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Survey on Digital Academic Scheduler using Arduino

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ABSTRACT: With huge data access, latest technology and its acceptance among people, there is a need to organise such data and present it to the consumer. One such way is via digital academic scheduler. The system will ask for data from the user, once the user feeds the data, it would be displayed accordingly. Also various reminders, events and meetings would be shown on a timely manner. The system has a speech synthesizer which will grab voice commands and data. This raw data would be processed by the arduino and stored accordingly. In case of event reminder, scheduled reminder, or alerts the system will notify the user via a buzzer. System will be in sleep mode by default, unless it senses motion via proximity infrared sensor, this in turn saves energy and will be active only on demand. The system can further optimised to link to a network to dynamically load data across network.

KEYWORDS: Arduino, Smart cradle, GSM, Audio processing

I. INTRODUCTION

In today's digital world, people are becoming attracted to easy access as well as sharing of the information. Whether it's through the internet or television, people want to be informed and up-to-date with the latest events happening around us.

Apart from sharing information, technology has developed in such a way that, the desktops and Electronic appliances are accessed remotely. In our day-today life, we are using many notice boards in home, office and public places like airport, bus stand, hospital etc. for our comfort and convenience. Communication technology helps us to exchange information and also allows monitoring and controlling the machines from remote locations. Hence we are introducing a new system which does not require reaching to the display or any pinning or pasting of papers anywhere. The system consists of the voice alert notice which can be built on single board known as Arduino. This can be implemented on Liquid Crystal Display (LCD) or Light Emitting Diode display.

Digital Academic scheduler is an important medium for displaying information and keeping people informed. The traditional way involves the pinning up of printed or handwritten information on a board. Here we have to be dependent on a person to put up important notice or remove something that is not important. To overcome above-mentioned drawbacks some developments in this system include display of data on a screen using wired communication.

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II. LITERATURE SURVEY

Wireless Electronic Notice Board Using Raspberry Pi 3 [1] introduces a notice board system which will give a new method of communication with one another. Their board ideally is a tool for organizing and displaying info. They will be used over and over again to show vital notices or advertise forthcoming events or meeting. The paper, tend to plan a complicated wireless board within which at any time the user will be able to add or take away or alter the message as per demand. The proposed system is based on a computer/laptop as a transmitter, Raspberry Pi three model B as a receiver, Wi-Fi for knowledge transmission and a LED/LCD screen as a display.

Display Message on Notice Board using GSM [2] deals with an SMS based notice board which implements GSM for basic communication between the user and the notice board. The user could update the notice board via their registered phone. The system uses ATMEGA32 as its core controller and is programmed in assembly language. ASIM300 GSM modem with a SIM card is interfaced to the ports of the controller using AT commands.

The Digital Notice Board which is also called as **Campus Display System (CDS)** as it is GSM-based system, it offers the flexibility to display flash news and announcements faster than the programmable system.

Design of Digital Notice Board Using Power Line Communication [4] A centralised database is used to update the display if and when needed. The system uses existing power lines for data transfer to special node or to broadcast to various power line nodes. The address is assigned to each receiver and its response is based on some appropriate commands.

Limitations: (i) Limited number of Character (ii) Data storage is not possible.

Development of a Smart Mirror Using Raspberry Pi.[5] The proposed system will collect data which would be transmitted from the system managed by the arduino. The system is enforced as a single device equipped with peripherals like microphone, speakers, Monitor coated with a sheet of reflective. The mirror provides one amongst the foremost basic common amenities like weather of town, latest updates of stories and headlines and native time cherish the placement.

III. PROPOSED SYSTEM DATA

The Smart display has been developing around on the internet for a couple years now and there are a number of well-designed and developed projects available. Some of these projects have inspired features of our design and some have raised red flags allowing us to identify potential features that could improve the practicality and functionality of the display.

Presenting data is an important part of consuming it, since the data can be efficiently used if it is represented properly. Our system is based on the concept of displaying data in a manner to be understood by all and to maintain flow of data. Smart display system will gather data from users (in our case an administrator). This data is then processed by Arduino uno and feed to the display in a predefined format. The user can feed important schedules or upcoming events so the controller (Arduino uno) which further will notify the user accordingly. These event or schedules will be displayed on a display along with an alert. Our system also consists of speech synthesizer module which intake raw speech data processes it and passes it on to the Arduino uno. These commands then can be processed into some particular functions. this proposed system has input module of dc supply and have different kind of output like speech synthesis, LCD display, IR sensor, Proximity sensor etc. Arduino Uno has ability to co-ordinate with various types of systems with programming and their library.

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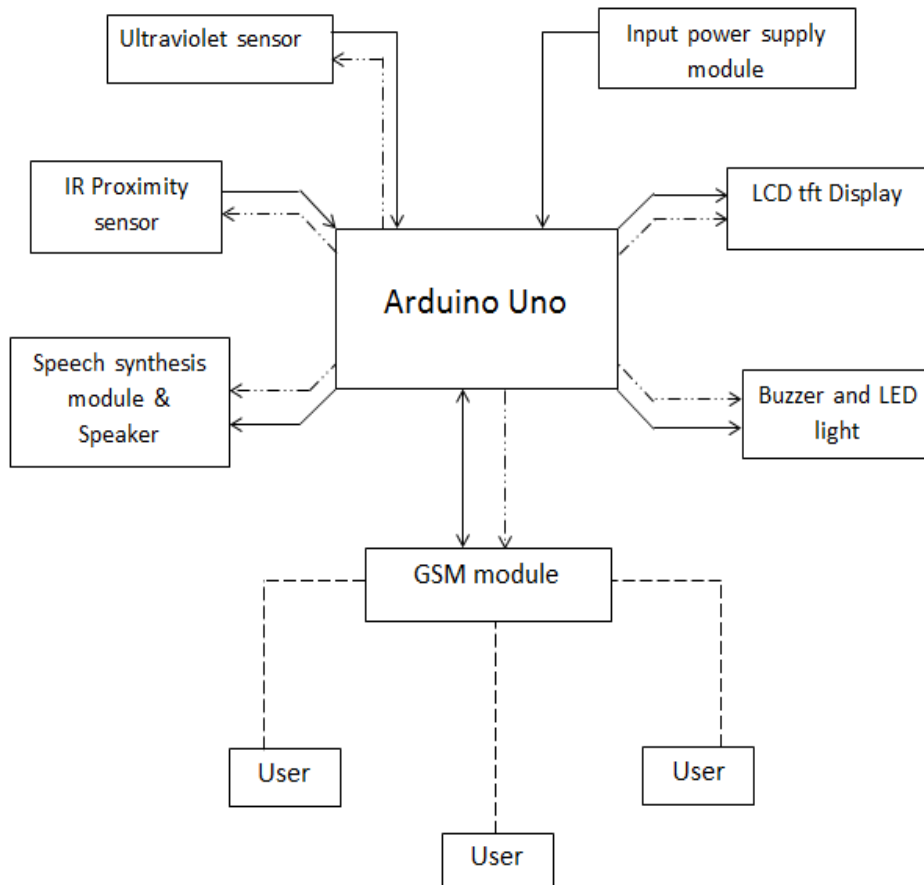


Fig.1 Block Diagram of Proposed System

In fig.1 there is gsm module for the conversation between the arduino and users. This fig. Also consist of ultrasonic sensor, buzzer and LED module (Buzzer and LED is for alarm purpose). The speech synthesis module and speaker is for text to speech converter.

The proposed system also consists of IR proximity sensor for monitoring users around the system. This way the system can actively be in sleep mode and display only when users are near the system.

Our Proposed System will be built on the following modules:

Active Display:

The display will only wake up when it senses users around it.

Speech Synthesis:

Raw speech can be fed to the system which after processing can be converted into specific functions.

Sending an alert:

The display will alert users for upcoming events or schedules. These reminders are stored in the system by the user.

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IV. CONCLUSION

According to the survey and primary raw data, the use of arduino has led to a formation of a system which is already used for commercial offices and public places but it is not used for academic concern. In our system multiple users can allow to interact with module.

This mode of system is the best way to remember the events in a person's daily schedule who has hectic schedule and which is difficult to manage. This system is made up of cost effective electronic components thus making the system energy efficient.

This system is particularly been made for the schooling purpose, for the staff members. This can be further programmed and be useful for serving different kinds of purposes. Future scope is developing the system which is cost efficient smart mirror so everyone can use it.

V. ACKNOWLEDGEMENT

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REFERENCES

- [1] G. Jalalu1 , Polepogu Rajesh “**Wireless Electronic Notice Board Using Raspberry Pi 3**” International Journal for Research in Applied Science & Engineering Technology (IJRASET) , Volume 5 Issue VI, June 2017 ISSN: 2321-9653.
- [2] Foram Kamdar, Anubhav Malhotra and Pritish Mahadik “**Display Message on Notice Board using GSM**” Advance in Electronic and Electric Engineering, Volume 3, ISSN 2231-1297, Number 7 (2013).
- [3] Jaiswal, Kalawade, Kore, Lagad “**A survey on Digital Notice Board**” in November 2015
- [4] R.Pudumai Nayagi, R Seethalakshmi “**Design and Implementation of Digital Notice Board Using Power Line Communication**” International Journal of Engineering and Technology (IJET) ,Volume 5 No 2 Apr-May 2013, ISSN: 0975-4024.
- [5] Khanna, Vardhan, Nair, Pannu “**Design and Development of a Smart Mirror Using Raspberry Pi**” International Journal of [6]Electrical, Electronics and Data Communication, Volume-5, Issue-1, Jan.-2017, ISSN: 2320-2084
- [6]D.K. Mittal1*, V. Verma2 , R. Rastogi “**A Comparative Study and New Model for Smart Mirror**” International Journal of Scientific Research in Computer Science and Engineering Vol.5, Issue.6, pp.58-61
- [7]AlpayKasal and Sam Ewen, “**A project of the interactive mirror with artsy visuals in Lit Studios**”, "International Journal of Engineering Technology, Management and Applied Sciences", May 2017, Volume 5, Issue 5, ISSN 2349-4476
- [8] L. Ceccaroni and X. Verdaguier. “**Magical mirror: multimedia, interactive services in home automation**”. In Proceedings of the Workshop on Environments for Personalized Information Access-Working Conference on Advanced Visual Interfaces (AVI 2004),pages 10-21, New York, NY, USA
- [9]G. Yolcu, S. Kazan and C. Oz, “**Real Time Virtual Mirror Using Kinect**”, "BALKAN JOURNAL OF ELECTRICAL & COMPUTER ENGINEERING, 2014, Vol.2, No.2 ISSN: 2147-284X June 2014 Vol:2 No:2.
- [10] E. Aarts, H. Harwig, and M. Schuurmans. “**Ambient Intelligence, The Invisible Future**”. McGraw Hill, New York, 2001. pp. 235-250.
- [11] M. A. Hossain, P. K. Atrey, A. El. Saddik, “**Smart Mirror for ambient home environment**,” 2007. International Journal of Computer Applications (09758887) Volume 166-No.9, May 2017
- [12] F. Bomarius, M. Becker, and T. Kleinberger. “**Embedded intelligence for ambient-assisted living**”.ERCIM News, 67:1920, 2006.