

# **Implementation of Humanistic Health Care Environment Based on Cyber Physical System**

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## **Abstract**

With the rapid growth of information technologies and the fast diffusion in communication networks, digital devices have massively affected our daily life and living environment. Recently, the cyber-physical system (CPS) is a hot research topic. A CPS is an intelligent system to integrate computation, communication, and control into an entity, which provides the tight conjoining of and coordination between computational and physical resources through network connectivity.

People suffer from heavy pressure in the modern life. Overworking will decay people's health. With the aging of Taiwan population, homecare takes on a new urgency. According to the strategies for the six emerging industries to boost Taiwan's competitiveness proposed by the Executive Yuan, the medicine and health care is listed as the most important key industry. In which, telecare integrates many disciplines including medical care, communication technologies, and electronic medical devices. Through the combination of medical care and information technologies, people can obtain service of health care in a home.

To realize the concept of humanistic health care environment based on the Cyber Physical System, we integrated six research teams of CSIE department in YunTech. The major goals of this project are to develop and to build an emotional support environment, a real-time information gather and push system, a family health management information platform, a homecare robot, a real-time and reliable connectivity for the CPS, and a mobile health-monitoring system.