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**ABSTRACT**

Internet of Things (IoT) is a computing

process, where each physical object is equipped with

sensors, microcontrollers and transceivers for empowering

communication and is built with suitable protocol stacks which

help them interacting with each other and communicating

with the users. In IoT based healthcare, diverse distributed

devices aggregate, analyse and communicate real time medical

information to the cloud, thus making it possible to collect,

store and analyse the large amount of data in several new

forms and activate context based alarms. This novel information

acquisition paradigm allows continuous and ubiquitous medical

information access from any connected device over the Internet.

As each one of the devices used in IoT are limited in battery

power, it is optimal to minimise the power consumption to

enhance the life of the healthcare system. This work explains

the implementation of an IoT based In-hospital healthcare

system using ZigBee mesh protocol. The healthcare system

implementation can periodically monitor the physiological

parameters of the In-hospital patients. Thus, IoT empowered

devices simultaneously enhance the quality of care with regular

monitoring and reduce the cost of care and actively engage in

data collection and analysis of the same.

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The novel technologies developed aim at reducing the costs of the health sector, by increasing the empowerment of people and, in the same time, by improving the monitoring of patients with chronic diseases. Through the continuous assessment of symptoms, such systems can help the patients to managing their condition by their own, without needing direct supervision of specialized healthcare personnel. Currently, the patient monitoring systems based on internet of things (IoT) or cyber physical systems (CPS) are attracting considerable attention from the scientific community. Such emerging technologies have been used to various purposes: facilitate smoking cessation monitor patients with chronic heart failure detect early signs of arrhythmia or ischemia, provide diabetes education or monitor relevant physiological markers . can effectively link disparate Bitcoin transactions to a common user and, in many cases, to that user’s real-world identity.

However, individuals with disabilities are likely to engage in behaviors that can put their health at risk and there is a strong need of technologies that can improve their daily-life conditions, enable social relations, and increase their degree of autonomy and safety. Here we focus on a particular case of disability, which is the visual impairment. Nowadays, more than 285 million people worldwide suffer from visual impairment (VI) with 39 million of blinds and 246 million people with low vision. The World Health Organization estimates that by the year of 2020 the number of individuals affected by VI will significantly increase. The visually impaired people adapt to normal life by using traditional assistive aids

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