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IOT Based Advertising Display

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ABSTRACT: IOT is the network of physical things or object that contain embedded technology to interface and sense to move with their internal states or the external setting. Automation is the most often spelled term within the field of electronics. The hunger for automation brought several revolutions within the existing technologies.

Advertisement digital boards could be a primary factor in any establishment or public places like bus stations, railway stations, colleges, malls etc. Sticking out numerous advertise day to day could be a tough method. A separate person is needed to take care of this advertising display.

This project is regarding advanced wireless Advertising board. In IOT based Web Controlled Advertising Board, Internet is employed to wirelessly send the message from Browser to the display. A local web server is created; this could be a global server over net. AT the Raspberry pi, display monitor or TV is used to monitor the specific advertisement.

I. INTRODUCTION

The Internet of Things (IOT) concerns to the environment where network connectivity and computing capability elaborates to objects, everyday items are not usually considered as computers. IOT will not be considered as unique system, but it is critical, integrated infrastructure on which many applications and services can be mobilized. IOT, a budding technology when extended is noteworthy to numerous improvising electronic instruments where Digital Advertising board is one among them. Digital Advertising Board is authorized as an important information element in any institution or public utility like transportation areas such as bus, railway stations etc. An individual is employed to take care of this advertise display where the scenario is replaced by the concept that deals with advanced wireless advertise   board.

The project is built on the basis of WIFI module which is functioning part of the system. At any instant we can include or detain or alter the text according to our requirement through IOT using WIFI module. In this project Single board computer is used instead of microcontroller to increase the processing speed of system. The Data used to display would be in video or image format which need high speed processing speed which can be achieved by Single Board Computer. Raspberry pi 3b is used for processing all data and connect to internet with inbuilt Wi-Fi module through which data is transmitted and received. The LCD Monitor or TV is used to display the advertise set by the user from remote location. A webpage is developed to change and update the data of advertising board which can be accessed using laptop or PC or even accessed through any Mobile phones. In this system current sensor is used to monitor the power usage of system and to check the system is running or not. The power of display monitor can be controlled and scheduled with the webpage.

II. LITERATURE REVIEW

In Usama Mokhtar's Paper, early days GSM technology is used for displaying information. Here GSM module which is located on the digital advertising board is used to receive information from the authorized user and displayed it. In this work, only text message is transferred. It becomes inefficient when we need to transfer other than text messages. By introducing the concept of Bluetooth technology communications become faster and more efficient. Here an Android application is used for enabling Bluetooth for sending a message. This work mainly focused on cable replacement and data can send up to the rate of 1 Mb per sec. Bluetooth has a limited range (approximately 70m to 100 m). modification in the system can also lead to a reminder system, system has been successfully tested with troubleshooting to the best of our knowledge.

To U. Mokhtar, M. A. S. Ali, A. E. Hassenian, and H. Hefny Paper, Arduino consists of both a physical programmable circuit board (often referred to as a microcontroller) and a piece of software, or IDE (Integrated Development

Environment) that runs on your computer, used to write and upload computer code to the physical board. The Arduino microcontroller Grasp the content quickly. In Arduino microcontroller Systematic alignment of portraying desired information that directs through a proper channel.

In G. Anuradha, Ch. Raga Madhuri, V.V.N.V. Phani Kumar paper,It has Bluetooth co-existence interfaces, Prototype has facilities to be integrated with a display board thus making it truly mobile/PC The ESP8266 is a low-cost Wi-Fi microchip, with built-in TCP/IP networking software, and microcontroller capability The ESP8266 module enables microcontrollers to connect to 2.4 GHz Wi-Fi, using IEEE 802.11 bn. It can be used with ESP-AT firmware to provide Wi-Fi connectivity to external host MCUs, or it can be used as a self-sufficient MCU by running an RTOS-based SDK.

In Saral Nigam, Shikha Asthana, Punit Gupta Paper, Data mining comprehensive information about the connected assets and their data interchange, here the implemented system is cost-efficient and can be easily implemented on a larger scale Data mining is the process of sorting through large data sets to identify patterns and relationships that can help solve business problems through data analysis.

III. PROPOSED WORK

Problem Definition
"To foster a server which is administrated by the user to display ads from an indoor space repeatedly and reduce the expenses through centralized control."

Architecture of Proposed System
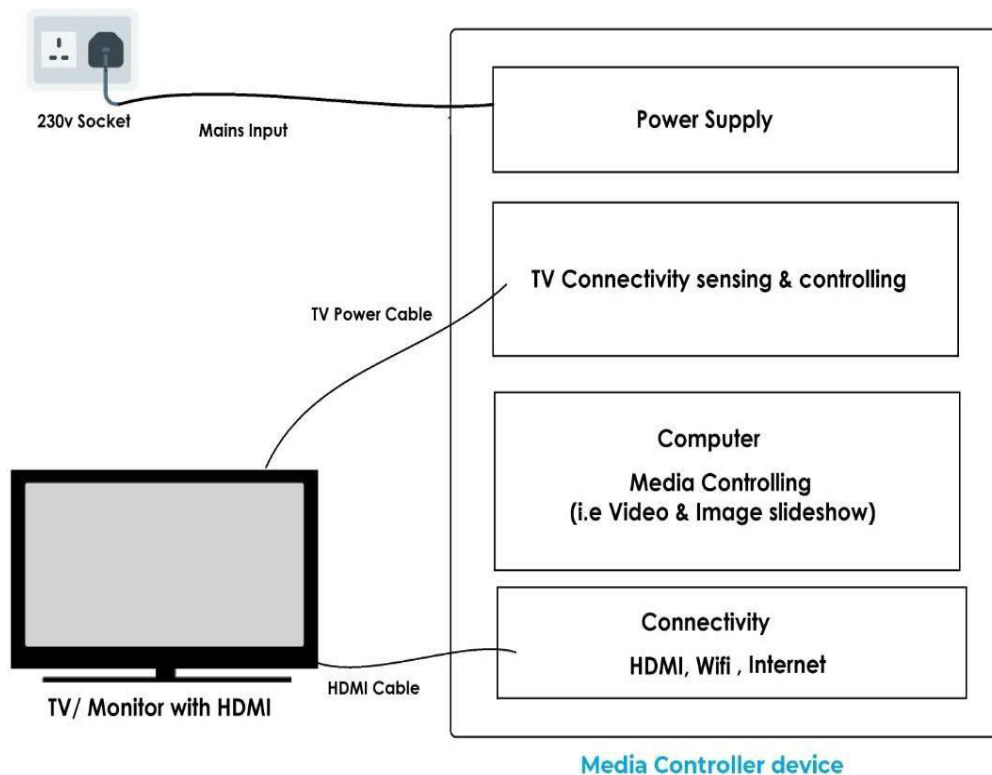

Fig. A. Proposed System Architecture

IV. METHODOLOGY

Webserver

As per the project is IOT based the basic need for this is Internet and one server to store and control all things. Webserver will be used to store the advertising data which will be display on all the devices connected to server through internet. For the prototype of this, we built a local server using XAMPP.

Admin Panel

To control and change the data of advertising one web based panel is needed for the admin. Through this panel admin can monitor the advertising data and also can change the data from anywhere as the devices will be IoT Enabled.
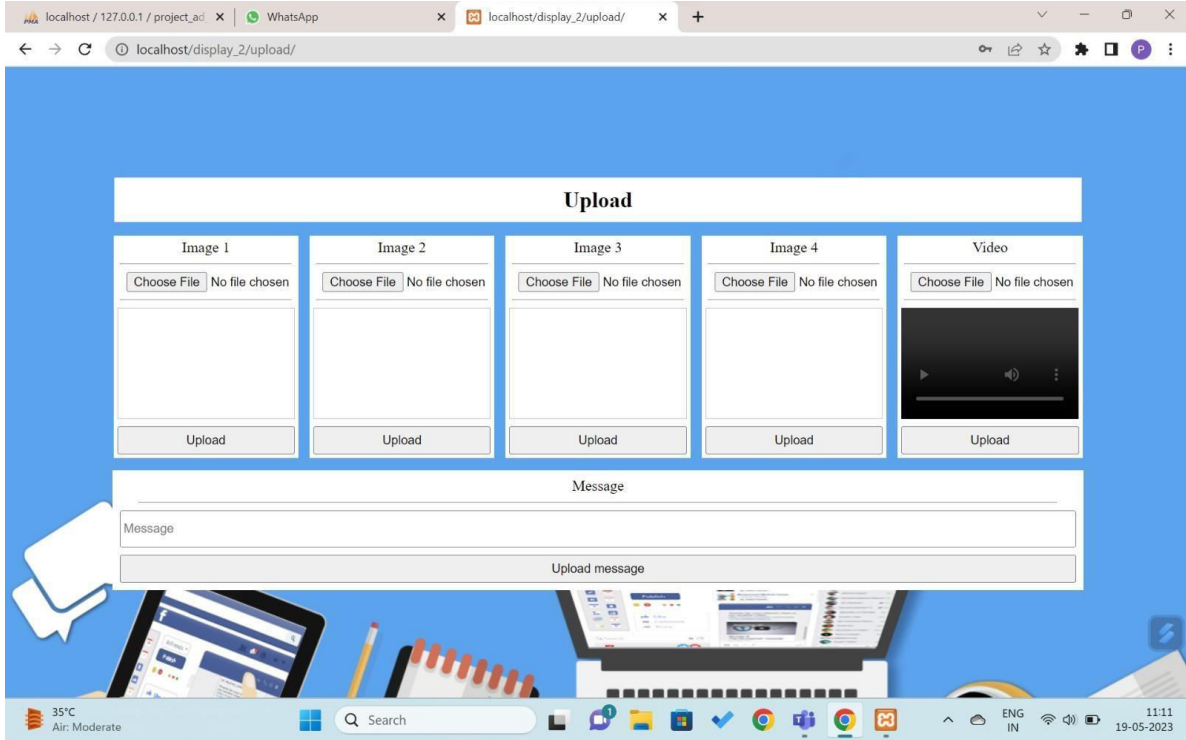
Single Board Computer

At the display side there will be need of a processor which will connect to server, download the data and Display it on a display connected to it. For this purpose, we need a single board computer like raspberry pi to perform the displaying part of the advertisement.
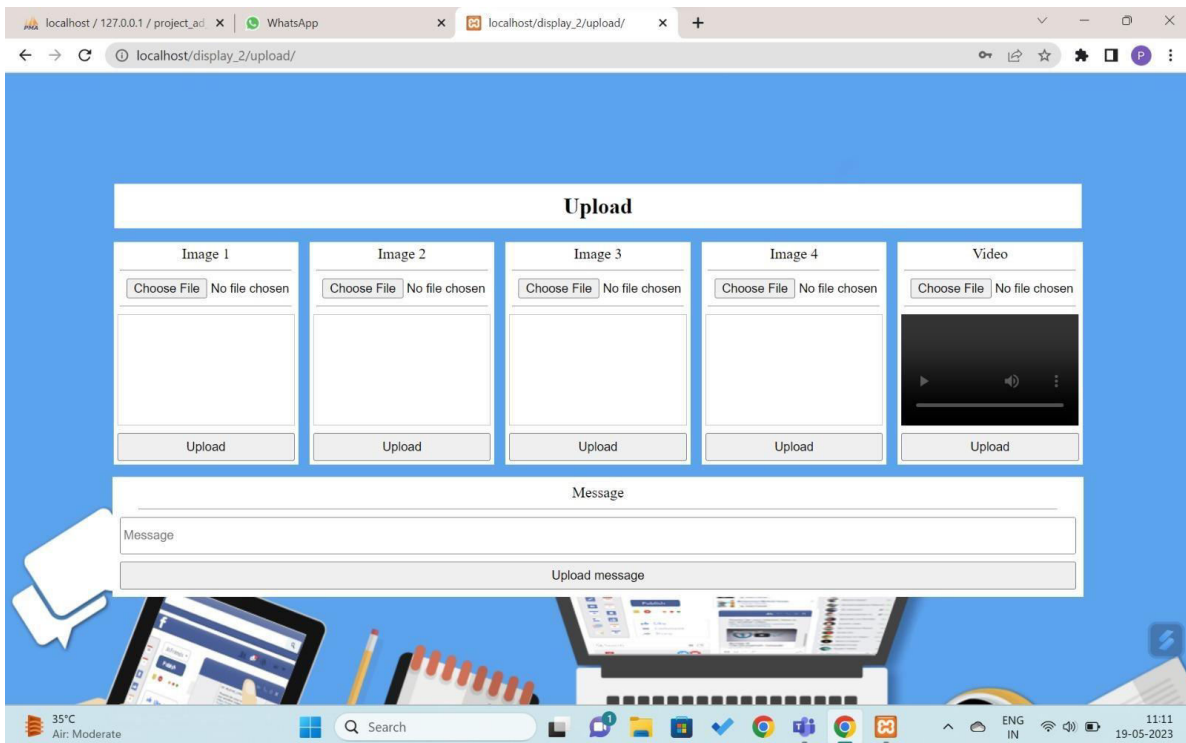
- **Flowchart**
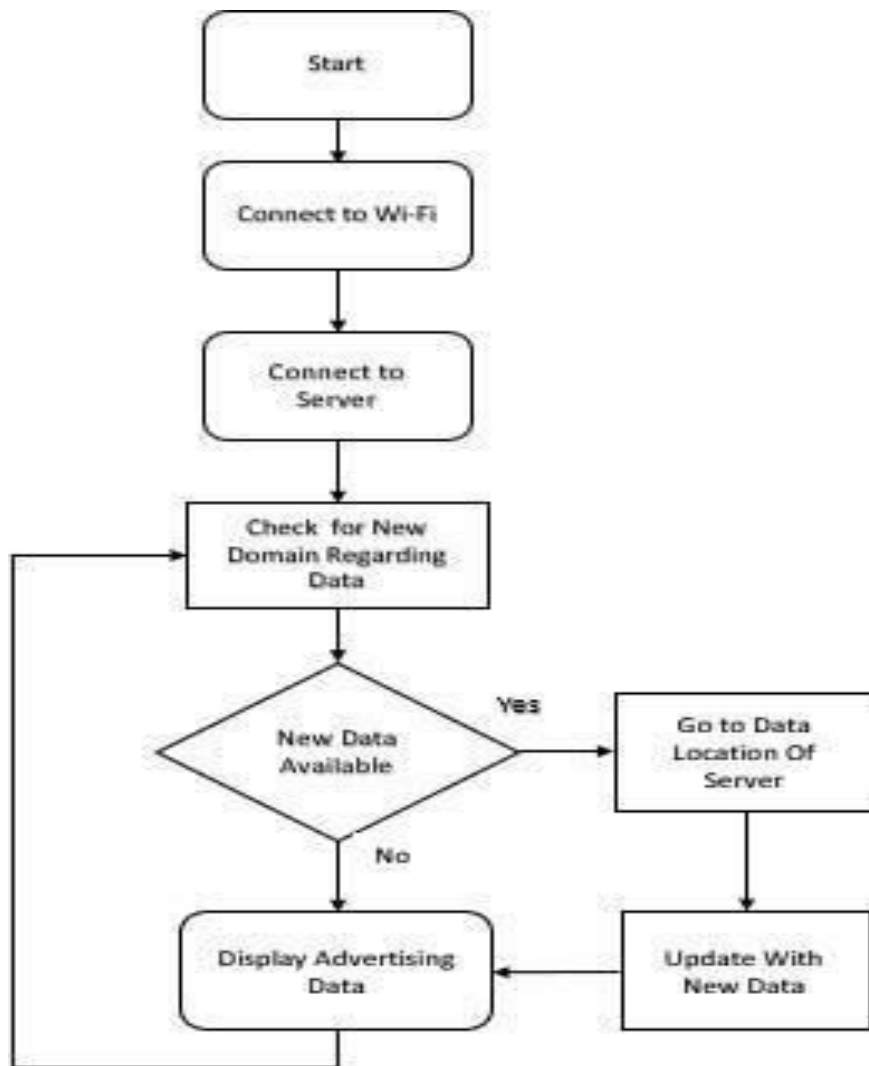
Result:

Fig. B. Upload Web-page

Fig.B. Upload Web-page

Fig.C. Single Board Computer

Fig.D. Display Side

V. CONCLUSION

Remote controlled raspberry pi smart advertising technology has been designed and tested for uploading moving images successfully and overcome the limitations of existing system by using better integrated system and display domain regarding data.

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