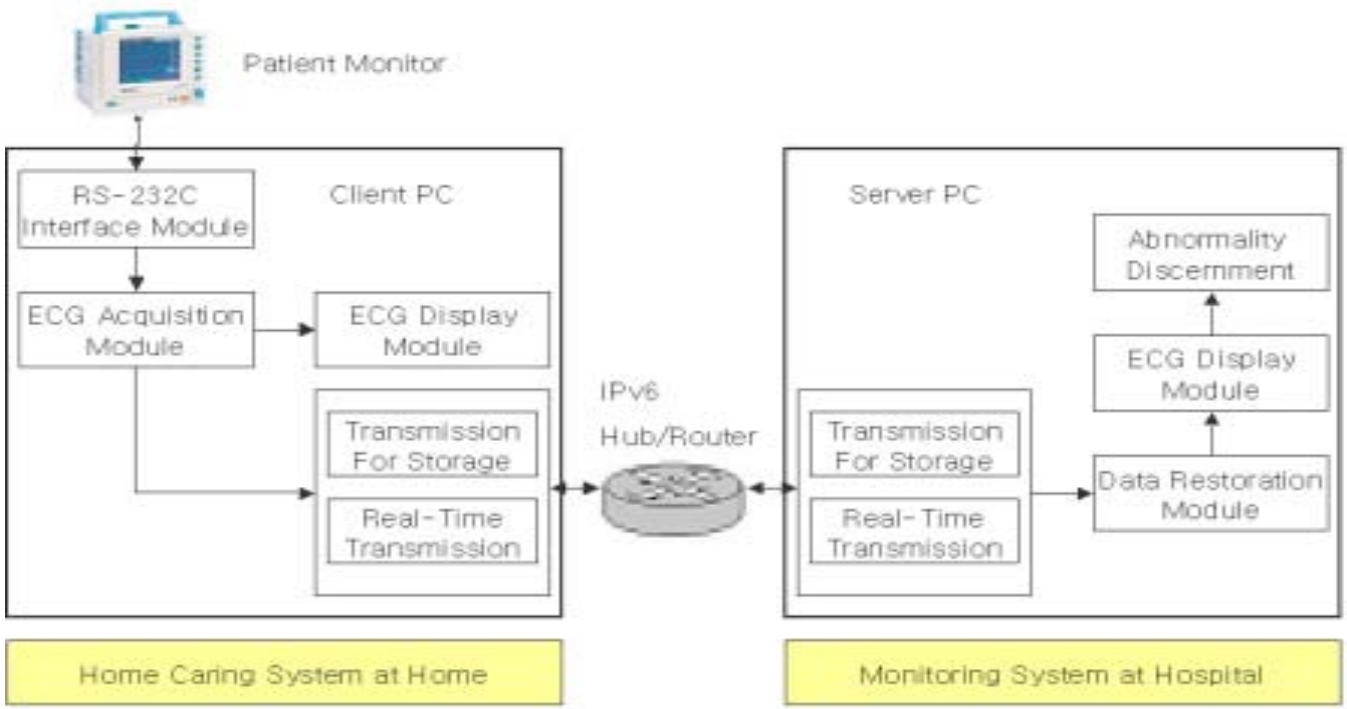
IPv6 Home Caring System

- Concept of the System
  - This system is for the medical consultation between the patient and the medical specialist through the IPv6 network without the patient visiting the hospital.
  - Patients measure their ECG signal at home and sends the data to a computer in the hospital for the storage or a real-time medical consultation.
- System Architecture



Operating Procedure of the System

- Patients measure their ECG (Electrocardiogram) signal at home.
- The acquired data is transmitted to a computer in the hospital through the IPv6 network, and at the same time it is displayed in the computer at home.
- The transmitted data is either stored in the database of the hospital or consulted by the medical specialist in real-time.
- The medical specialist in the hospital can restore the data in the computer for treatment or examine the patient in real-time.
- The server computer in the hospital can discern the abnormality of the ECG signal and will display such part in different color so that the specialist can recognize easily.

Content of Development

- PC Interfacing Module of the Patient Monitor
- Display Module of a Real-Time ECG Signal
- Data Transmission Module
  - Data transmission module using the IPv6 address for the storage of the data in the database of a server computer in hospital
  - Data transmission module using the IPv6 address for a real-time display in the server computer of a hospital
- Abnormality Discernment Module
  - Display the abnormal part of the ECG signal in a different color
  - Through the detection of the peak point of the signal and the measurement of the heart rate, it should be able to alarm the abnormality
- Data Restoration Module

Expected Benefits of the System

- Extend the medical application to be compatible in the IPv6 network in preparation of the future network environment
- Can fulfill the increasing interest of the health care by realizing the home caring system
- Due to the abundance of IP addresses, any patients can use their own address to make connections with the server computer in the hospital.
- Using other features of IPv6 such as mobility, the application can be applied to the mobile communication environment.
- With the development of the home network facilitated by IPv6, a medical application like this will be essential for future lives.