

# On perfectly $\alpha\delta$ -continuous functions in topological spaces

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## Abstract

The Industrial Revolution and the development in the International Trade and Commerce, Communication and Information Technology have led to the vast expansion of business and trade. As a result, variety of consumer goods have appeared in the market to cater to the needs of the consumers and a host of services have been made available to the consumers like Insurance, Transport, Electricity, Housing, Entertainment, Finance, Banking and the like. The market is becoming more and more complicated today. Technological Development, intensive marketing strategies, entry of multinational corporations, globalization, quality of governance, scarce natural resources have all compounded to make the position of today's market is so complicate and the position of today's consumer vulnerable and many a times weak..Promotion of products has become an increasingly important component in the new digital age, mostly thanks to digital marketing. The traditional form of marketing is lagging behind digital marketing, which offers users new opportunities like personalized messages or answers to a search query. There are several ways to advertise on the internet, and in this paper, ways and tools will be presented that allow digital advertising as well as their advantages and disadvantages. Specifically, search engine optimization, search engine marketing, display advertising, social networking marketing and e-mail marketing will be discussed. Also, the goal of the paper is to enable more efficient creation and implementation of similar contents in new business environments through an insight into internet advertising, social and business networks.

**Keywords:** Display advertising, e-mail marketing, search engine marketing, search engine optimization, social network, Consumer Awareness.

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## 1. INTRODUCTION

Philosophy of consumerism emphasizes on the protection, preservation and enhancement of human life. Consumerism as a social movement it energizes consumers creates new responsibilities to producers and buyers promote consumer consciousness and educate the consumers about their basic rights in the larger interest of coordinated economic growth. India is a vast country where nearly half of the total population is living below the poverty line and with illiteracy, spending half of their income on daily purchases of their livelihood. They could easily be cheated by the business community through unethical trade practices. Unless a strong consumer movement is organized, the rights of the consumer cannot be protected. To gain an insight into the growth of the internet over the last fifteen years, it is enough to say that 3.5 billion people used the internet, while in 2000 that number was only 400 million, which represents a growth rate of 87.5%. Along with the growth of internet usage, there was a growth of related activities such as digital marketing. The main difference between traditional and digital marketing is that digital marketing focuses on the customer, offering him a personalized message and response to his query. Many search engines can be used in

two equally important ways. The first way is search engine optimization (SEO) that helps companies show unpaid search results. It is the process of optimizing online content so that a search engine shows it as a top result of searches for a certain keyword. Another way is search engine marketing (SEM) that allows marketers to buy inventory in search results. When they are online, besides browsing, users can see various content. In addition to that content, they can also see ads in multiple forms, such as text, image, or video ads. That type of advertising is called display advertising. Additional advertising opportunities on the internet and social networks because they allow connecting with the clients by creating a company profile on one of the social networks where clients are present. In addition to the aforementioned forms of marketing, email marketing can be used, which implies sending information and offers to people who have agreed to receive that kind of emails.

## 2. Literature Review of Consumer awareness of Digital Media Marketing in India

Consumer cry for protection, passing of legislations, public pressure for government interference, role of voluntary organizations, loopholes in the existing legal mechanism etc.,

are the very frequently heard terminologies in the market. Many academicians, practitioners of law and many social activists, Marketing experts, and Technical experts, have done good amount of research and have reported them. Now it is pertinent to analyze, evaluate and review such studies before finding the research gaps. The researcher has referred to important studies already undertaken on Consumer awareness of Digital Media Marketing. Hence, an analysis and review of those studies have been presented below:

Internet marketing has been described simply as 'achieving marketing objectives through applying digital technologies' (Chaffey et al., 2009). Digital marketing is the use of technologies to help marketing activities in order to improve customer knowledge by matching their needs:<sup>[1]</sup>

Chaffey, (2013)<sup>1</sup>. In the developed world, companies have realized the importance of digital marketing. In order for businesses to be successful they will have to merge online with traditional methods for meeting the needs of customers more precisely.

Parsons, Zeisser, Waitman (1996)<sup>2</sup>. Introduction of new technologies has creating new business opportunities for marketers to manage their websites and achieve their business objectives (Kiani, 1998). Online advertising is a powerful marketing vehicle for building brands and increasing traffic for companies to achieve success.<sup>[2]</sup>

Song, (2001)<sup>3</sup>. Expectations in terms of producing results and measuring success for advertisement money spent, digital marketing is more cost-efficient for measuring ROI on advertisement.<sup>[3]</sup>

Pepelnjak, (2008)<sup>4</sup>. Today, monotonous advertising and marketing techniques have given way to digital marketing. In addition, it is so powerful that it can help revive the economy and can create tremendous opportunities for governments to function in a more efficient manner.<sup>[4]</sup>

Munshi, (2012)<sup>5</sup>. Firms in Singapore have tested the success of digital marketing tools as being effective and useful for achieving results.<sup>[5]</sup>

Teo, (2005)<sup>6</sup>. More importantly, growth in digital marketing has been due to the rapid advances in technologies and changing market dynamics (Mort, Sullivan, Drennan, Judy, 2002). In order for digital marketing to deliver result for businesses, digital content such as accessibility, navigation and speed are defined as the key characteristics for marketing.<sup>[6]</sup>

Kantila, (2004)<sup>7</sup>. Other tried and tested tool for achieving success through digital marketing is the use of word-of-mouth WOM on social media and for making the site popular.

Trusov, (2009)<sup>8</sup>. In addition, WOM is linked with creating new members and increasing traffic on the website which in return increases the visibility in terms of marketing. Social media with an extra ordinary example Facebook has opened the door for businesses to communicate with millions of

people about products and services and has opened new marketing opportunities in the market. This is possible only if the managers are fully aware of using the communication strategies to engage the customers and enhancing their experience.<sup>[7]</sup>

Mangold, (2009)<sup>9</sup>. Marketing professional must truly understand online social marketing campaigns and programs and understand how to do it effectively with performance measurement indicators. As the market dynamics all over the world are changing in relation to the young audience accessibility to social media and usage. It is important that strategic integration approaches are adopted in organization's marketing communication plan.<sup>[8]</sup>

Rohm & Hanna, (2011)<sup>10</sup>. With the above reviews we can assume that GST is a tax reform which will change the scenario of the country as a support for this review study. Blogs as a tool for digital marketing have successfully created an impact for increasing sales revenue, especially for products where customers can read reviews and write comments about personal experiences. For businesses, online reviews have worked really well as part of their overall strategic marketing strategy.<sup>[9]</sup>

Zhang, (2013)<sup>11</sup>. Online services tools are more influencing than traditional methods of communication (Helm, Moller, Mauroner, Conrad, 2013). As part of study, it is proven that users experience increase in self-esteem and enjoyment when they adapt to social media which itself is a motivating sign for businesses and marketing professional.<sup>[10]</sup>

Arnott, (2013)<sup>12</sup>. Web experiences affect the mental process of consumers and enhance their buying decision online (Cetină, Cristiana, Rădulescu, 2012).<sup>[11]</sup> The Internet is the most powerful tool for businesses (Yannopoulos, 2011). Marketing managers who fail to utilize the importance of the Internet in their business marketing strategy will be at disadvantage because the Internet is changing the brand, pricing, distribution and promotion strategy.

### 3. Objectives Of The Study

The principal objectives of the study are as under:

1. To understand consumer awareness in Digital Media Marketing
2. To know about the attitudes in relation towards On-Line Marketing.
3. To understand the views of consumers on basic services through E-Marketing.
4. To make some suggestions in view of the problems faced by the consumers.

### 4. Methodology Of The Study

The major criteria for the validity of any research study lies in the methodology adopted to get relevant and accurate data, analysis and interpretation of data and to end up with proper results. However, in this study I referred only secondary data, all possible periodicals, journals, printed leaflets, books on abridged

case collections, newspapers etc

## 5. Search Engine Optimization for Business Sector

SEO is a process itself and it takes time to get the website ranked higher in the search engine results.<sup>[12]</sup>

While SEO is continually changing, it is still an essential part of the process of delivering the right content to the right people. SEO helps the audience to find online businesses, and it also guides them through each stage of the buying cycle. It builds awareness because via organic results people can find some website and become aware of the products and services of the business advertised by that website. It also helps people with their research. The more information the website provides through different types of content (like blog posts, infographics and videos), the greater the chance of attracting people to the website. Finally, it helps people to confirm their final choice and entices them into purchasing. The business owner has to build trust and credibility with the customers and convince them to buy from him.

## 6. Black Hat SEO

Unauthorized practices, popularly called "Black Hat SEO", are a set of techniques used to increase site rankings in search engines by breaking the terms and conditions of the search engine. These are practices that mostly have a short-term effect until they are discovered. Once they have been discovered, their rank is lowered. Some of the examples are:

- Keyword stuffing - too many repetitions of the same keywords to make content more relevant for search engines,
- Link farms - False websites used to inflate the popularity of the original websites using a massive number of fake links to get a better position on search engines.

To prevent Black Hat SEO, Google has developed some algorithms such as "Panda" and "Penguin", which prohibit unauthorized practices by punishing those methods, especially unnatural links, or websites of poor quality.

## 7. SEARCH ENGINE MARKETING

There are two ways of using search engines for promotion and advertising purposes. The first is SEO, which helps users find the product or company in unpaid search results. An alternative to this is search engine marketing or SEM, where advertisers buy inventory in search results. It is important to note that paid ads do not have any impact on unpaid search results. Unlike traditional marketing, SEM is aimed at people who are actively searching for products or services, so it is vital for advertisers to know which business-related keywords people type while searching. Most search engines use an auction system, in which advertisers bid for keywords and thus compete for ad serving. Advertisers bid on the auction for a limited number of places where ads can appear on the search engine. After the search, the outcome of the auction is presented, as in Table 1, where the user with the highest combination of the bid and quality score

gets the highest rank in search results. The bid is the maximum amount the advertiser is willing to pay for the ad click; however, in most cases, he does not pay that amount, but the amount that is sufficient to exceed the competitor participating in the auction. That can be seen in (1), where the ad rank is the rank of the advertiser in the position below and the quality score is a grade of ad quality. In addition to the bid, ad relevance is also crucial.

## 8. Google Search Network

The Google Search Network is a group of sites and search-related apps where ads can appear. When advertising on the Google Search Network, ads can appear above or below search results on Google Search, Google Play, Google Shopping, and Google Maps. The text ad in Google Search is the simplest ad type offered by AdWords. It consists of three parts: title, destination URL, and text description, often including ad extensions such as the location or a phone number. In Google AdWords, an advertiser can choose between manual bidding and automatic bidding. Manual bidding is an option in which the advertiser selects the maximum bid amount for an auction. Automatic bidding is the most commonly used option. By using it, the advertiser defines the daily budget, based on which the AdWords system tries to get most user clicks on the ad within the budget.

## 9. DISPLAY ADVERTISING

Unlike search engine marketing, display advertising allows ads to appear on all sites that have inventory. Display advertising provides advertisers with many creative ad ideas - different sizes and formats, images, and videos, which automatically implies more opportunities for attracting potential customers. Google Display Network Display advertising is a digital version of jumbo posters or TV ads, and it is used for websites users visit. Companies pay inventory to attract as many potential customers as possible. There are two ways to do that, i.e. by buying ad space from the website owner or by using affiliate networks for companies with different sites promoting ad slots. An ad can be displayed on specific web pages, to an individual website visitor, or both. Like other digital lithographic forms, display advertising platforms offer many options for targeting users. One of the options is to show your ad to the specific speaking area or at a particular time of the day. For example, it is possible to have an exact selection of ad placements by selecting a specific website or specific areas on that website where the ad can appear. Display advertising has many options in defining ad layout.

## 10. Customer journey

Analyzing user steps and imagining this as a funnel can help the advertiser understand what the users want and how to access them. It is possible to divide this stream into the following phases: building awareness, a customer considering

the product, a customer reviewing product purchases, and retaining users.

- Building awareness:
- Users do not look for a product actively.
- Broad audience targeting.
- Ads to attract attention of a customer and create an excellent first impression.
- Users considering the product:
- Ads that emphasize the advantages over competitors.
- Users consider buying products:
- Users actively interested in the product.
- An additional narrowed audience.
- Ads with a precise message emphasizing the unique advantage of the product.
- User retention:
- Existing customers.
- Ads encouraging users to return to the webpage and buy an additional product.

### 11. Remarketing

The most important feature of display advertising is called remarketing, and it allows the use of the user's activity on the advertiser's site to target them with a unique advertising message, even when they leave the site. There are many remarketing solutions, and many display networks offer this feature. The first step is to define who the target audience is. The target audience can be identified as users who added the product into the cart but did not make any purchase. A remarketing service may require adding a small code to a web page that allows collecting a list of users from the site, i.e., visitors who are suitable for specific criteria and who can later be targeted. The next step is to create ads tailored to their needs. These ads could include, for example, special offers of additional content, a coupon with a discount, or other incentives to get users back to complete their purchase. When users make their purchase, there is no need to show them the same ad, so a new targeting list for the existing customers should be created. Then they can be targeted with another ad campaign.

### 12. Video advertising

Popularity and an increase in online video quality represent enormous opportunities for advertisers because, four times more users would rather watch the video of a product than read about it. Videos are quickly becoming the primary marketing tool. The price of an internet connection is much lower, the speed is significantly higher, and there are more ways to reach users on the online video market. Video can be created and shared on a website such as YouTube or advertising space in other people's videos can be bought. Available video ad formats on YouTube include TrueView in-stream ads and TrueView video discovery ads. TrueView in-stream ads appear before or after videos on YouTube or other sites, in games or apps on the Display

Network, and the viewer can skip the ad after five seconds. With TrueView video ad, an advertiser is charged when users watch at least 30 seconds of a video. TrueView video discovery ads reach people in search results on YouTube or in related YouTube videos. If a viewer clicks on an ad thumbnail, the video will start on YouTube. For this kind of an ad, the advertiser is charged only when a viewer chooses to watch a video.

### 13. Mobile marketing

Today the internet is more accessible through mobile devices than through computers, which is an advantage of mobile marketing and the features it offers. For example, mobile advertising can potentially boost the number of phone calls to the advertiser or encourage people to download mobile apps. Mobile device users do not search the internet in the same way they search the internet on their computers, so ads should be adjusted to mobile devices. Because mobile phones are smaller, ads should have a concise message with a clear call to action and the ability to appear in the text, picture, or video. In addition to the quality of an ad, it is equally important to have a mobile optimized site because users will more frequently leave a website that is not mobile optimized for users. The site must work well on smaller screens and load faster because, slow loading of a website is the most important reason for abandoning the website. Buttons should be legible and noticeable. Navigation should be clear and user friendly. Visitors should immediately be clear about their options and how to do something. Mobile sites should offer the same things as the main site. In the world of mobile devices, it is not limited to displaying your services solely on websites, but ads can also appear within mobile apps. A mobile app is an application that can be downloaded and installed on a mobile device (cell phone or tablet). It can contribute to a mobile site and help customers achieve specific goals. The application can increase customer loyalty and enable active communication with clients. Applications are also useful for creating loyalty programs and long-term users.

### 14. SOCIAL NETWORK MARKETING

Social networks are present in the lives of internet users on a daily basis, and for companies, they are an excellent opportunity of advertising as they allow users to interact, share and exchange information. Also, social networks can be a great tool for companies as they are platforms that can directly address existing and potential customers, share content, engage in conversations, build trust, reach more people, increase impact, and understand clients better. Many social networks also offer paid advertising that allows access to specific groups of users and direct advertising to users of these groups because it is more likely for them to become clients than the broader, uninterested audience. Social media sites can do so because they have a lot of information about their users. The greatest power of social networking is the ability to target potential customers and

customers based on demographic information, user behaviors, and specific interests. But besides content promotion, social networking ads are also a great way to increase website traffic or data collection in email campaigns.

## 15. EMAIL MARKETING

Email marketing is an excellent addition to other activities in digital marketing because without much cost it can build engagement and customer loyalty. According to [4], as in any different type of marketing, the first step in email marketing is to set the goals and create a list of users who have already agreed to receive commercial emails. Most email marketing tools contain a contact database that must contain at least the email address of a single contact. Furthermore, users should be given the option to cancel their subscription. Online registration forms should be short and simple to complete because this guarantees success. Given the fact that clients receive many emails every day, even the most intriguing message does not guarantee to reach the users. For this reason, it is recommended that content is concise, these sections should not be longer than 5 sentences, and for longer articles and additional information on the website, a call-to-action link should be set up. The text should be more appealing, and the audience should be addressed with the appropriate tone. Email marketing, as well as other kinds of online marketing, is easy to measure. Reports may contain information such as the email opening rate or the content that attracts most people to the website based on the click-through rate. Email campaigns can be improved continuously by testing different versions, creating a relevant landing page and tracking experience analysis.

## 16. DISCUSSION

Out of all techniques described in the paper, SEO is the most important technique for acquiring a customer organically (i.e. free of charge). By optimizing a company website with high quality content, that site can be shown among top places on Google search results. But, since creating content and optimizing it for search engines is a long-term process, lots of companies decide to use a faster way of generating traffic to its websites. Knowing which keyword is often searched by users in combination with a well-created ad, SEM is one of the essential marketing techniques. SEO and SEM are effective because they are aimed at users already showing interest in some of the advertised goods by searching the web. On the other hand, display marketing, even though it provides ads in different sizes and format, is not that effective. People are often irritated by display ads, but these ads are still a great way of building awareness for a certain brand. Although ads on social media display ads similarly, they tend to have more success in turning an ordinary reader into a customer. That is because on social media an advertiser can select which group of people to target with his ad based on users' interests and their demographic data. Many digital marketers largely

neglect email marketing, but if used adequately, email marketing can have a tremendous effect on users because users are already familiar with the company and its business since they have submitted their email address.

## CONCLUSION

As there exist many ways for product or service promotion, it is rather challenging to choose which one to use. In addition to traditional advertising methods such as television and radio advertising, digital advertising has been on the rise in recent years. This paper presents digital advertising technologies, techniques and media and their advantages and disadvantages. Understanding the way search engines work and advertising thereon are the most critical items for quality product promotion. For a potential buyer to find a website, it is necessary to optimize it, and thus display the product advertised at the top of search. An alternative to search engine optimization is paid advertising on search engines whose most significant advantage is paying only when a user shows interest in the ad, i.e. clicks on it. Since unlike search engine marketing, users are shown different ads and not just those they are interested in, display ads performance is somewhat weaker, but display advertising is still a great way to create product awareness. Social networks are also one of the most prominent media advertising channels. They allow everyday interaction with customers and help build awareness of the brand being advertised. The biggest advantage of advertising on social networks are various customer information they have, which makes it easy to find ideal customers. Though the seemingly old advertising model, email marketing allows us to supplement all forms of digital marketing mentioned above, primarily thanks to the possession of email addresses of already interested users and remarketing. Remarketing is undoubtedly one of the most significant advantages of digital marketing, as it provides the ability to segment the user based on which part of the buying process they are located in and access them with a custom message or an ad for that part of the process. So, it is crucial to know the audience and their habits. Also, unlike traditional marketing, digital marketing is measurable. It is possible to see which ad was interesting to the audience and which failed, and then adjust the advertising strategy accordingly. Knowing your costs and calculating the amount invested and gained is of great importance to every business person, and digital marketing makes that possible. With the development of modern technologies and devices that allow everyday use of the internet, even the most traditional entrepreneurs will not resist this form of advertising because it is not only the future but also the present.

**REFERENCES:**

1. H.S. Anitha, Consumer Education in India, Prof.B.R.Anantan felicitation Committee, (2008) 59-81.
2. Nair, R. Suja, consumer Behaviour and Marketing Research, Himalaya Publishing House, New Delhi, (2004) .
3. M.A. Lokhande, , Business Regulatory Framework, Kailash Publication, Auarangabad, (2002).
4. A. Sen Gupta, A.K. Srivastava, Big Bad and parallel world of counter feits and look – alike, Indian Journal of Marketing, (2003).
5. P. Kotler, Principles of Marketing, New Delhi, Prentice Hall of India Pvt. Ltd, (1992) .
6. P.K. Majumdar, Law of consumer Protection in India, Orient Publishing Company, New Delhi, (1994).
7. V.M. Peshwe, The Consumer Protection Act, (1986).
8. Singh Gurjeet, The law of consumer protection in India.
9. Internet Live Stats, Internet Users, [www.internetlivestats.com/internet-users](http://www.internetlivestats.com/internet-users), (2017).
10. Seo Administrator, SEO Tutorial, [seo-tutorial.seoadministrator.com](http://seo-tutorial.seoadministrator.com), (2017).
11. Google, Google's Search Engine Optimization Starter Guide, [static.googleusercontent.com](http://static.googleusercontent.com).
12. [media/www.google.com/en//webmasters/docs/search-engine-optimization-starter-guide.pdf](http://media/www.google.com/en//webmasters/docs/search-engine-optimization-starter-guide.pdf) (accessed: 2017)  
Google Digital Garage, How search engines work, [arndigital.withgoogle.com/digitalgarage/lesson/41#](http://arndigital.withgoogle.com/digitalgarage/lesson/41#), (accessed: 2017)  
[5] Google AdWords, About Search Network only campaigns, [support.google.com/adwords/answer/6340430](http://support.google.com/adwords/answer/6340430), (2017).