

IOT Based Distribution of Digital Information Using Multimedia Display

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Abstract: - In this paper, we propose to send notice to Digital Monitor based on Raspberry pi. The notice board here are not physical boards but the digital boards which are LCD's. The different diagrams have been presented. We are using Wifi/LAN. At any time we can add or remove or alter the text according to our requirement. At transmitter PC is used for sending a notices. At receiving end Wi-Fi/Lan is connected to raspberry pi. When an user sends a notice from his system, it is received by receiver. Wireless is a popular technology that allows an electronic device to exchange data wirelessly over a computer network, including high authenticated user.

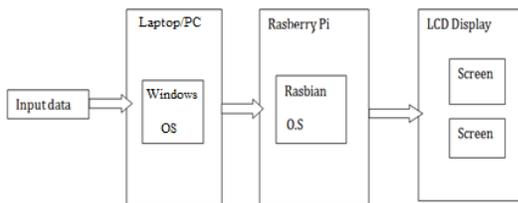
Keywords: – Web server, Raspberry pi, Electronic components.

I. INTRODUCTION

The Internet of Things (IOTs) can be described as connecting everyday objects like smart-phones, Internet TVs, sensors and actuators to the Internet where the devices are intelligently linked together enabling new forms of communication between things and people, and between things themselves. Building IOTs has advanced significantly in the last few years since it has added a new extension to the world of information and communication technologies.

Notice Board is primary thing in any institution or public places like bus stands, railway stations, colleges, malls, Hospitals, etc. But sticking various notices in day to day life is a difficult process. A separate person is required to take care of this notices display. This project is about advanced wireless notice board. Display is obtained on LCD. A Wi- Fi/LAN is used for Data transmission. At transmitter PC is used for sending a notices. At receiving end Wi-Fi/LAN is connected to raspberry pi. When an user sends a notice from his system, it is received by receiver.

Block Diagram:



System setup:

- ◆ Format SD memory card(8 GB)
- ◆ The Raspberry pi will not start without a properly formatted SD card
- ◆ Insert the card before powering pi,& shutdown pi before unplugging the card
- ◆ Download OS rasbian.
- ◆ Insert SD card into memory slot of raspberry-pi

Dataflow Diagram

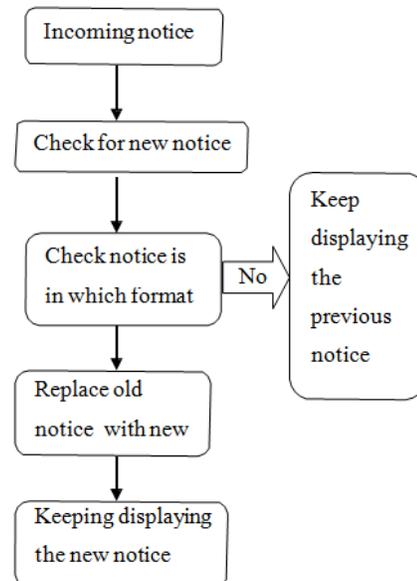


Fig:shows the flow of the data in system

II. LITERATURE SURVEY:

Usually we have seen that notices are put on notice board .In this process various resources like human resource power, printer ink and also time is required. And also wastage of lots of papers and time & along with that if we want to make any correction in it again we have to print new notice. In this paper we propose a system that people transmit there notices wirelessly from anywhere. Here we have proposed a system that authenticate person can send and handle the system.

III. PROBLEM DEFINATION :

Design and Implementation of Digital notice board by using raspberry pi board. This contains website which we can use on both PC as well as smartphone.A web server and a raspberry pi card used to display text on display device. The main objective of this system is to develop a wireless notice board that display message sent from the user and to design a simple, easy to install, user friendly system, which can receive and display notice in a particular manner with respect to date and time which will help the user to easily keep the track of notice board every day and each time he uses the system

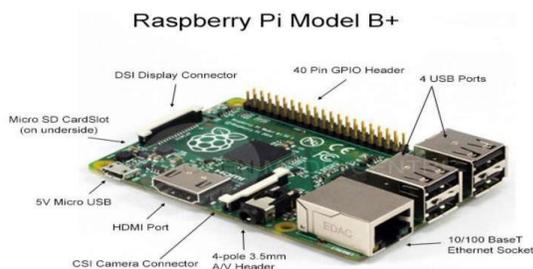
IV. GOALS AND OBJECTIVES

The main goal is to provide new facilitates to send information to students by staff in colleges .It can also be used in various organizations, hospitals ,railway station or any public area.

V. HARDWARE REQUIREMENTS

Raspberry pi

We used raspberry pi 3 module it contains inbuilt wi-fi module it is single nano computer card



LCD Monitor

It used to display the notice. User will post the message after the authentication. Notice will display through the raspberry pi.

Hardware setup

Connect the Ethernet cable form the Ethernet connect of the raspberry pi to router .Internet connection should be working. We need to do this when setting up raspberry pi so that program can update itself to the latest version .Connect the HDMI cable from the HDMI cable on raspberry pi to to the VGA connector of LCD.Plug the wireless adapter from keyboard touch pad media controller into USB port on raspberry-pi. Finally, insert the micro USB power supply. This will automatically boot the raspberry-pi up. It shows raspberry-pi logo after successfully installation.

VI. SOFTWARE REQUIREMENTS

Python

Python is widely used general purpose high level programming language. Its design emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code instead of using languages such as C++ or java. The language provides constructs intended to enable clear programs on both small & large scale.

JSON

JSON(Java Script Object Notation)is a data structure format.The data are considered as objects with properties & subproperties.This formalism is close enough based on XML

& Javascript.

MySQL

MySQL is relational database management system (RDBMS).It is distributed under a dual GPS & proprietary license.It is one of the database management software most used in world.

Php

Php is general purpose scripting language that is especially spread to server side development in which case php generally runs on a webserver.

CONCLUSION:

This system works efficiently under heavy load. So that sending notices from remote places can be a easy task. Hence Web server can provide user with real time actual data which can be used application.

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