unit. The transmission information creation unit creates first transmission information from first-type information about the appliances. The first transmission information is the transmission information to be sent to the first reception processing unit. The transmission information creation unit creates second transmission information from second-type information about the appliances. The second transmission information is the transmission information to be sent to the second reception processing unit. The transmission unit sends the first transmission information to the first reception processing unit and sends the second transmission information to the second reception processing unit.

In this information transmission apparatus, considering that the information collection system, which is a destination to which information about the appliances is transmitted via the communication line, includes the first reception processing unit and the second reception processing unit, the first transmission information to be sent to the first reception processing unit is created from the first-type information about the appliances, and the second transmission information to be sent to the second reception processing unit is created from the second-type information about the appliances. That is, for the first reception processing unit and the second reception processing unit that differ in the write failure rate, creation of transmission information from types of information about the appliances that match the characteristics of write failures in the respective reception processing units is enabled. Accordingly, information about the appliances can be transmitted to the information collection system from the information transmission apparatus without the need of significantly decreasing the number of items of transmission data or without the need of significantly lowering the transmission frequency.

In an embodiment of the above aspects of the information transmission apparatus, the transmission unit sends the first transmission information to the first reception processing unit and sends the second transmission information to the second reception processing unit with a frequency of once every predetermined period of five minutes or less.

Here, both the first transmission information and the second transmission information are sent to the information collection system with a relatively high frequency. That is, this information transmission apparatus enables to real-time sending to some extent. To enable real-time sending at a higher level, it is preferable to perform transmission with a frequency of once every predetermined period of two minutes or less (for example, at intervals of one minute).

In an embodiment of the above aspects of the information transmission apparatus the

the transmission information creation unit creates third transmission information from the first-type information about the appliances and from the second-type information about the appliances. The transmission unit sends the third transmission information to the first reception processing unit at intervals of ten minutes or more.

Here, the third transmission information for which the communication volume tends to be larger than the communication volume for the first transmission information and that for the second transmission information is sent to the first reception processing unit of the information collection system at intervals of ten minutes or more. The first reception processing unit has a larger buffer capacity or a lower write failure rate than the second reception processing unit. Therefore, the probability of the information collection system successfully receiving and processing the third transmission information is high, and even if the second reception processing unit fails to perform a process for receiving the second transmission information, information collection can later be compensated for by the third transmission information.

In an embodiment of the above aspects of the information transmission apparatus, a communication volume necessary for a handshake between the transmission unit and the first reception processing unit performed after establishment of communication via the communication line is larger than a communication volume necessary for a handshake between the transmission unit and the second reception processing unit performed after establishment of communication via the communication line.

Here, for the first reception processing unit and the second reception processing unit that differ in the communication volume necessary for a handshake, creation of transmission information from types of information about the appliances that match the characteristics of the respective reception processing units is enabled.

In an embodiment of the above aspects of the information transmission apparatus, the appliances that are targets of information collection by the information collection system are air conditioners. The first-type information about the appliances includes at least one of information about an abnormality in the air conditioners, information about an abnormality in the transmission unit, and information about an abnormality in the transmission information creation unit. The second-type information about the appliances includes at least one of information about operation/non-operation of the air conditioners, information about an operating mode of the air conditioners, and a set temperature of the air conditioners.

In an embodiment of the above aspects of the information transmission apparatus, the transmission information creation unit creates the first transmission information from

information about the appliances that has been changed from the information about the appliances included in the first transmission information previously sent from the transmission unit.

Here, the amount of information of the first transmission information can be reduced.

An appliance management system according to a third aspect is an appliance management system managing information about a plurality of appliances, including an information collection system and an information transmission apparatus. The information collection system includes a database storing the information about the appliances, a first reception processing unit, and a second reception processing unit. The first reception processing unit writes information about the appliances that has been received to the database. The first reception processing unit includes a first buffer capable of temporarily saving information. The second reception processing unit writes information about the appliances that has been received to the database. The second reception processing unit includes a second buffer capable of temporarily saving information. The first buffer has a capacity larger than a capacity of the second buffer. The information transmission apparatus includes a transmission unit and a transmission information creation unit. The transmission unit transmits the information about the appliances to the first reception processing unit or to the second reception processing unit via a communication line. The transmission information creation unit creates transmission information, which is the information about the appliances to be transmitted by the transmission unit. The transmission information creation unit creates as the transmission information to be sent to the first reception processing unit, first transmission information from first-type information about the appliances. The transmission information creation unit creates as the transmission information to be sent to the second reception processing unit, second transmission information from second-type information about the appliances. The transmission unit sends the first transmission information to the first reception processing unit and sends the second transmission information to the second reception processing unit.

In this appliance management system, considering that the information collection system includes the first reception processing unit and the second reception processing unit, the first transmission information to be sent to the first reception processing unit is created from the first-type information about the appliances, and the second transmission information to be sent to the second reception processing unit is created from the second-type information about the appliances. That is, for the first reception processing unit and the second reception

processing unit that differ in the capacity of the buffer capable of temporarily saving information, creation of transmission information from types of information about the appliances that match the characteristics of the respective buffers is enabled. Accordingly, information about the appliances can be transmitted to the information collection system from the information transmission apparatus without the need of significantly decreasing the number of items of transmission data or without the need of significantly lowering the transmission frequency.

An appliance management system according to a fourth aspect is an appliance management system managing information about a plurality of appliances, including an information collection system and an information transmission apparatus. The information collection system includes a database storing the information about the appliances, a first reception processing unit, and a second reception processing unit. The first reception processing unit writes information about the appliances that has been received to the database. In the first reception processing unit, a write failure rate when the information about the appliances that has been received is written to the database is low. The second reception processing unit writes information about the appliances that has been received to the database. In the second reception processing unit, a write failure rate when the information about the appliances that has been received is written to the database is higher than the write failure rate in the first reception processing unit. The information transmission apparatus includes a transmission unit and a transmission information creation unit. The transmission unit transmits the information about the appliances to the first reception processing unit or to the second reception processing unit via a communication line. The transmission information creation unit creates transmission information, which is the information about the appliances to be transmitted by the transmission unit. The transmission information creation unit creates as the transmission information to be sent to the first reception processing unit, first transmission information from first-type information about the appliances. The transmission information creation unit creates as the transmission information to be sent to the second reception processing unit, second transmission information from second-type information about the appliances. The transmission unit sends the first transmission information to the first reception processing unit and sends the second transmission information to the second reception processing unit.

In this appliance management system, considering that the information collection