Easy Nurse: IOT Based Wireless Nurse Conducting System

Name: Arif Suhan, Omar Faruk Riyad, Ahraf Sharif

Supervisor: **Dr Mohammad Monirujjaman Khan**

Department of Electrical and Computer Engineering

North South University

omar.riyad@northsouth.edu

INTRODUCTION

In hospitals many emergency events occurs everyday and calling a nurse is one of the most common task of the daily schedule. However, calling a nurse could be difficult when it comes to emergency since there's no efficient remote option to call a nurse. Since the process of calling a nurse is almost manual in Bangladesh, it's not entirely possible to send the notification right away.

KEY FEATURES

PATIENT

- Call Button to Trigger Call
- Send Information of caller via WiFi
- Read RFID and Send Information

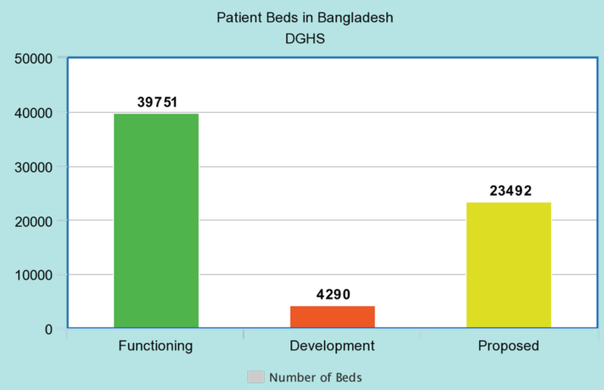
SERVER

- Decision making based on the call
- Segmentation of call information
- RFID authentication
- Open API feature

NURSE

- Recieve & Send Call Information
- OLED Display
- Embeded RFID chip
- Time Display

PROBLEM



- Management issues
- Delay in emergency call
- Less efficient nurses
- Monitoring issue
- Increasing number of hospital beds.

IMPACT

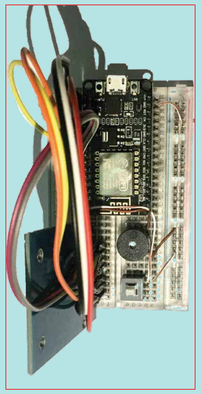


Figure: The Nurse Call Device

This diverse system can not only be used in emergency calling service but also can be used for attendance and as digital wearable.

This project has several revenue sources: IMPLEMENTATION, SUBSCRIPTION AND BY SELLING GENERATED DATA.

The key customers are government hospitals in B2B market segment. The system is one of the most economical approaches to its domain and can be easily installed in many different facilities.

The development cost of these products would be under $10.

Figure: Nurse Wrist Band

DIAAGRAM

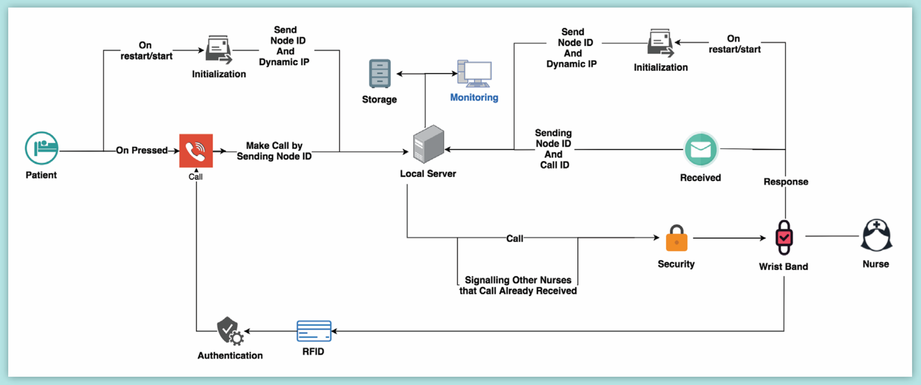


Figure: System Workflow Diagram

TECHNOLOGY

django

PostgreSQL

RESTful API

WiFi

ARDUINO

CONCLUSION

The fascinating thing about this project is that it has one of a kind dynamic IP allocation system. The significant approach of this project is totally WiFi based, which can be found in any hospital and an open API sub-system to incorporate other monitoring devices of the hospital.

The current solutions are mostly wired based vor pager technology based. By using the unified WiFi network as the main network BUS of the system makes this project unique and cost effective.

Incorporating RFID along with wrist band makes the project more diverse and useful in terms of authenticity and security.