step of correcting the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[0006m] Another aspect of the present disclosure provides an information processing method executed by an information processing device, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a

predetermined time of obtaining the first position information and the error of the first position information; and

a correcting step of correcting the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein in the correcting step, a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, is set as the second position information of the terminal device after correction.

[0006n] Another aspect of the present disclosure provides a program to cause a computer to execute:

a first obtaining step of obtaining a first position information of a terminal device via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position

information;

a third obtaining step of obtaining a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtaining step of obtaining a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtaining step of obtaining an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the

third position information of the terminal device; and

a correcting step of correcting the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[0006o] Another aspect of the present disclosure provides a program to cause a computer to execute:

a first obtaining step of obtaining a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correcting step of correcting the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein in the correcting step, a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a

movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, is set as the second position information of the terminal device after correction.

ADVANTAGEOUS EFFECTS OF INVENTION

[0007] According to embodiments of the present invention, position information can be more accurately corrected.

BRIEF DESCRIPTION OF DRAWINGS

[0008] [Fig. 1] Fig. 1 is a drawing illustrating an exemplary result of obtaining position information via a GPS function.

[Fig. 2] Fig. 2 is a drawing illustrating an exemplary system configuration of an information processing system.

[Fig. 3] Fig. 3 is a drawing illustrating an exemplary hardware configuration of a server device.

[Fig. 4] Fig. 4 is a drawing illustrating an

CLAIMS

[Claim 1] A system comprising:

a first obtainment means configured to obtain a first position information of a terminal device via a position information obtainment means;

a second obtainment means configured to obtain a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtainment means configured to obtain a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtainment means configured to obtain a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtainment means configured to obtain an acceleration of the terminal device at the

position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correction means configured to correct the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[Claim 2] The system according to claim 1, further comprising an output means configured to output the third position information of the terminal device corrected by the correction means.

[Claim 3] The system according to claim 1 or 2, wherein the position information obtainment means is a GPS function of the terminal device.

[Claim 4] A system comprising:

a first obtainment means configured to obtain a first position information of a terminal device and an error of the first position information

via a position information obtainment means;

a second obtainment means configured to obtain a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correction means configured to correct the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein the correction means sets a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, as the second position information of the terminal device after correction.

[Claim 5] The system according to claim 4, further comprising an output means configured to output the second position information of the terminal device

corrected by the correction means.

[Claim 6] The system according to claim 4 or 5, wherein the position information obtainment means is a GPS function of the terminal device.

[Claim 7] An information processing device comprising:

a first obtainment means configured to obtain a first position information of a terminal device via a position information obtainment means;

a second obtainment means configured to obtain a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtainment means configured to obtain a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtainment means configured to obtain a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to

a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtainment means configured to obtain an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correction means configured to correct the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[Claim 8] An information processing device comprising:

a first obtainment means configured to obtain a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtainment means configured to

obtain a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correction means configured to correct the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein the correction means sets a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, as the second position information of the terminal device after correction.

[Claim 9] An information processing method executed by a system, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtaining step of obtaining a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtaining step of obtaining a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtaining step of obtaining an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position

information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correcting step of correcting the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[Claim 10] An information processing method executed by a system, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correcting step of correcting the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein in the correcting step, a position

moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, is set as the second position information of the terminal device after correction.

[Claim 11] An information processing method executed by an information processing device, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtaining step of obtaining a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtaining step of obtaining a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the third position information;

a fifth obtaining step of obtaining an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correcting step of correcting the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[Claim 12] An information processing method executed by an information processing device, the method comprising:

a first obtaining step of obtaining a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position information and the error of the first position information; and

a correcting step of correcting the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein in the correcting step, a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to

the first position information of the terminal device, is set as the second position information of the terminal device after correction.

[Claim 13] A program to cause a computer to execute:

a first obtaining step of obtaining a first position information of a terminal device via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the first position information;

a third obtaining step of obtaining a third position information of the terminal device via the position information obtainment means after a predetermined time for obtaining the second position information;

a fourth obtaining step of obtaining a movement distance and a movement direction from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device and a movement distance and a movement direction from the position indicated by the second position information of the terminal device to a position indicated by the third position information of the terminal device, based on the first position information, the second position information, and the

third position information;

a fifth obtaining step of obtaining an acceleration of the terminal device at the position indicated by the third position information of the terminal device, based on the movement distance and the movement direction from the position indicated by the first position information of the terminal device to the position indicated by the second position information of the terminal device and the movement distance and the movement direction from the position indicated by the second position information of the terminal device to the position indicated by the third position information of the terminal device; and

a correcting step of correcting the third position information of the terminal device, when the acceleration of the terminal device is equal to or more than a threshold value.

[Claim 14] A program to cause a computer to execute:

a first obtaining step of obtaining a first position information of a terminal device and an error of the first position information via a position information obtainment means;

a second obtaining step of obtaining a second position information of the terminal device and an error of the second position information via the position information obtainment means, after a predetermined time of obtaining the first position

information and the error of the first position information; and

a correcting step of correcting the second position information of the terminal device when the error of the second position information is equal to or more than a threshold value,

wherein in the correcting step, a position moved by a movement distance obtained by multiplying the logarithm of the error of the second position information by a multiple that is inversely proportional to the logarithm of the error of the second position information with respect to a movement distance from a position indicated by the first position information of the terminal device to a position indicated by the second position information of the terminal device, with respect to the first position information of the terminal device, is set as the second position information of the terminal device after correction.