Claims

[Claim 1]

A maintenance management device of a track running vehicle system, comprising:

a maintenance target device candidate determination unit that determines maintenance target device candidates in a maintenance segment based on an operation mode determined for the track running vehicle system; and

an output unit that outputs the determined maintenance target device candidates.

[Claim 2]

The maintenance management device according to claim 1, further comprising:

an operating rate calculation unit that calculates an operating rate of each maintenance target device candidate based on past operation time and failure history,

wherein the output unit outputs the operating rate of each maintenance target device candidate.

[Claim 3]

The maintenance management device according to claim 1 or 2, further comprising:

a cost information calculation unit that calculates cost information based on maintenance cost of a maintenance target device selected from the maintenance

target device candidates,

wherein the output unit outputs the maintenance cost and the cost information of each maintenance target device candidate.

[Claim 4]

The maintenance management device according to any one of claims 1 to 3,

wherein the output unit obtains an inspection deadline of each maintenance target device candidate, and outputs the obtained inspection deadline.

[Claim 5]

The maintenance management device according to any one of claims 2 to 4,

wherein the output unit rearranges the maintenance target device candidates based on at least one of the operating rate, the maintenance cost and the inspection deadline, and displays the rearranged maintenance target device candidates.

[Claim 6]

The maintenance management device according to any one of claims 1 to 5,

wherein the output unit obtains the amount of inventory of each maintenance target device candidate, and outputs the obtained amount of inventory.

[Claim 7]

The maintenance management device according to any one of claims 1 to 6,

wherein the output unit obtains time and the number of workers required for maintenance of each maintenance target device candidate, and outputs the obtained time and number of worker.

[Claim 8]

The maintenance management device according to any one of claims 1 to 7, further comprising:

an operation mode candidate determination unit that determines candidates of the operation mode indicating a vehicle operation mode in a predetermined operation segment and a predetermined operation time zone,

wherein the output unit outputs the candidates of the operation mode in the predetermined operation segment and the predetermined period.

[Claim 9]

The maintenance management device according to any one of claims 1 to 8,

wherein the output unit performs display such that an operation route and a maintenance segment are different for an operation mode selected from the candidates of the operation mode.

[Claim 10]

The maintenance management device according to any

one of claims 1 to 9, further comprising:

a maintenance plan recording unit that records information including the maintenance target device selected for each operation mode and the maintenance cost and the number of workers for the maintenance target device,

wherein the output unit obtains the information recorded by the maintenance plan recording unit, and outputs the achievement of the inspection deadline which is previously determined for each maintenance target device candidate and total income and expenditure calculated using a fare income, operation cost and maintenance cost for a predetermined period.

[Claim 11]

A maintenance management method in a track running vehicle system, comprising:

determining maintenance target device candidates in a maintenance segment based on an operation mode determined for the track running vehicle system; and

outputting the determined maintenance target device candidates.

[Claim 12]

A program causing a computer of a maintenance management device to function as:

means for determining maintenance target device

candidates in a maintenance segment based on an operation mode determined for a track running vehicle system; and

means for outputting the determined maintenance target device candidates.

CLAIMS

[Claim 1]

A maintenance management device of a track running vehicle system, comprising:

an operation mode database which stores operation modes each indicating a vehicle operation mode that determines an operation route of the vehicle for the track running vehicle system;

an executable maintenance database which stores information of maintenance target devices provided in a maintenance segment which is related to the operation modes;

an operation mode candidate determination unit that determines the operation modes that satisfy a condition designated by a user as candidates of the operation mode from the operation mode database;

a maintenance target device candidate determination unit that determines the maintenance target devices in the maintenance segment which is related to the candidates of the operation mode as maintenance target device candidates from the executable maintenance database; and

an output unit that outputs the maintenance target device candidates.

[Claim 2]

The maintenance management device according to claim 1, further comprising:

an operating rate calculation unit that calculates an operating rate of each maintenance target device candidate based on past operation time and failure history,

wherein the output unit outputs the operating rate of each maintenance target device candidate.

[Claim 3]

The maintenance management device according to claim 2,

wherein the output unit rearranges the maintenance target device candidates based on the operating rate and displays the rearranged maintenance target device candidates.

[Claim 4]

The maintenance management device according to any one of claims 1 to 3, further comprising:

a cost information calculation unit that calculates cost information based on maintenance cost of a maintenance target device selected from the maintenance target device candidates,

wherein the output unit outputs the maintenance cost and the cost information of each maintenance target device candidate.

[Claim 5]

The maintenance management device according to claim 4,

wherein the output unit rearranges the maintenance target device candidates based on the maintenance cost and displays the rearranged maintenance target device candidates.

[Claim 6]

The maintenance management device according to any one of claims 1 to 5,

wherein the output unit obtains an inspection deadline of each maintenance target device candidate, and outputs the obtained inspection deadline.

[Claim 7] The maintenance management device according to claim 6,

wherein the output unit rearranges the maintenance target device candidates based on the inspection deadline, and displays the rearranged maintenance target device candidates.

[Claim 8]

The maintenance management device according to any one of claims 1 to 7,

wherein the output unit obtains the amount of inventory of each maintenance target device candidate, and outputs the obtained amount of inventory.

[Claim 9]

The maintenance management device according to any one of claims 1 to 8

wherein the output unit obtains time and the number of workers required for maintenance of each maintenance target device candidate, and outputs the obtained time and number of worker.

[Claim 10]

The maintenance management device according to any one of claims 1 to 9, further comprising:

wherein the operation mode candidate determination unit determines the operation modes each indicating the vehicle operation mode in a predetermined operation segment and a predetermined operation time zone as the candidates of the operation mode, and

wherein the output unit outputs the candidates of the operation mode in the predetermined operation segment and the predetermined period.

[Claim 11]

The maintenance management device according to any one of claims 1 to 10,

wherein the output unit performs display such that the operation route and the maintenance segment are different for the operation mode selected from the candidates of the operation mode.

[Claim 12]

A maintenance management device of a track running vehicle system, comprising:

an operation mode database which stores operation modes each indicating a vehicle operation mode that determines an operation route of the vehicle for the track running vehicle system;

an executable maintenance database which stores information of maintenance target devices provided in a maintenance segment which is related to the operation modes;

an operation mode candidate determination unit that determines the operation modes that satisfy a condition designated by a user as candidates of the operation mode from the

operation mode database;

a maintenance target device candidate determination unit that determines the maintenance target devices in the maintenance segment which is related to the candidates of the operation mode as maintenance target device candidates from the executable maintenance database;

an output unit that outputs the maintenance target device candidates; and

a maintenance plan recording unit that records information including the maintenance target device selected for each operation mode and a maintenance cost and the number of workers for the maintenance target device,

wherein the output unit obtains the information recorded by the maintenance plan recording unit, and outputs an achievement of an inspection deadline which is previously determined for each maintenance target device candidate and total income and expenditure calculated using a fare income, operation cost and the maintenance cost for a predetermined period.

[Claim 13]

A maintenance management method in a track running vehicle system, comprising:

storing operation modes each indicating a vehicle operation mode that determines an operation route of the vehicle for the track running vehicle system in an operation mode database;

storing information of maintenance target devices provided in a maintenance segment which is related to the operation modes in an executable maintenance database;

determining the operation modes that satisfy a condition designated by a user as candidates of the operation mode from the operation mode database;

determining maintenance target devices in the maintenance segment which is related to the candidates of the operation mode as maintenance target device candidates from the executable maintenance database; and

outputting the maintenance target device candidates.

[Claim 14]

A program causing a computer of a maintenance management device to function as:

a storing unit that stores operation modes each indicating a vehicle operation mode that determines an operation route of the vehicle for the track running vehicle system in an operation mode database;

a storing unit that stores information of maintenance target devices provided in a maintenance segment which is related to the operation modes in an executable maintenance database;

a determining unit that determines the operation modes that satisfy a condition designated by a user as candidates of the operation mode from the operation mode database;

a maintenance target device candidate determination unit that determines maintenance target devices in the maintenance segment which is related to the candidates of the operation mode as maintenance target device candidates from the executable maintenance database; and

an output unit that outputs the maintenance target device candidates.