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NETWORK MONITOR WITH SMS ALERT SYSTEM

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ABSTRACT

Main objective of this research project was to develop a network monitor with SMS alert system to provide network monitoring solution to the Anantare Resort, Tangalle. This system scans the telephone network and sends a report to the maintenance Engineer using SMS alert system. This device scan the telephone network per 30 minutes and generates the scanned report. SMS alert system helps maintenance Engineer to repair the telephone connection breakdowns quickly. Arduino uno was used to control the SMS alert system. Sim900 GSM module was used to send a SMS to the maintenance Engineer. Network scanning software was used to scan the telephone network.

Keywords: Network monitor, SMS, Telephone connections, Arduino uno

1. INTRODUCTION.

Anantara resort is a newly opened hotel in Tangalle. They have selected an IP PBX system to communicate with each other. The IP PBX is called the communication server which has several features like call routing, voicemail functions, conference calling etc. Every telephone has a unique IP address to communicate with communication server. All the telephones and communication server act as a voice network which communicate via IP addresses [1]. Currently there is no network monitoring tool to scan the telephone network in Anantara resort. Therefore there are lot of problems when going to maintain the telephone system. There are two ways to identify that telephone connection breakdown. One is guest complaints about the telephone connection breakdown and other thing is manually scanning the system. Most of the time maintenance Engineer is going to repair a telephone connection breakdown after receiving a guest complains. But that is not a good method, because gust satisfaction is the most important thing of a hotel.

By considering these drawbacks, this network monitoring system with SMS alert was introduced to reduce them

2. EXPERIMENTAL

The bellow figure 1 shows the block diagram for the network monitor with SMS alert system.

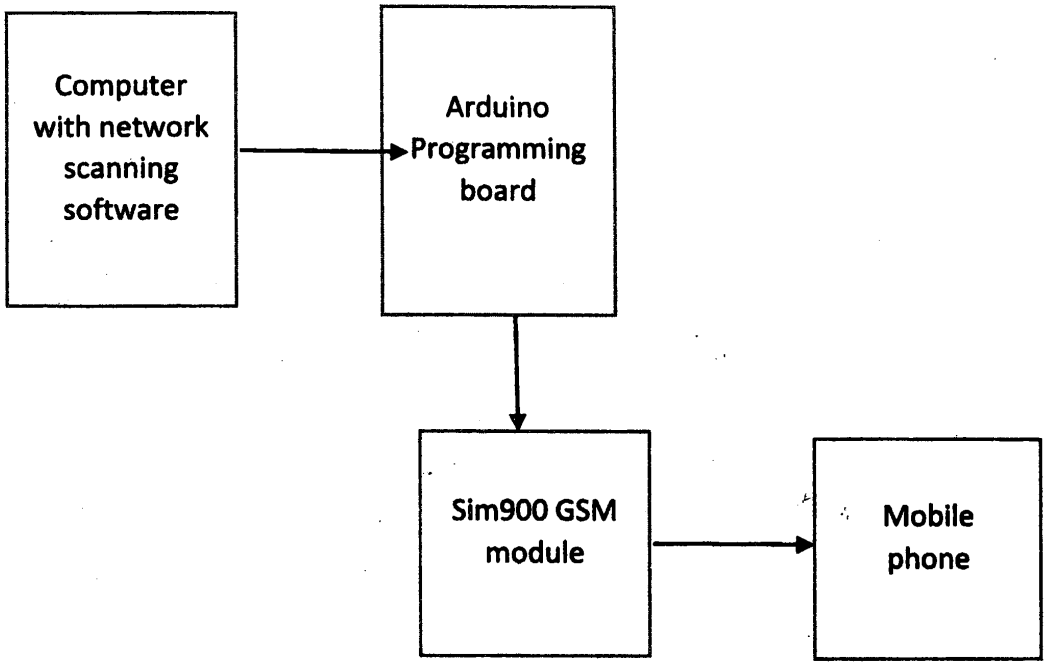

Figure 1: The block diagram of the network monitoring with SMS alert system

2.1 Operation of the network monitoring with SMS alert system

The Arduino programming board is the main controller unit of this system [2]. A computer is used to scan the telephone network by using a network monitoring software [3]. The computer is connected to the voice network through a network cable. The 10 strike network monitor software was used to scan the telephone network. The system is scanning once every 30 minutes and the result is generated as an output. That output is taken as the input to the ATmege328p. The message is received in hex numbers and it is should be converted to decimal to get the exact meaning of the message. Then message is sent to the maintenance Engineer through the GSM module which is interfaced with Arduino [4] The following figure 2 shows a picture of the device

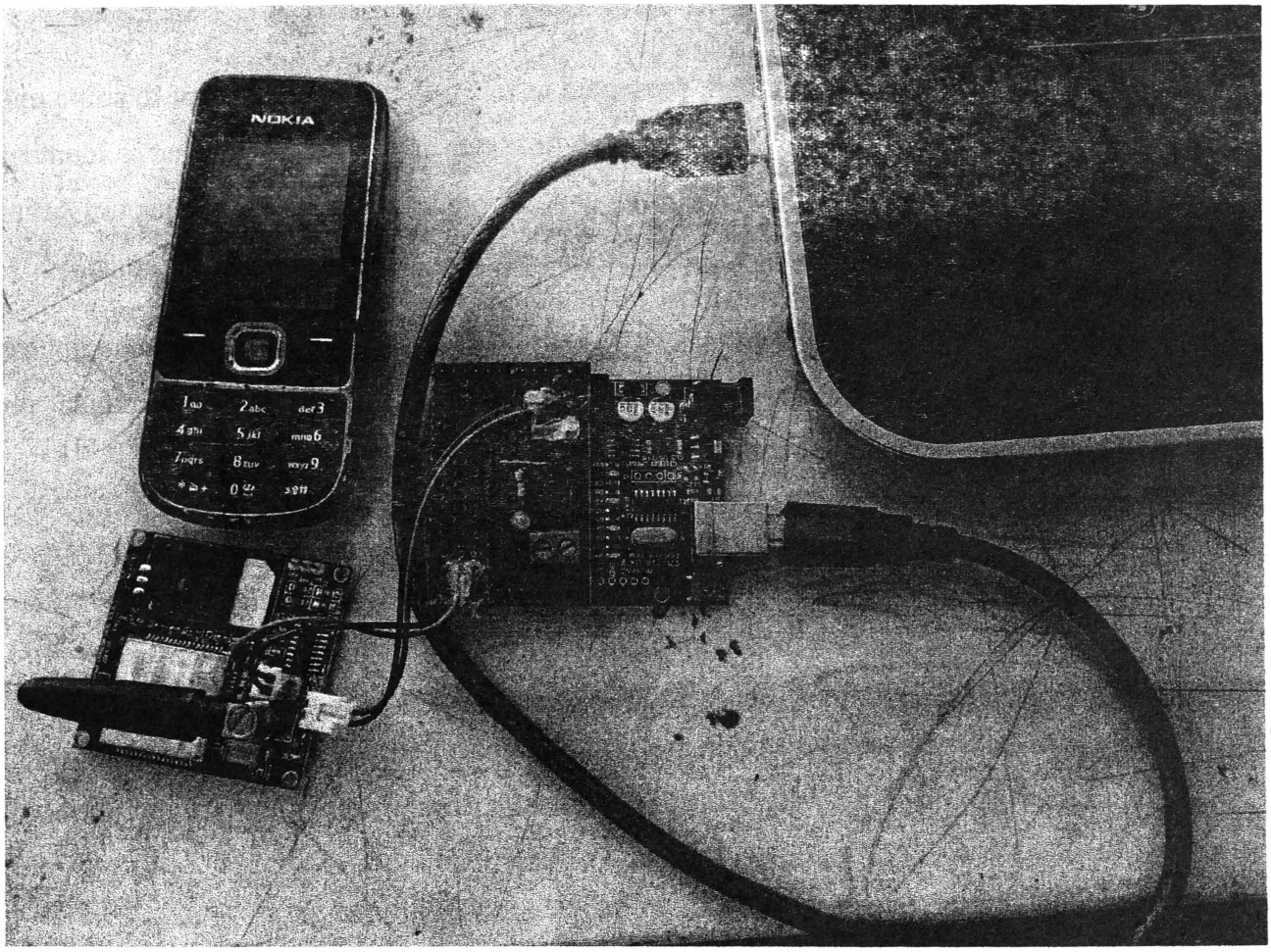

Figure 2: Designed system

3. RESULTS AND DISCUSSION

- Voice network is scanned by the computer per 30 minutes automatically.
- System Engineer receives SMS only when a telephone connection breaks down.
- SMS is sent to the specific number defined before.

The device offers several advantages

- Maintain Engineer does not need to stay in the server room every time.
- SMS alert system is very fast communication method, therefore maintainer can get that message immediately and repair the broken telephone connection quickly.
- Using this device we can reduce the guest complaints about telephone connection breakdowns.
- This system helps the Hotel to increase the guest satisfaction by giving immediate service for them.

4. CONCLUSION

This study and the implementation presented in this paper was an attempt to solve one of the problems in existing in telephone system at Anantara resort Tangalle. That is identifying the telephone connection breakdowns before guest complains about it. The concept of Arduino and network monitoring software were used in this study to achieve the project goals.

The developed network monitoring system with SMS alert will help to maintain the telephone system more efficiently. And also using this system, IT department can reduce the guest complains about telephone connection breakdowns.

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