

CLAIMS

1. A maintenance management system that comprises:
 - a management device to manage an air conditioner operated by an operation device;
 - and
 - a maintenance support device to support maintenance of the air conditioner, and that manages the maintenance of the air conditioner,
 - the management device storing lifestyle information that shows a lifestyle of a user who uses the air conditioner, the lifestyle information including consumable item usage information, cleaning service information, and personal attribute information of the user,
 - the maintenance support device comprising first processing circuitry configured to determine based on the lifestyle information transmitted by the management device, whether or not cleaning for the air conditioner is necessary and to transmit to the operation device when it is determined that the cleaning is necessary, a cleaning notification for notifying that the cleaning is necessary,
 - to cause the operation device to display, a list of cleaning companies, each of which provides a cleaning service of the air conditioner,
 - to receive a cleaning service request that requests the cleaning service on the air conditioner and indicates a cleaning company selected from the list of the cleaning companies,
 - to execute based on the cleaning service request, a process of arranging the cleaning service, and
 - to cause the operation device to allow input of an evaluation for the selected cleaning company after the selected cleaning company has completed providing the cleaning service,
 - the management support device comprising second processing circuitry configured to determine based on the lifestyle information, a type of cleaning liquid used for the cleaning service, and
 - to transmit a determination result to the maintenance support device as a recommended cleaning liquid, and
 - the first processing circuitry being further configured to transmit to the operation device, the cleaning notification indicating the recommended cleaning liquid.
2. The maintenance management system according to claim 1, wherein
 - the management device comprises second processing circuitry configured

to select based on the lifestyle information, a type to be presented from among a plurality of types of a consumable item used in the air conditioner, and to cause the operation device to display the selected type as purchase candidates;

to receive a candidate selected from among the purchase candidates, as a purchase consumable item; and

to cause the operation device to allow purchase of the purchase consumable item through an electronic commerce environment.

3. The maintenance management system according to claim 2, wherein the second processing circuitry is further configured to

acquire an advice instruction for narrowing down the purchase candidates and

cause the operation device to display the purchase candidates narrowed down by following the advice instruction.

4. The maintenance management system according to claim 3, wherein the first processing circuitry is further configured

to transmit to the operation device, the advice instruction input via a maintenance terminal device used in operating the maintenance of the air conditioner and to acquire the advice instruction transmitted.

5. The maintenance management system according to claim 2, wherein the consumable item is a filter used in the air conditioner and

a plurality of types of the filter includes a dust collection filter, a deodorization filter, and an allergen removal filter.

6. The maintenance management system according to claim 2, wherein the first processing circuitry is further configured to

acquire consumable item usage information that shows a usage status of the air conditioner at a time when the purchase consumable item is used in the air conditioner, transmit the consumable item usage information to the management device, and cause the management device to set the consumable item usage information in the lifestyle information.

7. The maintenance management system according to claim 1, wherein the first processing circuitry is further configured to cause the operation device to display the cleaning notification via a maintenance application which is an application program implemented in the operation device, and receive the cleaning service request via the maintenance application.
8. The maintenance management system according to claim 7, wherein the first processing circuitry is further configured to cause the operation device to display via the maintenance application, the list of the cleaning companies, and cause the operation device to allow the input of the evaluation for the selected cleaning company via the maintenance application after the selected cleaning company has completed providing the cleaning service.
9. The maintenance management system according to claim 8, wherein the first processing circuitry is further configured to give a usage point via the maintenance application after providing the cleaning service has been completed.
10. The maintenance management system according to claim 8, wherein the first processing circuitry is further configured to transmit to the management device as cleaning service information, a usage status of the cleaning service for at a time when providing the cleaning service has been completed.
11. A maintenance management method by a maintenance management system that comprises:
 - a management device to manage an air conditioner operated by an operation device; and
 - a maintenance support device to support maintenance of the air conditioner, and that manages the maintenance of the air conditioner, the maintenance management method comprising:
 - determining based on lifestyle information that shows a lifestyle of a user who uses the air conditioner, the lifestyle information including consumable item usage information, cleaning service information, and personal attribute information of the user, and being transmitted by the management device, whether or not cleaning for the air conditioner is

necessary and transmitting to the operation device when it is determined that the cleaning is necessary, a cleaning notification for notifying that the cleaning is necessary;

displaying on the operation device, a list of cleaning companies, each of which provides a cleaning service on the air conditioner;

receiving a cleaning service request that requests the cleaning service on the air conditioner and indicates a cleaning company selected from the list of the cleaning companies displayed on the operation device,

executing based on the cleaning service request, a process of arranging the cleaning service,

receiving an evaluation for the selected cleaning company, the evaluation being input after the selected cleaning company has completed providing the cleaning service, determining based on the lifestyle information, a type of cleaning liquid used for the cleaning service,

transmitting a determination result to the maintenance support device as a recommended cleaning liquid, and

transmitting to the operation device, the cleaning notification indicating the recommended cleaning liquid.

12. A non-transitory computer readable medium storing a maintenance management program for a maintenance management system that comprises:

a management device to manage an air conditioner operated by an operation device; and

a maintenance support device to support maintenance of the air conditioner, and that manages the maintenance of the air conditioner, the maintenance management program causing at least one computer to execute:

a cleaning determination process to determine based on lifestyle information that shows a lifestyle of a user who uses the air conditioner, the lifestyle information including consumable item usage information, cleaning service information, and personal attribute information of the user, and being transmitted by the management device, whether or not cleaning for the air conditioner is necessary and to transmit to the operation device when it is determined that the cleaning is necessary, a cleaning notification for notifying that the cleaning is necessary; and

a cleaning support process to display on the operation device, a list of cleaning companies, each of which provides a cleaning service on the air conditioner,

to receive a cleaning service request that requests the cleaning service on the air conditioner and indicates a cleaning company selected from the list of the cleaning companies displayed on the operation device,

to execute based on the cleaning service request, a process of arranging the cleaning service, and

to receive an evaluation for the selected cleaning company, the evaluation being input after the selected cleaning company has completed providing the cleaning service,

to determine based on the lifestyle information, a type of cleaning liquid used for the cleaning service,

to transmit a determination result to the maintenance support device as a recommended cleaning liquid, and

to transmit to the operation device, the cleaning notification indicating the recommended cleaning liquid.