is a failure that, even if smoke is detected by a smoke detector which is a disaster-prevention device, fire or others cannot be checked from the building facility device managing system with operating the IP monitoring camera, and there is a problem that it is difficult to provide building-facility users with the advanced building environment under which variously-installed building facility monitoring devices are utilized.

A preferred aim of the present invention is to solve problems caused by the above-described conventional techniques, which is to provide a connection system of a building facility device managing system, a connection method of a building facility device managing system, and a connection program of a building facility device managing system, which can coordinate operation of a building facility monitoring device managed by a building facility device managing system with operation of an IP network device managed by an IP network managing system.

**MEANS FOR SOLVING THE PROBLEMS**

T~~In order to achieve t~~he above-described preferred aim is achieved as follows.~~,~~ The present invention has a first feature of a connection system of a building facility device managing system which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using a BACnet or Lontalk protocol, the IP network device managing system being for managing an IP network monitoring device with using an IP protocol, so that the building facility monitoring device is coordinated with the IP network monitoring device, the IP network device managing system including: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and parameter information of the IP protocol and the BACnet or Lontalk protocol are stored; a monitoring-device-status managing

unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol into the management database when the status which is a state of the IP network monitoring device has been changed; and a coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system, the monitoring-device-status managing unit executing a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it, and the coordinated-packet-generation transmitting/receiving unit executing: a second step when receiving an inquiry command of a status of a specific IP network monitoring device from the building facility device managing system, the second step of acquiring the status and the parameter information of the specific IP network monitoring device for which the inquiry has been received, acquired from the management database, and of generating the packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system.

The present invention has a second feature of a connection system of a building facility device managing system which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using a BACnet or Lontalk protocol, the IP network device managing system being for managing an IP network monitoring

device with using an IP protocol, so that the building facility monitoring device is coordinated with the IP network monitoring device, the IP network device managing system including: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and parameter information of the IP protocol and the BACnet or Lontalk protocol are stored; a monitoring-device-status managing unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol into the management database when the status which is a state of the IP network monitoring device has been changed; and a coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system, the monitoring-device-status managing unit executing a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it, and the coordinated-packet-generation transmitting/receiving unit executing: a third step when receiving an operation command of the status of the specific IP network monitoring device from the building facility device managing system, the third step of acquiring the status and the parameter information of the specific IP network monitoring device for which the operation command has been received, acquired from the management database, and of generating the packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system.

Tthe present invention has a third~~first~~ feature of a connection system of a building facility device managing system, which connects a building facility device managing system with an IP network monitoring device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using a BACnet or Lontalk protocol, the IP network device managing system being for managing an IP network monitoring device with using an IP protocol, so as to coordinate the building facility monitoring device with the IP network monitoring device. In the connection system, the IP network device managing system includes: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and parameter information of the IP protocol and the BACnet or Lontalk protocol are stored; a monitoring-device-status managing

unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol into the management database ~~with being numbered~~ when the status which is a state of the IP network monitoring device has been changed; and a coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system. The monitoring-device-status managing unit executes a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it. The coordinated-packet-generation transmitting/receiving unit executes a second step when receiving an inquiry command of a status of a specific IP network monitoring device from the building facility device managing system, the second step of acquiring the status and the parameter information of the specific IP network monitoring device for which the inquiry has been received, acquired from the management database, and of generating the packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system, and executes a third step when receiving an operation command of the status of the specific IP network monitoring device from the building facility device managing system, the third step of acquiring the status and the parameter information of the specific IP network monitoring device for which the operation command has been received, acquired from the management database, and of generating the packet of the BACnet or Lontalk protocol based on the acquired status and parameter

information to transmit it to the building facility device managing system.

The present invention has a fourth feature of a connection method of a building facility device managing system for a computer system which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using a BACnet or Lontalk protocol, the IP network device managing system being for managing the IP network monitoring device with using an IP protocol, which coordinates the building facility monitoring device with the IP network monitoring device, and in which the IP network managing system includes: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and the parameter information of an IP protocol and a BACnet or Lontalk protocol are stored; a monitoring-device-status managing unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol into the management database when the status which is a state of the IP network monitoring device has been changed; and an coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system, the monitoring-device-status managing unit being made to execute a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it, and the coordinated-packet-generation transmitting/receiving unit being

made to execute: a second step when receiving an inquiry command of a status of a specific IP network monitoring device from the building facility device managing system, the second step of acquiring the status and the parameter information of the specific IP network monitoring device for which the inquiry has been received, acquired from the management database, and of generating a packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system.

The present invention has a fifth feature of a connection method of a building facility device managing system for a computer system which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using a BACnet or Lontalk protocol, the IP network device managing system being for managing the IP network monitoring device with using an IP protocol, which coordinates the building facility monitoring device with the IP network monitoring device, and in which the IP network managing system includes: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and the parameter information of an IP protocol and a BACnet or Lontalk protocol are stored; a monitoring-device-status managing unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol into the management database when the status which is a state of the IP network monitoring device has been changed; and an coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing

system, the monitoring-device-status managing unit being made to execute a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it, and the coordinated-packet-generation transmitting/receiving unit being made to execute: a third step when receiving an operation command of the status of the specific IP network monitoring device from the building facility device managing system, the third step of acquiring the status and the parameter information of the specific IP network monitoring device for which the operation command has been received, acquired from the management database, and of generating a packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system.

Also, the present invention has a sixth~~second~~ feature of a connection method of a building facility device managing system for a computer system, which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using a BACnet or Lontalk protocol, the IP network device managing system being for managing the IP network monitoring device with using an IP protocol, which coordinates the building facility monitoring device with the IP network monitoring device, and in which the IP network managing system includes: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and the parameter information of an IP protocol and a BACnet or Lontalk protocol are stored; a monitoring-device-status managing unit which stores the parameter information for filling a difference in a specification between the

IP protocol and the BACnet or Lontalk protocol into the management database ~~with being numbered~~ when the status which is a state of the IP network monitoring device has been changed; and an coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system. In the connection method, the monitoring-device-status managing unit is made to execute a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing

it. The coordinated-packet-generation transmitting/receiving unit is made to execute a second step when receiving an inquiry command of a status of a specific IP network monitoring device from the building facility device managing system, the second step of acquiring the status and the parameter information of the specific IP network monitoring device for which the inquiry has been received, acquired from the management database, and of generating a packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system, and is made to execute a third step when receiving an operation command of the status of the specific IP network monitoring device from the building facility device managing system, the third step of acquiring the status and the parameter information of the specific IP network monitoring device for which the operation command has been received, acquired from the management database, and of generating a packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system.

The present invention has a seventh feature of a connection program of a building facility device managing system for a computer system, which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using the BACnet or Lontalk protocol, the IP network device managing system being for managing an IP network monitoring device with using the IP protocol, which coordinates the building facility monitoring device with the IP network monitoring device, and in which the IP network device managing system includes: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and the parameter information of the IP protocol and the BACnet or Lontalk protocol are stored; a

monitoring-device-status managing unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol into the management database when the status which is a state of the IP network monitoring device has been changed; and an coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system, the monitoring-device-status managing unit being made to execute a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it, and the coordinated-packet-generation transmitting/receiving unit being made to execute: a second step when receiving an inquiry command of a status of a specific IP network monitoring device from the building facility device managing system, the second step of acquiring the status and the parameter information of the specific IP network monitoring device for which the inquiry has been received, acquired from the management database, and of generating a packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system.

The present invention has an eighth feature of a connection program of a building facility device managing system for a computer system, which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using the BACnet or

Lontalk protocol, the IP network device managing system being for managing an IP network monitoring device with using the IP protocol, which coordinates the building facility monitoring device with the IP network monitoring device, and in which the IP network device managing system includes: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and the parameter information of the IP protocol and the BACnet or Lontalk protocol are stored; a monitoring-device-status managing unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol into the management database when the status which is a state of the IP network monitoring device has been changed; and an coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system, the monitoring-device-status managing unit being made to execute a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it, and the coordinated-packet-generation transmitting/receiving unit being made to execute: a third step when receiving an operation command of the status of the specific IP network monitoring device from the building facility device managing system, the third step of acquiring the status and the parameter information of the specific IP network monitoring device for which the operation command has been received, acquired from the management database, and of generating a packet of the BACnet or Lontalk protocol based on the

acquired status and parameter information to transmit it to the building facility device managing system.

Further, the present invention has a ninth~~third~~ feature of a connection program of a building facility device managing system for a computer system, which connects a building facility device managing system with an IP network device managing system, the building facility device managing system being for managing a building facility monitoring device installed in a building with using the BACnet or Lontalk protocol, the IP network device managing system being for managing an IP network monitoring device with using the IP protocol, which coordinates the building facility monitoring device with the IP network monitoring device, and in which the IP network device managing system includes: a management database in which statuses of the building facility monitoring device and of the IP network monitoring device and the parameter information of the IP protocol and the BACnet or Lontalk protocol are stored; a

monitoring-device-status managing unit which stores the parameter information for filling a difference in a specification between the IP protocol and the BACnet or Lontalk protocol ~~stored with being numbered, stored~~ into the management database when the status which is a state of the IP network monitoring device has been changed; and an coordinated-packet-generation transmitting/receiving unit which receives a command from the building facility device managing system and which generates a packet of the BACnet protocol based on the status and the parameter information acquired from the management database to transmit it to the building facility device managing system. In the connection program, the monitoring-device-status managing unit is made to execute a first step when the status received with using the IP protocol from the IP network monitoring device has been changed from the status stored in the management database, the first step of providing the parameter information unique for the BACnet or Lontalk protocol to the changed status and storing it. The coordinated-packet-generation transmitting/receiving unit is made to execute a second step when receiving an inquiry command of a status of a specific IP network monitoring device from the building facility device managing system, the second step of acquiring the status and the parameter information of the specific IP network monitoring device for which the inquiry has been received, acquired from the management database, and of generating a packet of the BACnet or Lontalk protocol based on the acquired status and parameter information to transmit it to the building facility device managing system, and is made to execute a third step when receiving an operation command of the status of the specific IP network monitoring device from the building facility device managing system, the third step of acquiring the status and the parameter information of the specific IP network monitoring device for which the operation command has been received, acquired from the management database, and of generating a packet of the