
Integrated Outdoor Advertising Solution

Mr. Kiran Sundaram

Welingkar School

Mr. Sudeep Chatterjee

Welingkar School

Every year there are crores of rupees that are earmarked for advertising. A sizeable amount, of which is dedicated to outdoor advertising. The range of this field starts from simple pamphlets handed out free of cost to the multi lakh hoardings around a city. A big chunk of the money poured into out-doors advertising lands up with the hoarding owners. Every company sets their own budget, which is congruent with their business analytics and objectives.

How does one get access to the various hoarding around the city without involving intermediaries? How does one differentiate between a legal and an illegal hoarding? Hoardings are every where, how does a brand manager or the marketing head of a company decide which hoarding is going to add maximum value to its marketing campaign? Can all this be accessed directly on the workstation?

This paper aims to highlight these typical issues in the outdoor advertising industry and thereby provide a tangible solution through the use of technology. Addressing these shortfalls especially in the outdoor advertising domain is main aim of this paper. This area of business is untouched and we hope to create a new need based solution catering to the advertising requirements of any company indulging in out-door hoarding advertising - making it simpler.

Keywords - Outdoor advertising industry, technology, hoardings, intermediaries, cellular hoardings, GIS.

1. Introduction

“The man who stops advertising to save money is like the man who stops the clock to save time.”—

Thomas Jefferson.

Outdoor advertising has been one of the age old methods of advertising but still one of the best ways to grab consumer attention, if used effectively. Given all inventions of modern media, outdoor advertising signs have reached new

technological peeks and attract a broader audience range than ever before. A few benefits of outdoor advertising are as follows:

- a. Round the clock exposure: Outdoor advertising is effective as it is always visible to the public and is gathering people's attention throughout the day. It is not temporary or sporadic like other means of advertisement.
- b. Investment: It is proved to be a cost efficient way to reach target customers.
- c. Attention Span: A carefully designed outdoor advertising campaign can actually draw the customer's attention to a great extent and it stays with the customer.
- d. Flexibility: Taking into account details like target consumers, consumer density etc the hoardings can be displayed at strategic locations to yield the best results.

Apart from these benefits, outdoor advertising also helps in enhancing the effectiveness of advertisements run in other traditional media like radio, television, newspapers and magazines.

This makes outdoor advertising a very important aspect of advertising and marketing as a whole.

It is observed that information is vital for management and presenting that information in an efficient and easily understood framework is crucial. Also, not every business manager requires similar tools; what works for a service based company might be useless for a manufacturer. That is where the integrated advertising solution will be of help. This paper aims at studying such methodologies which will anticipate client's needs, adapt software solutions to these needs and identify industries / corporations that need such planning tools for customer engagement and eventual profitability.

A mechanism which will allow corporate advertising and marketing forces and franchises to use planning tools to achieve tremendous efficiencies in their business processes. In essence, allowing the customer's of an agency to

plan their own approach when introducing a new product in the market. It will help to create a road map of their branding plans that corporate managers can monitor and adjust accordingly. The possibility exists to customize the product to work with other collaborative tools such as ERP's and the clients email applications.

The scale at which such services are set to hit the segment of advertising is unprecedented. Every company, be it a small manufacturing company or a multi-national bank needs to advertise their product to stay ahead of the game.

2. Literature Review

1. Articles by ESRI
2. "A novel advertising application using GPS and GIS" – A case study by Phani Sagiraju and Madhavi Rudraraju
3. LBA new kid on the advertising block - By Anand Kashyap, GIS development
4. www.nec.com
5. www.diversifiedmedia.com
6. www.symon.com
7. www.mediatile.com

3. Objectives

- Understanding the core concepts of outdoor advertising as an industry.
- Present an Integrated Advertising Solution package catering to the normal users and corporates in order to make advertising more effective.
- Understanding and applications of latest technologies for outdoor digital signage advertising.
- Making the entire exercise of outdoor advertising more superfluous resulting in higher customer engagement.

4. Methodology

A geographic information system (GIS) integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. GIS allows us to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts. A GIS helps you answer questions and solve problems by looking at your data in a way that is quickly understood and easily shared.

GIS technology can be integrated into any enterprise information system framework for better decision making.

A GIS works with thematic layers of spatial data and helps answer questions, establish relationships and study trends by comparing different layers of data.

Location Based Services (LBS) are offered based on user's geographical location provided by positioning technology such as Global Positioning System (GPS), and with the help of Geographical Information Systems (GIS). This technology can be used by firms to advertise, the idea is to incorporate the advertising feature into devices. For eg: a new advertising application is proposed, which is more useful for commercial firms eager to promote their business around their own location. The idea is a commercial firm willing to advertise shall provide their location and will mention the area in which they want to advertise. So when ever someone with GPS enabled device enters the advertised area will automatically be notified with their commercial.

To put it in simple terms, location based advertisements that will engage the customer further and add impetus to the advertising campaigns of companies.

The integrated advertising solution aims to service the need of a simpler and more effective means of controlling outdoor advertising. The application is a web based application capable of remote monitoring of existing billboard establishments. This application is also used to send interactive messages to the user via Bluetooth or sms as he passes through the buffer zone. The application consists of 2 main parts: the customer login and the corporate login.

Feature list for the Integrated advertising solution:

1. User has two options to watch the intro or skip it.
2. Login page Registered users login Corporate user login AD Agencies login Option to continue as free user free user limited benefits.
3. Map: the most important feature of utilizing a GIS, a thematic map having relevant details which will be accessed by the user.
4. This application will also include remote updation of the signage/hoarding using cellular and web technologies. When the user clicks on the red hoarding / billboard, the corresponding details would be visible to him/her.

Details:

- 1) Snapshot and exposure rate of the hoarding
- 2) The Owner of the hoarding / billboard's corresponding addresses and contact numbers (Open to Free , Registered Users and Corporate clients)
- 3) The relative booking costs and the manufacturing costs of hoarding / billboard's affixed by corresponding agencies. (Open to registered users and Corporate clients)
- 4) Pipelines of hoarding / billboard's (Open to Registered users and Corporate clients)
- 5) Corporate booking links
- 6) Multiple hoarding booking option
- 7) BOOK THIS AD
 - 1) If unregistered... get them registered
 - 2) Book with respect to two counts
 - 1) Online
 - 2) Send a message with the contact details and the required hoardings to the ad agency or the hoarding owners (Here a unique reference for all hoardings could be required)

For Corporate's the database of our advertising clients would be inclusive. Hence we will have corporate accounts with their corresponding contacts, giving us an opportunity to promote exclusive offers for them.

Corporate and registered users can book Ad's.

The difference with corporate is that we can offer the database of ad agencies, best offers, best rates, best exposure ads, best buy hoardings to our corporate counterparts.

The agency or corporate login:**More features that would enable better business options:**

- 1) Roping in the Billboard makers...
- 2) The advertisement printing agencies...
- 3) Offering automated approach to all aspects of advertising

A typical map showing the billboards/signages:

Digital Signages and Mobile:

This ushers in a new generation of digital media signage engagement with customers.

Eric Schmidt "We understand that the new rule is mobile first. Mobile first in everything"

Changing trends: Users are now online and use mobile phones. Users are now increasing their consumption of digital content. Companies like facebook have managed to tap into customer information in unprecedented ways. Users increasingly use wireless technologies embracing wireless data and mobile content and utilize ad driven applications and content

Ways in which the user can be accessed and information exchange can occur.

DTMF: Dual-tone frequency modulation utilizes the touch-tones generated by a cell phone's key pad to respond to or control content on a digital sign. Touch-tone interactions are recorded and tracked on the back end for the purpose of quantifying signage viewer ship and call-to-action responses. DTMF is modeled after the standard voice response telephone systems, except the action takes place on a digital sign instead of a telephone switchboard.

Proximity: Systems know which type of mobile phone is requesting information and send the most suitable file to the corresponding mobile phone.

A customer looks at a digital signage. Provided his blue-tooth is switched on. A message would be prompted on the customer's mobile phone. Only if the customer agrees to receive more information would the content be downloaded onto the customer's mobile phone. This could be an offer, a new coupon, latest updates, etc.

- Videos

- Games

- Images

- Ringtones

- Applications

- Coupons

- Calendar Appointments

Many users make use of the video downloads available from content aggregators tied to operators.

SMS

- Customer controlled content selection

- Customer controlled content manipulation

- Text to screen

- Pics to screen

This is the most common form of interacting with the customer. A digital signage or a billboard can communicate with a user and obtain valuable

information. Offers, discounts and coupons could be shared with the customer within close proximity to the billboard through SMS. Also closed ended, simple yes/no type questions could save the customer time and help gain metrics on the customer usage.

Also, in this implementation, signage viewers send text messages via a short code to a digital sign for the other viewers to see. Viewers of the messages can then send their own text responses to the message, thereby creating a group dialogue. This feature is frequently used in places where people congregate and is typically instituted as a way to stimulate conversation.

Graphics recognition: Using a camera enabled mobile phone a consumer can click a landmark, a person, or even a billboard. The phone would automatically detect and discover the clicked image and provide valuable information to the customer.

Mobile web and Mobile Applications: In the world of mobile phones, these two terms are not folklore anymore. Anyone with a GPRS enabled phone can make use of these amazing new technologies that throw the door open to exciting applications, the internet, or connections to even the security systems back home.

5. Findings/Discussion

Cellular-based 3G enabled digital signage:

3G promises to usher in a new wave of content to networks including increased bandwidth, interactivity and on demand video.

The cellular based signages work on Wi-Fi connectivity eliminating the need of having complex systems in place.

Advantages include:

- Easy to deploy without IT management
- Extreme portability
- Ability to deploy in areas which does not have Wi-Fi or LAN connectivity
- Can be used in shuttle buses or mobile environments
- Flexibility in usage as layouts change
- Completely separate from corporate networks, eliminating security risks.

Areas where cellular signages can be deployed include:

- Retail
- Healthcare

- Shop floors for employees
- Lounges, Hotels, Discotheques
- Promotion activities
- Travel points

Here we can make avail of the expansive rail networks in India and have such signages deployed. The signages which can interact with customers. A similar system can be deployed in buses.

With more than 200 million people living in metropolitan cities in India, interacting with digital signages. This is an embryo that can grow to capture the markets where conventional advertising has never been before.

Display screens:

The display screens present in stores all over India. The trend is currently picking up. More and more retail operators are spending on Digital Signages and Digital out of home systems.

The S.W.O.T analysis of display screens

Strengths:

- Critical mass of display have been deployed. Positive results have been achieved
- Business models are stable
- 3rd party ad agencies have no role
- Capital Expenditure can be accurately established
- Operating Expenditure can be adjusted to scale

Opportunity:

- Communications seek media that can better target and engage audiences and demonstrate proven results. DS / DOOH fits into a communication continuum,
- Capital Expenditure and Operating Expenditure are declining as suppliers emerge. Capital expenditure can be financed easily
- DS/DOOH leverages and can be leveraged by other media

Weakness:

- DS/DOOH is an emerging media
- All elements must be paid for by the communicator
- Many networks have limited history and government infrastructure

Threat:

- Other communications wish to sustain build their use and revenues
- Agents for ad placements with DS/DOOH are widely dispersed and may be shrinking with overall ad spending
- Scalability and success are concomitant
- Revenues have external dependencies

Although the display screens meet the demand of information exchange with the customer, there are certain areas where it fails to touch upon

- 1) Unmet needs of shoppers: This includes the cost of time that the customer has to forgo while making a purchase. A customer hates to wait in long queues. If the staffer isn't aware of the product or the position where the product is, it leads to dissatisfaction. Also after making a purchase if the customer is informed of an existing offer that he could have availed of, he might go home unhappy.
- 2) Way finding: Finding the right areas of a shop where a customer's buying needs lie.
- 3) Choice editing: A customer might have to settle for a lesser offer, in case there are no proper substitutes for an unavailable product.
- 4) Feels valued: The customer needs to feel valued. Only if he feels that the store or the product is meeting the perceived value, might the customer come back for repeat sales in the same store.
- 5) Be surprised and delighted: The customer would like to be surprised at every stage of his buying experience. If the retailer identifies the areas of contact of the customer and enhances them using peculiar value ads the customer would be more than happy.

Hence display screens at retail shops could be enhanced. Touch screen displays at crucial points could help the customer save time, money and effort.

For digital signage to thrive and to be more than 'digital wallpaper,' its impact on viewers must be quantifiable

Signages used in retail shopping:

A retail store now days are cluttered, too loud and does not keep in mind the customer actual needs. Retailers who are not careful about where to place goods are usually giving rise to dissatisfied customers. The look and feel of the store matters, too many items on display, loud music, might just drive away potential customers. Time that a customer spends is one of the most important

elements that a retailer has to keep in mind. While managing time they have to engage the customer ad more importantly it has to drive the customer to the store again for repeat business

A customer requirement could be very specific, like for e.g. for an occasion a shopper wants to pick out the right salwaar kameez that could be worn. Many factors influence the customer choice, most of all it price. Instead of wading through clothes and numerous try on sessions the customer could simple walk into the store choose a vacant interactive floor unit and pick the right salwaar kameez. The customer can then be directed to the part of the store where this item is available. Thereby signages in a retail store could help direct traffic to a specific part of the store, display brand messages, show new offers and discounts and help the customer make a well informed decision.

At its most basic, digital signage uses animated lights to create motion. Just like the interactive floor unit that keeps customers engaged and helps them buy. If the Signages are properly positioned, they could drive traffic into a store and help boost the overall sales of a company. It could help in creating a positive reputation for the retailer and improve customer awareness. Share of mind of the consumer is a natural prerequisite to share of wallet.

Evaluation of in store signages:

This helps retailers gain insight into how customers interact with the screens and understand how effective the signage is. Most companies look for a return on investment and this could be in the form of increased sales, reduced store associate costs or improved customer service. Also customer metrics can be ascertained using the on floor unit. Which product has the maximum demand, top sellers, high margin, low margin products, etc. This would help the retailer to effectively manage the logistics of the store driven by customer requirements.

The ultimate use of the on floor unit would be to help determine what the customer is exactly looking for.

6. Conclusions/Implications

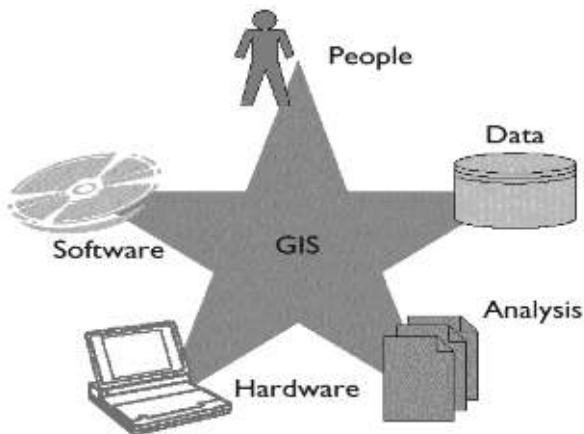
Rapidly evolving trends in mobile technologies will allow cell phones to become extensions of digital signage. Content presented on screens will be seamlessly tied to the content on the mobile handset. When this happens, calls to action will be issued via the digital signage, responded to on the handset by the handset user and quantified on the back-end by the content management system.

Internet transactions are increasingly being initiated by mobile devices rather than traditional PCs, Gurley says. At the same time smart phones, which are an emerging catalyst behind the increase in mobile transactions, are capturing a larger portion of the mobile device market.

Market estimates indicate good times ahead for Location Based Advertising. According to Suresh Reddy, Chairman and CEO of Ybrant Digital, India, mobile marketing in Asia-Pacific region is poised to see an accelerating growth of USD 7.7

billion (and more than USD 16 billion globally) by 2011. ABI Research observes that global location-based services (including LBA) platforms revenue in the US will grow from USD 560 million in 2010 to USD 1.8 billion in 2015. Globally, it will surpass USD 14 billion by 2014. In-Stat projects that sales of mobile devices with integrated GPS will grow from 720 million units in 2011 from 180 million units in 2007. Even if those numbers are just 50 percent accurate, they indicate a steep growth for LBA.

4. Methodology



The agency or corporate login:

Links:	Agency Login	Login's/ Links/ Nav Buttons
<p>Here Initially information as to Number of Hoardings... Total Hits... Changes / New .. Will be Present...</p> <p>Once Hoarding is selected...Snapshot of Hoarding in this frame and Corresponding info is.. in the Frame to the Right</p> <p>View Other Offers.... Compare....</p>	<p>Here Admin controls as to..</p> <ol style="list-style-type: none"> 1) Modify Hoarding details... 2) Change Pricing 3) Exclusive Offers 4) Pipeline views <p>Renew Registration Links</p>	

A typical map showing the billboards/signages:

