

WSN-based Health Care Management Platform for Long-Term Care Institutions

吳美玉, 黃文彥

Information Management

Computer Science and Informatics

mywu@chu.edu.tw

Abstract

Although a growing elderly population worldwide has led to the establishment of an increasing number of long term care institutions, the rate of health care nursing personnel is growing far slower than that of growth in the elderly population. The elderly who require care are mostly disabled or suffering from chronic diseases. Personnel shortages are negatively impacting care quality, causing elderly patients to develop Eczema or other skin diseases. Additionally, in safety care, most care institutions are using conventional cable-based emergency notification systems. The cable-based system must be fixed in a single position, meaning it cannot effectively and immediately respond to patient emergency events, and location causes delays in medical care. This work presents a novel health care management platform involving safety monitoring capabilities for long-term care institutions. Based on a wireless sensor network (WSN), the proposed platform incorporates Zigbeebased wireless transmission combined with humidity sensors, an electronic humidity sensor and emergency event report system integration platform. The proposed platform constitutes a safety monitoring system for health care management.

Keyword : Wireless sensor network (WSN), Zigbee, Health Care, Management Platform