

## Digital Advertisement using Smart Phone

Pravin L. Parakhe<sup>1</sup> Jayesh R. Bhavsar<sup>2</sup> Vishakha D. Patil<sup>3</sup> Akshay A. Jadhav<sup>4</sup>

<sup>1,2,3,4</sup>B.Tech Student

<sup>1,2,3,4</sup>Department of Computer Engineering

<sup>1,2,3,4</sup>Loknete Gopinathji Munde Institute of Engineering Education & Research (LoGMIEER) Nashik-02, India

**Abstract**— Digital signage is a variety of electronic display that shows information, advertising and messages in both public and private environments, as well as retail stores, hotels, and stations. Unlike an existing digital signage displayed at a fixed position, the proposed digital signage system can see in anytime and anywhere using smart-devices if you can use a network service. User can download and install the advertising smart phone application. Accessing the signage content through the application it download the signage content and delivers them to other users. GPS capability at the display panel ent will enable owner to localize devices. Thus it will become easy categorized and classify the advertisements areas according to location based methods.

**Key words:** Deduplication, Cloud storage, Avoid Duplication in Cloud System

### I. INTRODUCTION

Digital signage means using Hi-Definition screens to strategically broadcast advertising content in an attention-getting way. You are seeing this emerging technology over and over because no other medium makes it possible to deliver dynamic content at the right position at the right time for maximum impact. Compared to old printed signage, digital signage enables you to reach audiences more efficiently and in real time. Using conventional methods, it is almost impossible to make any changes once the sign is in place.

Digital signage is spreading fastly in every industry, from retail to corporate offices, hospitals and hotels, from trade shows to schools and colleges. Why? Because it draws attention, whether you want to: keep people updated of events and last changes; extend sales and brand loyalty. Tailor marketing to a specific consumer or set up emergency notification. And what is really great is that it has become affordable, even for small industries.

Recently, there has been rapid development in the global digital signage industry. This development seems to be connected with the cost reduction of flat-screen panels. Digital signage is a form of electronic display that shows video or multimedia content in public places for informational or advertising purposes. Advertising in public spaces has been changing from fixed or mechanical signage to digital signage.

The purpose of this paper is to put forward an Android based digital signage(ABDS) system for use with mobile phones as a new method of advertising and enabling users to easily perform tasks (e.g. making reservations, voting, and purchasing) of users. We designed a functional architecture of our system and developed a prototype to ascertain the plausibility of usability. We combined digital signage and android smart phone capabilities with mobile phones into the system. The basic features of the system are

making users more aware of advertisements and enabling interactivity.

Also, the use of social media sites such as Facebook, instagram, YouTube to name a few and digital cameras, have give to a fast growth of data which known as Big Data problem. In, it has been said that the global data supply hiked 3.7 trillion GB in 2013 - but just 0.5% of it was used for analysis. In the same having, the volumes of data are projected to reach 50 ZB per individual by 2020. A study has also tell that only 25% of data is exclusive in data warehouses; and only 35 GB of the entire data for each individual user are exclusive and the other ones are similar data that are shared with various cloud users.

In the proposed system we are planning to use Android operating system for base of digital signage display. There will be android based application for user(users will be categorized in ownrs of digital signage and costumers who will be seeking medium for their advertisements ). Such android based signage systems can be identified by their location as it will be using the Global Positioning System(GPS) for localizing the display contents. Using such system customer can particularly choose the location to place his advertisements on. Also customer can choose the signage lacated remotely will make the whole process convinent. With such system costumer can target the perticular audience for his advertisement for exemple, if a customer wants to advertise a edible product he can specifically choose the signage placed over the restaurents and bakery shops.

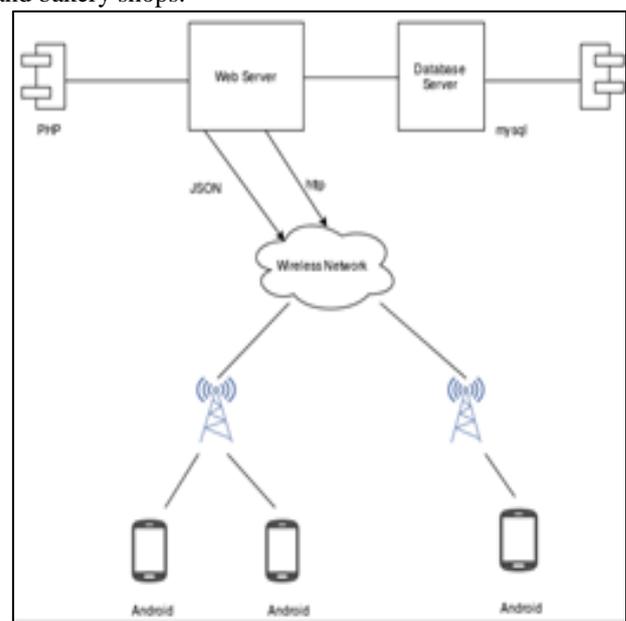


Fig. 1:

The application will be installed on both diplay end as well as user end. At signage end application will register the custer ID and store for what time the particular add will

be displayed. There will be notification system that will send SMS to customer about the particulars of the respective ads displaying on each system. The system will be using the web services to transmit and receive the data from customer. The connectivity will be provided to the signage system via cellular data network or wifi.

## II. COMPARATIVE STUDY

### 1) *Digital Signage System Using Virtualization Technology Signage based on Virtualization technology.*

- Publish year:2014
- Author: Wonjae Lee, Hyun-Woo Lee, Yong-Tae Lee
- Technique:
  - 1) Virtual content management
  - 2) Signage player technique(Personel computer used as signage players individually)
  - 3) Virtualization using pspecial web browser
    - Application: To reduce the rendering

6Desktop virtualization technologies have been used for enterprise and educational environments. Client-hosted virtualization technology has been used for public displays. They have developed a virtual-machine based Web application platform for public displays. Web and virtualization technologies have been used for homogenizing mix of heterogeneous public displays.

Conventional server-based desktop virtualization technology runs multiple virtual machines on a server, and allocates one virtual machine for each client. CPU resources, disk space, memory space, and other resources are allocated to run each virtual machine and its operation system. This virtual machine based scheme is appropriate if the goal of the system is to provide a desktop environment for each client.

### 2) *Emergency Evacuation Base on Intelligent Digital Signage Systems:*

- Publish year: 2014
- Author: Huan-Po Hsu,Kun-Ming Yu, Shao-Ting Chine
- Algorithm: polynomial algorithms
  - 1) Setup
  - 2) VSLS(for determining location)
- Technique:
  - 1) WSN to monitor encironmental information
  - 2) RFID based localization
  - 3) Intelligent digital signage module
- Application:
  - 1) Provide emergency evacuation route
  - 2) Advertising

In case of an emergency, efficiently providing an evacuation route becomes quite important. Efficient guidance equipment is key for personnel survival. In this study, an emergency evacuation system was implemented with a wireless sensor network, RFID positioning technology, and digital signage. In addition, the construction of a ZigBee sensor network covering the whole area with the smallest number of sensors was also studied. Moreover, personnel location information was also applied to detect unexpected accidents and re-route the evacuation path. In future, the evacuation system can be linked to fire-fighting equipment

based on real time environmental information to enhance the efficiency of rescue.

### 3) *Application of Digital Signage for Tourism Information and Communication System :*

- Publish year: 2012
- Author: Erwin Cahyadi, Yoanes Bandung, and Anton Wiguna
- Technique:
  - 1) Cloude storage for data
  - 2) P2P communication
- Application: In social media sites
  - 1) Tourism
  - 2) Public information (News, weather, etc.)

Digital Signage is one of ICT application for tourism industry that can give up to date and relevant information to travelers. Rich multimedia content of information would give enhanced perspective and experience for travelers. In this research the we implement digital signage solution for tourism information and communication system using open source software. We use Xibo open source digital signage that support multi digital signage terminal with different content schedule for each terminal. Xibo support wide range of content such as image, video, flash, power point, text, RSS ticker, webpage, and embedded HTML. Digital Signage Server is hosted online so each terminal can access is from anywhere with internet connection. Digital Signage Terminal can be connected to the server through Internet using various Internet data service.

## III. CONCLUSIONS

We have proposed a new application of digital signage using smart android devices. The proposed system can deliver advertisements via the smart-devices, which makes it possible to increase the effectiveness of advertisement. And it is possible to transmit and receive data among smart-devices quickly, because it uses cellular communication among smart-devices that the app has been installed.

Also it is possible by use of a touch screen technology that is built into the smart andrid devices recently to provide interactive communication between content and user. Basically, we can resize the content at screen by scale up/down and rotation of contents. Further it will be possible to record the expressions of the audience by using camera which is basic feature in smart devices.

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