

Methods and Techniques for Effective Electronic Advertising

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Abstract

Apart from the traditional methods used by companies in order to establish a strong customer base, a new technique has been increasingly developing in the last years: electronic advertisement. This new method of advertising has obtained a broader share of the market, while its effectiveness is rapidly increasing, even in physical sales. As a result of this new trend, an effort has been observed to bill this new type of advertising, as well as an increasing effort to improve it. The aim of this article is to demonstrate the methods and techniques of measuring electronic advertisement effectiveness, as well as the techniques used for its billing.

Key words: Marketing Communications, Promotion, Advertising Techniques, Electronic Advertising Strategies, Banners, Advertisement Designing Techniques, Media effectiveness

1. Introduction

The purpose of businesses is to create a strong and loyal customer base through marketing. Physical markets, despite the variety of alternative products they offer, set certain limitations to consumers relating to searching costs and product distribution options. These limitations favor consumer focus on specific brands. In electronic markets, where costs are minimal and distribution processes focus on group purchases by customers, consumers are flooded with alternative products, messages and offers by competitors (Vlachopoulou, 1999).

Traditional marketing communications follow the well-known and long-followed model of persuasion. In the Internet environment, when marketing executives address the customers, they need to replace persuasion with permission and promotion with attraction (Siomkos & Tsiamis, 2004). When it comes to promotion, traditional marketing communications use communication processes that involve advertising, sales promotion techniques and publicity. On the other hand, the Internet offers the option of interactive communication with customers/ users (Vlachopoulou, 2003). Customers, using Internet tools that allow for this type of communication, have the option to set the communication conditions along with others (both consumers and businesses) who share common interests or ideas on the products.

The purpose of Internet advertising is the same as in other types of advertising, i.e. to convince customers to purchase a specific good or service. Therefore, it is considered as an alternative (or supplementary) means to the traditional methods of advertising. Customer knowledge of this alternative means is quickly increasing.

2. Electronic Advertising

Electronic advertising is an attempt to release information on the Internet in order to establish a relationship among vendors and buyers. Internet advertising can also aim at strengthening the position of a specific brand in the market (brand building) or attempt to evoke direct response from consumers. This latter type of advertising has great advantages compared with other advertising means, such as television or radio that do not support bi-directional communication and transactions. Moreover, Internet advertising can be defined as every form of commercial

content, available through the Internet and designed by a company, in order to inform consumers of a good or a service (Schlosser et al, 1999). The most common way of advertising through the Internet is the so-called "brochure ware", which refers to the use of a company's official website to show its products and business activities.

Advantages offered by advertising are direct communication and interaction with users, the possibility to offer personalized or, at least, adapted mass messages, the consumer's ability for direct criticism, the broad number of potential customers and, consequently, the low cost of advertising messages per viewer/ user. In the other end, the disadvantages are that certain ways of measuring advertising message effectiveness are not commonly accepted, the lack of technological standards to ensure the time efficiency of messages, the easiness to offer advertising content, and the dependence of advertisements on advertised product technology, web means of exposure and the receiver of the message. In many cases, viewers have the option to deactivate incoming advertising messages, a fact that re-determines the effectiveness of a company's cooperation with advertising agencies.

2.1 The Three Dimensions of Internet Exposure

The purpose of all these means of exposure is communication of the right message to the right receiver at the right time, as well as the collection, understanding and translation/ decoding of the message in a proper manner. In order to meet this complex purpose, there are three aspects of communication strategy that need to be balanced within a message. Kiani (1998) described these aspects as follows:

Message: the concept to be transmitted from the sender to the receiver.

Format: the message characteristics that attract the receiver's attention.

Context: the means with which the message is transmitted.

Every context provides messages with different opportunities to attract and interact with the public. A good message should balance each one of the above aspects, in order to be supported by the appropriate format and use all the available offered capabilities within the transmission context. In most cases, Messages can adjust to the Context and the Format of the available types and means of exposure. Companies and products appear to be facing the following problem with electronic exposure: "When the promotion is realized through the Internet, distance between consumers and businesses is only one click away. However, the exposure of an electronic address in the physical environment does not offer the same opportunities. To be exact, while in the previous case users would click on the Internet advertisement and would be redirected to the company's website, in the second case, another form of active participation is required, since there are further issues regarding memory, recording, reminding and access at a later time. Therefore, in the second case, as has been noted by Kiani (1998), in order for all additional steps to take place, motivation and communication strategy need to enter the field.

On the other hand, Dann & Dann (2001) have made certain observations on the phenomenon of excessive website activity, resulting in very low speeds or even a Denial of Service (DoS). According to Dann & Dann (2001), the Slashdot phenomenon is the result of existing imbalance among the five Weibe factors, as described by Kotler & Roberto (1989). The five Weibe factors are:

Force: It refers to the degree of one's motivation against a purpose and based on his/ her inclination to the idea of a message. On the Internet, force is an essential component to the success of a website as it is driven by the user's interest. In other words, the effectiveness of a communication campaign depends on the interest it induces to users.

Direction: It the knowledge of how (means and methods) and where (points of presence) a company should meet the objectives of a communication campaign. On the Internet this is translated as access and **navigation** through a website. Access relates to the easiness in connecting to a website. Navigation relates to the easiness in obtaining specific information that is stored in a certain web location.

Mechanism: It refers to the entity that will convert user interest into action. On the Internet, the mechanism is the website itself.

Adequacy and **Compatibility:** They refer to the ability and effectiveness of an entity-mechanism in serving its planned objective. On the Internet, these factors are translated as technological compatibility and planning adequacy, in order to serve user requests in a clear manner.

Distance: It refers to the consumer's estimation of the energy and costs necessary in order to modify certain behaviour and be rewarded. On the Internet, distance represents the difficulty and time needed to locate a website and gain access to specific information.

2.2 Behaviour and Preference Data

As mentioned, personal demographic data are used in the communication process, as it is assumed that demographic characteristics are correlated with consuming preferences (Turban et al, 2002). In this context, data on the user's behaviour within a website can better indicate a person's consuming preferences and guide advertising planning on a personalized basis.

More specifically, certain personal information are collected, such as frequency of visits, time of last visit, pages, questions, purchases, etc. By processing this information, a website can expose the proper advertising or make appropriate suggestions to its visitors. It is worth mentioning that the advertising focus becomes more and more effective as the amount of personal data increases. For example, a person's behaviour within an electronic records store reveals important information on his or her music preferences. By collecting these data and using the appropriate software, a website can propose new releases that interest specific visitors and promote advertising messages with higher rates of response.

In this behaviour recording process, **cookies** play an important role; cookies are files sent through a website which are added to the visitor's hard disk and are capable of recognizing a computer each time that this computer connects to the website. If cookies are enabled, it is possible to recognize a visitor and record behaviours and preferences while navigating a specific website. For example, if an electronic newspaper visitor often navigates through the financial news section, an investment company can promote itself through an advertisement ensuring higher response rates. It should be mentioned that even though cookies involve each website separately, there are certain companies that monitor visitors in a number of cooperating websites with high traffic rates and create large databases. Alternatively, the website can ask visitors to reveal their preferences and interests by filling a questionnaire. The problem in this method is of course the unwillingness of users to do so.

Finally, it should be mentioned that personal data are not used only in communication planning. They are often used to predict the preferences of other visitors who share certain characteristics. For instance, if the total number of data maintained by an electronic records store indicates that there is positive correlation between age and classical music CD purchases, then similar pointers can be addressed to visitors of an older age.

3. Electronic Advertising Methods

Some of the primary methods used in electronic advertising are the following (Siomkos, 2004):

Advertising banners

Advertising banners are the most common form of Internet advertising. They rent advertising space in websites and are usually visible on the upper or lower section of a page. Most banners are click-through, linking to the web page of the advertiser. While planning, attention must be paid to file size, as it affects the time necessary for an advertisement to load on the user's computer. The size of image files should be between 7KB and 10KB. The smaller the size of a file, the faster it loads. Advertising banner designers pay a lot of attention to image sizes, as slow loading can make viewers impatient and change their web location before the banner has fully loaded (Dabner, 2004).

Typically, an advertising banner contains a short text or a graphical message promoting a product. Advertising executives dedicate a lot of time to plan an advertisement that attracts the attention of consumers. With the progress of web programming, it is also possible to find advertising banners with videos and sound. Thus, the following types emerge (Dimitriadis & Baltas, 2003):

- The Animated banners include motion and rotation of graphics. They attract user attention more effectively than static banners, without largely affecting file size or loading times.
- Interactive banners support bidirectional communication with users, who can add data, select from a menu, answer a question or even carry out a transaction.
- Transactional banners form a significant development. This type of advertisement merges advertising and selling, and uses impulsive and non-scheduled purchases by consumers, allowing for direct transactions without relocating users to the vendor's website.
- Advertising banners contain links that, when clicked on, they redirect visitors to the advertiser's website. There are two types of advertising banners: key word banner and random banner.
- Keyword banners appear when a search engine is used to make a search using a keyword. It is an effective means for companies that wish to limit their target group.

- Random banners appear randomly. Companies that wish to launch their new products (such as a movie or a CD) use random banners.

Banners are placed by advertisers to third websites that address their target group.

There are three main banner placing methods:

Purchasing advertising space: This method is similar to purchasing advertising space or time in other media. The advertiser pays the owner of a website in order to expose an advertising banner. The website should be adequately efficient, i.e. be capable of approaching the target group both in terms of traffic and composition of visitors. The cost for banner exposure should also be competitive compared with other, equally effective means.

Banner swapping: The banner swapping method means that company A agrees to promote company B's advertising banner and, in exchange, company B publishes company A's advertisement. This is a direct link between two websites. Every time company B's website is accessed, the advertising banner of company A will be shown, providing viewers with the opportunity to visit company A's website. This is probably the cheapest form of advertising using banners in terms of placement and maintenance but it is not easily agreed. A company needs to find a website that produces qualitative traffic. The involved parties should also reach an agreement. Moreover, the company should contact the owner/ webmaster of the website and enquire whether he or she is interested to swap advertising banners. Swapping is a cost-effective method for projecting banners but requires consent by both parties. In order to reach an agreement on banner swapping, each party should regard the other party's website as the appropriate means of advertising.

Banner exchange: The swapping method is quite restrictive as it requires matching of the two companies. The method of exchange exceeds these restrictions by implicating more than two parties in the process with the help of an agent (a banner exchange company). A company that wishes to promote its banner submits it to the agent and the agent promotes the banner to the websites of participating companies. At the same time, the company hosts the banners of all participants in its website. The number of the company's banner hits is proportional to the number of third banner hits hosted in the website. The exchange of advertising banners does not often work because matching can be difficult.

However, if many companies are involved, it would be easier to match. The following is an example of 3 participating parties: A can show B's advertising banner but B cannot show A's advertising banner with the best possible results. B can show C's advertising banner and C can show A's advertising banner. This type of exchange can involve many different companies. Advertising banner exchange becomes with three or more implicated parties. It functions like a regular commercial transaction. A company submits an advertising banner to the banner exchange company and creates a link to one of its web pages showing different banners every time the page is accessed. Every time a participant shows an advertising banner on behalf of one of the exchange participants, they earn one point. When the participant earns several points, their advertising banner appears in the website of the appropriate participant. Most exchange schemes provide their members with the option to purchase additional points. Several exchange schemes allow participants to define the type of website they wish to promote their banner in, thus helping advertisers to consider a specific target group. Most exchanges offer a point ratio of approximately 2:1. This means that for every two advertising banners that appear in your website, your banner will be shown once. One can't help wondering why the ration is not 1:1 instead. The banner exchange company must produce income to cover its operating expenses and offer additional services; therefore it will sell about 50% of all advertising banners. Some transactions will not allow certain types of advertising banners, a fact that should be examined before deciding to participate in a similar scheme. Generally speaking, banner exchange is an important advertising method and should be seriously considered as an alternative.

A variation of banners is the **spot**. This is a space in a website that is rented by those who wish to advertise their products. As opposed to banners, spot advertising is permanently placed in a website and appears to all visitors. Spot advertisements are usually placed in search engines and Internet portals, and have small size.

Banner effectiveness is normally measured through the behaviour and reaction they evoke, such as click-through and number of transactions. It is worth mentioning that the percentage of users who react to a banner by clicking on it is very small. It is therefore important that the banner also meets other marketing purposes besides direct user response. In particular, they can be used for branding purposes (securing a powerful brand); this way they will produce a positive result even to users who do not click on the banner. There are clear restrictions on the amount

and type of information that is communicated through a banner and, in this context, its contribution to branding cannot be compared with that of other richer means, such as television. Yet, there are always opportunities for further use of this means of advertising and the space used by banners. For example, a banner that bears the logo of a famous brand can strengthen the brand's image and position in the mind of consumers, even if consumers do not click on the banner to get more information or do not purchase the product at that time.

The development of effective banners is greatly facilitated by the fact that they can be tested thoroughly before being finalized. The testing process takes place for a limited amount of time and provides data on the banner's effectiveness. Testing data help the selection of the best banner or its re-designing. Experimenting with a variety of designs and characteristics is easy and cost-beneficial.

Benefits

A primary advantage of using advertising banners is the ability to adjust them to the target group. An advertiser can decide which market fields to target (Fiore, 2001). Advertising banners can still be adjusted to a one-to-one, targeted advertising. A "mandatory advertising" marketing strategy is also used, which means that customers are bound to see the advertisement. The disadvantage of this method is its high overall costs. If a company asks for a successful advertising campaign, it should commit a large amount of its advertising budget in order to achieve a high CPM (cost-per-thousand). Another major disadvantage of using advertising banners is that only a limited amount of information is allowed; advertisers should think of small creative messages in order to attract viewers. An important element that should be examined by advertisers is the size of an advertising banner. They should make sure that the size of the image used is suited to the position in which it will be placed and that the file size and its animation restrictions are suitable. A large file image or unlimited motion can require a lot minutes to load. This can prevent the appearance of the remaining page until the image loads, and will result in impatient visitors exiting the website before the page has been viewed.

Splash screens

A splash screen is a starting web page used to attract attention for a short time, before directing to the website's home page, or used to inform users of the type of advertising or other software that is required in order to view the page. The great advantage of splash screens compared with other advertising methods is that one can create modernistic multimedia effects or provide plenty of information on a single visit.

Renting space

Search engines often provide advertising space in their home page. The duration of advertising space use depends on the agreement made between the host of a website and the renter. As opposed to advertising banners that appear at various times, advertising space for rent will always be available. In this way, the competition is reduced. The disadvantage of renting space is that the size of the advertisement is often small and limited, resulting in many viewers losing their willingness, plus the fact that costs can be very high.

Interstitials

Interstitials are advertisements that appear on the user's screen while a home page loads. They are also referred to as pop-ups and intermercials. Interstitial messages are similar to TV commercials in the sense that they interrupt the main flow of transmission. Their size varies from a small space to full screen and they allow for incorporating multimedia. The advantage of interstitial advertisements is that they will undoubtedly be perceived by viewers. Their disadvantage is that they can irritate users, whose navigation is interrupted by advertising messages.

URL (Uniform Resource Locator)

The main advantage of using URL as an advertising tool is that it is free. Anyone can submit their URL to a search engine and view it. Moreover, by using URL, the target group can be locked and unwanted visitors can be filtered using keyword options. On the other hand, the URL method has several disadvantages. The first of these is strong competition. Several search engines classify their entries in different ways. Some search engines use after-marking and others not. One can have the proper keywords but, if the search engine classifies its entries using the content title or description in after-marking, then all efforts will be of no use.

Email (Electronic mail)

Electronic mail is the most frequent activity in which Internet users are engaged, and like conventional mail, it may be used for advertising and communication purposes. Newsletters may be sent by advertisers through electronic mail to those interested in their activities or products.

An alternative means of advertising through email is within corporate websites that offer free mail accounts. The holders of these free email accounts should visit the corresponding website in order to view and send emails. Just like conventional mail, electronic mail can be used for advertising and communication purposes for Internet users. The advertiser sends out email with paid advertisements from third companies, mostly in the form of banners. The company itself can also send messages to those considered as potential customers, using email lists. This is the electronic form of direct mail that has many advantages against traditional mail in the sense that it does not involve any postal charges and the recipient can answer directly or by following hyperlinks.

Yet, attention must be paid on the issue of spam messages and the recipients should be selected carefully in order to minimize inconvenience and maximize the communication effect. Spam messages form a major Internet issue in terms of unsolicited use of email addresses. The recipients of advertising emails should only be those people who have expressed their consent to receive the information contained in the messages. List members must also easily be able to subscribe or unsubscribe from the list and stop receiving these messages at any time.

What happens though when all offers flood potential and existing customer mailboxes? How many emails will they be receiving? How will customers deal with this? In which areas must they focus in order to ensure that their email will be successful? Promoters who use emails should prepare long-term plans and work towards providing motives to consumers, in order for them to continue opening these emails. This is extremely important, as currently one third of consumers open and read only those emails sent by those related to them. The larger the amount of emails, the more consumers will censor incoming messages. When examining who to address their messages to, promoters should update database information with data relating to email campaigns. When they decide what the communication involves, promoters should integrate their customers' incoming mail solutions with their own outgoing marketing efforts. Finally, with regards to "how" or the drafting of a message, promoters should develop email writing skills and their ability to prepare multimedia emails. A mailing list can form a very powerful tool as it targets a specific group of people for who there are some information available.

Chat rooms

Chat rooms refer to a settlement in which participants exchange messages in real time. Software industry executives estimate that many hundreds of thousands of websites offer millions of chat rooms.

A chat room is a virtual meeting point where groups of regular visitors gather and chat. Chat rooms can be used to allow a community to promote a political or environmental issue, in order to support those with health problems or in order for those interested in a hobby to share their interests. Also, because many customer-supplier relationships should be preserved without face-to-face meetings, online communities are used more and more to serve business interests, including advertising.

The main difference between an advertisement that appears on a static website and one that is passed through a chat room is that the latter allows advertisers to pass through all messages and target their conversations again and again. This way, advertising can also be more thematic. One can start with a message and build up until they have reached a climax, as one would do with a good story. Conversations are used to demonstrate multiple advertisements on screen and will therefore be noticed.

Sponsorships

Companies that support a website financially or cooperate with the company that has it can be advertised directly or indirectly. Sponsorships can form an effective means of communication with the target group. The advertised message is channelled along with the main content of the website and gives the impression that the website approves of the advertised products. Such promotion, for example, can be achieved by preferential treatment of the sponsor in the market directories of large search engines. Similar practice is followed also in other media, where certain products are indirectly shown, as in the shopping columns of magazines.

Other forms

Online advertising can be done in many ways, from newsgroup advertisements to electronic kiosks. Internet radio advertising is just the beginning and Internet television advertising will soon follow. An interesting form is advertising for the members of Internet communities. Community websites such as www.geocities.com provide direct advertising. There are also

advertisements that link to other websites which may interest community members. Targeted advertisements can also be added to the individual websites of members.

4. Electronic Advertising Strategies

4.1 Advertisement Designing Techniques on the Internet

Certain commonly accepted advertisement orders on the Internet are mentioned by Choi et al (1998) and others. A typical guide includes the following:

- Advertisements should be visually attractive. In massive media, advertisements should be coloured and attract the reader's attention. On the Internet, this principle can be applied by adopting interactive and animated content that can attract the visitor's attention and make him/her want to return to the page.
- Advertisements should target specific groups or individual consumers. Advertisements should be adaptable and be able to communicate on a personal level.
- The content must be valuable to consumers. Websites should offer valuable information, avoiding any unnecessary and large files that delay loading times.
- Advertisements should focus on the trademark and the company's image. Advertisements should emphasize on how the company's products and services differ from those of the competition.
- Advertisements should form part of a complete marketing strategy. Companies should actively participate in all kinds of Internet activities, such as newsgroups, mail lists and electronic bulletin boards. All activities form part of a strategy. Furthermore, online advertisements should coordinate with offline advertisements.
- Advertisements must be associated with ordering processes in a clear manner. After watching the advertisement, if they wish, customers can order the advertised product using convenient, preferably online, means of payment.

4.2 Designing Internet Advertisements

The successful designing of websites is both an art and a science. In reality, it is a very difficult task. Gehrke & Turban (1999) acknowledged 50 variables that can increase (or decrease) client satisfaction of a web page and, in the end, their wish to view advertisements. These 50 variables were then split in five categories. Authors performed certain experiments in order to find their relative meaning. Several of the most important variables in each category are mentioned below, along with suggestions:

- Page loading time

Graphics and tables must be simple and have a reason for being there. They should be compatible with standard screens.

Thumbnails can be useful.

- Business content

Clear and concise content is essential. An attractive page title and headline text can be useful.

The amount of registration information required should be minimal.

- Navigation efficiency

Properly named, precise and descriptive links are obligatory.

Websites must be compatible with different browsers, software, etc.

- Security and confidentiality

Security and confidentiality must be ensured.

Cookies must be disabled.

- Marketing focus on customers

Clear terms and purchase conditions must be provided, including information on delivery, return policies, etc. A confirmation page should appear after every purchase.

When advertising follows the above suggestions, then it is possible to implement advertising on one, or a combination of more than one, of the following strategies:

Passive Pull Strategy

Customers usually search for a website to visit only if its content is useful and attractive. This strategy according to which a website remains passive, waiting to be accessed by customers, is referred to as passive pull strategy. The passive pull strategy is productive and cost-effective when applied to an open, non-identified public worldwide. However, due to the fact that there are too many websites open to all, the need arises for a directory that will guide customers towards targeted websites.

A website can either be a site dedicated to advertising (which means that it will not offer order placement or payment options) or an integrated retail store (such as Amazon). In the latter case,

advertisements can be directly linked to sales. In this case, advertisements may be regarded as the first stage of the sales process. When a website forms an electronic trade center, it is possible to view its own directory and search engines, a fact that helps us locate any specific goods or services. In this sense, a directory of an electronic trade center may be considered as the second stage of a passive pull strategy.

Active Push Strategy

If customers do not voluntarily visit a commercial website, vendors can actively advertise their products to target consumers. One of the options that form part of this strategy is sending out emails to potential buyers. The first issue that should be taken into consideration by vendors who adopt this strategy is how to obtain a mailing list of potential customers.

5. Promotion and Exposure

5.1 Ways to Attract Visitors to a Website

The promotion and exposure of a website follows, in general, similar methods to those applied in conventional markets, with the purpose to raise traffic in stores and increase sales of the advertised products (Panigirakis, 2003).

Sites offering web services

The provider's website is the first thing users see because providers advertise themselves through the installation software they give their customers. Therefore, the provider's home page receives many hits. The disadvantage is that there are many users and they have different interests. The companies that usually advertise their services here are banks, travel agencies, insurance companies and computer manufacturers, i.e. companies with a broad target group. For advertisements with a narrower target group, usually content-specific subpages of the provider are shown (e.g. stock exchange pages). In this case, the target group is clearly more limited but with more specific interests.

Creating a top-list for a search engine

For every search engine there is a page for submitting URLs. By submitting a URL, the system can search the submitted websites, following and sorting all related content and links. As the system searches the complete text of websites, there is no need to provide a keyword. There is also no need to give an overview or any descriptions, as everything is produced automatically. For submitting a website, the most popular search engines are selected for use. For example, a Greek website should also be submitted to Greek search engines along with international ones. The website's content should also include the appropriate keywords and relate to all potential user requests, in order to ensure good search results.

Improving a company's ranking in search engine lists

By adding, removing or changing sentences, a web designer can change the way a website is listed within search engine results. For this reason, when designing or re-designing a website, they should consider all search requests that users make when trying to locate the website. Later, designers can create a website that meets all these requests.

Supersites & virtual exhibition centers

Supersites specialize in a specific topic or a specific market (e.g. markets, agricultural affairs, etc.). Therefore, if a company operates within a specific market that is represented through one or more supersites, subscribing to these sites would be a good way of targeting customers. An example from the World Wide Web is www.agriculture.com. Virtual exhibition centers operate exactly like real exhibition centers, with the only difference that visitors can save on relocation costs, without however being able to touch the exhibits.

Promotion using conventional means Another means of promoting a website is press and television; these means communicate the existence and characteristics of a website to those who are difficult to approach through the Internet. Similar level of website promotion can also be offered by the systematic use of URL indications on product labels, promotional material, gifts, etc.

Electronic coupons. They are used to increase traffic and promote sales in electronic retail sites.

Reward programmes. Just like in traditional markets, reward programmes provide motivation to consumers for companies to maintain their customer base. The members of a reward

programme usually win points for every purchase or visit on a website and these points can later be exchanged for free products and services.

Product samples. The Internet can also be used to deliver free samples of digitalized products (e.g. software, text, music), which can be downloaded to the user's personal computer. It is important to focus on people with high likelihood of becoming future customers or people whose opinion affects other people's decision of purchase.

Competitions and lotteries. These promotional methods are often used on the Internet, mainly for creating website traffic.

Cooperation with other websites. A simple way of creating traffic in a website is the exchange of recommendations. Each of the cooperating websites creates a link for the other website. This type of cooperation can also be expanded in advertising with banner exchange. Another form of cooperation is special offers for the visitors of the cooperating website.

Thematic websites

Thematic websites can be characterized as electronic catalogues on a specific topic which they examine in depth. As they probably provide the highest level of targeting, they constitute one of the ideal means for promotion.

Online events, promotion and attraction

In our days, this type of promotion consists of regular events taking place in thousands of websites. Competitions, tests, coupons and special offers, designed to attract the attention of visitors, are all incorporated in electronic commerce at the same level or even more than in offline commerce.

Promotion through the Internet is similar to offline promotion. Some of the main points, according to Chase (1998) and O'Keefe (1997) are:

- The target group must be clearly defined.
- The target group must consist of online visitors.
- Website traffic must be measured and a powerful server must be prepared to handle it.

Supposing that promotion is successful, what will the result be? This estimate is necessary for the budget and the promotional strategy.

- Always consider company cooperation. Many promotions succeed because they bring together two or more powerful companies.

6. Push Technology and Intelligent Agents

On a technological level, the content personalization is achieved as follows: at first, the company collects information on the user's electronic behaviour either by interacting with the user or by recording user activities, inserting a small programme known as a cookie to the user's browser in order to detect all activities. Then, using a push technology known as webcasting, the company adjusts the type of information, the way it is displayed and its general electronic design to the user's preferences (Panigirakis & Siomkos, 2005).

6.1 Push Technology

Push technology allows the direct delivery of information to a person's personal computer. The typical form of the Internet includes the pull form. Users look up the information on a search engine or another system and the system retrieves and delivers the information to them. On the other hand, push technology allows for direct delivery of content to the end user. This can be done through a scrolling bar, a screen saver or a window that has been incorporated in the desktop. The term "push" originated from "server push", a term used to describe the flow of a website's content from a web server to a web browser.

The benefit gained from push technology for subscribers is that instead of spending hours searching on the web, they can automatically receive information of interest on their desktop through web and Internet technology. A computer performs a targeted delivery (as opposed to massive delivery) of information directly to users. The push principle has become an interesting principle in today's markets. While in the past, massive products were manufactured, today they are massively adapted to meet consumer needs. The same stands also for delivery. Massive delivery corresponds to massive production and targeted delivery corresponds to massive adaptation. The difference is that the information that is more relevant to users is directly delivered to them.

In order for the information to be directly delivered to the user's personal computer, the user needs to follow three steps: create a pre-determined profile, select the appropriate content and load his/her personal selections. The settings of a user's profile are set when the user subscribes to a push delivery service. Then the customer's software is loaded on the computer and can be adapted to retrieve only specific channels or categories, such as world news, sports, financial information, etc. In this step, the delivery of information is adjusted to user preferences. Users can then define how often they wish the information to be delivered to their computer. After submitting a profile to the push delivery service and saving it to a database, there are other software applications that monitor websites and other sources, in order to retrieve user-defined information. As soon as this information is found, the push application loads it to the customer by sending email notifications, playing a sound, showing a desktop icon, sending a full article or a website, showing titles in the screensaver, etc.

This process has been designed to offer easiness and efficiency. This type of service is often provided free of charge to PC users. Advertisers can offer the accounts to organizations that provide push technologies. There are four types of push technology: The first, manual delivery provides web users with the necessary tools to load pages that will later be viewed. The second type, aggregated delivery, operates like television networks and online commercial services in the sense that it provides users with a large variety of content and advertising, all-packed in a single offer. The third and popular push technology, adaptable delivery, allows Internet users to control which information to accept from participants, promoters and publishers, by selecting from a menu in the administrator's web page. In the last type, direct delivery, the interface itself pulls information from the Internet.

Depending on the size of the group to which a message is communicated, technologies (push, web casting) are divided in three general categories:

- Broadcast communication: This is a form of communication that resembles the media model, such as TV and radio, with the difference that active participation (i.e. interaction) of all users is possible (Douligeris et al, 2004).
- Narrowcast communication: This forms section of the previous category; a company communicates and offers the possibility of interacting only with those groups of electronic consumers that are of interest. Therefore, the company divides its Internet communication strategy by performing market segmentation. A typical example is the websites of Microsoft and Cisco, in which links change depending on the user or electronic consumer.
- PointCast communication: This, in reality, is a further specialized version of the previous category, in which personalized interaction is strategically attempted. It is characterized by a large degree of communication complexity and its use is therefore limited to e-procurement applications. Yet, focused Internet communication is partially achieved also in other corporate aspects with the use of technologies such as cookies.

Push on the Internet

A natural development of the initial form of push technology is that many organizations understand the current need to distribute adapted news to people who need this type of information at regular periods. Therefore, companies use push technology to determine their own channels and perform focused deliveries of important internal information to their employees (via intranets) and/ or their procurement associates (via extranets). Push provides companies with an easy and cost-beneficial way to deliver all sorts of content, from educational material to cafeteria menus. Direct promoters also use push technology in order to deliver promotional material on target customer desktops.

The delivered material can also include information which is packaged by external suppliers and is then spread internally. Alternatively, they can be the result of following specific information within corporate databases.

A major disadvantage of push technology is bandwidth requirements (capacity). As information is constantly loaded, great tension is produced on system resources. Many specialists predict that technology will never take off. Others foresee a tendency towards specialized applications.

6.2 Intelligent Agents

Companies collect information for consumers. The purpose of collecting this information is to create a customer profile. If a company knows the profile, it can adapt its advertisements or ask customers whether they wish to receive information on products. This type of agent is referred to as a product agent. A product agent notifies users of new product versions based on former choices or limitations defined by buyers. The aim is to demonstrate the capabilities and additional

options made available from the creation of lists, which can be accessed through the web in a form that allows potential customers to locate products according to their description; these lists would also contain operating manuals and information on structure. This arrangement allows users to easily focus on the fields they are interested in and select a more personalized view. By connecting several product information and characteristics through the distribution chain, buyers can view "virtual" catalogues in real time, as soon as the products become available. Consumers are in great need of interactive, personalized, smart catalogues in order to improve their buying experience. Future developments in personalized interactive catalogues will make it easier to locate products and their characteristics within the value added chain.

7. Internet Advertising Effectiveness

7.1 The Effectiveness of Internet Advertising

Measuring the effectiveness of advertising, i.e. the ability to transmit a message to the target group, also affects the distribution of advertising expenses among alternative means and tools, and determines the cost of advertising since the price of each tool is proportional to its effectiveness.

In modern marketing there is a series of factors that affect brand awareness, message association, intention of purchase and the purchase itself. The traditional typical elements of an advertising campaign are width (how many people are exposed to advertising messages), and frequency (how many times they are exposed to advertising messages). However, neither width nor frequency refers to the quality of this advertising exposure. The element of time is absent from this fundamental "equation".

In the context of measuring advertising effectiveness, even in the traditional means of promotion it is commonly accepted that such measurement is performed in approximation and it is therefore not accurate. The reason is that, even if the message reaches the target recipient, it is not certain that the latter will pay attention to it. In order for the message to be better perceived, let's imagine two advertising campaigns, each one of which has been shown to 1 million consumers and has an average frequency of 3.1 times. Until this point, both campaigns have exactly the same rate of success. What we are not aware of is the element of time, i.e. the index known as Brand Exposure Duration (BXD) which relates to the exact duration for which consumers are exposed to a given advertisement. A campaign can have a BXD of 18 seconds while another one can have only 2, producing significant differences in their effectiveness. Until today, measuring the BXD of online advertising was not an easy task, as opposed to its easier estimation for television and radio spots.

Internet visitors retain the control of their exposure to advertising messages by changing the page or simply closing their browser. This new element is of significant importance, as it literally eliminates what was so far regarded as a disadvantage of online advertising compared with radio and television. The ability to measure the BXD has a very positive impact on advertised companies that try to spread their corporate identity and secure a powerful brand. Advertisers and advertised parties detect websites and specific positions within these sites that meet the conditions of width, frequency and BXD in the most cost-beneficial way. Advertisers will also be able to increase or decrease, depending on the BXD, and according to the position where the banners are placed every time and the number of impressions.

Therefore, each impression obtains a measurable advertising value, regardless of whether it results in a page hit or a direct purchase. Respectively, creative designers will be aware of exactly how much time they have to communicate the message. If viewers are to be exposed to a banner for 1-2 seconds, creative designers will have to pass the message almost in a flash. For instance, there is no point in using the question trick if users will not still be connected to the page to view the answer, i.e. the advertised product or service.

According to data from the Internet Advertising Bureau (1999), there are three modes of billing in online advertising. The first is known as cost-per-thousand (CPM) and is often used, especially in the mass media. Alternatively, the cost-per-banner/ ad click may be used. Finally, a relatively new mode of billing for online advertising is that of pay-for-performance, in which every advertisement that leads to a transaction is paid for a percentage of the total amount of sales.

CPM-Based Exposure Models

The company should consider the total advertising efficiency, i.e. the communicative ability of a fixed expense, which depends on the effectiveness and its cost.

A typical example of billing and measuring effectiveness of the Internet as a means of communication is the CPM index, i.e. the cost of communicating a message to 1,000 people. The variable depends not only on the cost of purchasing this tool, but also on the number of people who will receive the advertising message. Until now, this model was the standard template when billing online advertisements. While CPM charges on the web vary significantly, they are, in average, higher than in other means due to the fact that there are few websites with high traffic. Since advertisers pay based on a pre-agreed number of "guaranteed" page views, it is very important that hits are counted accurately within the advertising model business scheme. Large price variations indicate that the Web can function both as a massive tool and as a direct marketing tool, and that the environment, the people, technology and the estimated results, all play their part in determining prices. Certain well-known websites that engage in multiple field categories (such as news, entertainment and sports) will dominate, and these websites will charge more for advertising space.

Interaction

This is a new means of measurement that was proposed by Novak & Hoffman (1997). While a click-based payment guarantees exposure, it does not guarantee that the viewers liked the advertisement or that they spent time examining it. This notion suggests that billing is based on the quantity of interactions between the visitor and the advertisement. This measure of interaction can be based on the duration of time in which visitors dedicate to the advertisement, the number of accessed advertisement pages or the number of repeated visits. Even though it has been proven that the level of interaction is proportional to a website's popularity, the interaction itself does not increase advertising effectiveness, as it can interrupt the persuasion process, especially in targeted advertising (Ghose & Dou 1998, Benjamin-Avery et al. 1998).

Dreze & Zufryden (1997) developed and used a methodological means to evaluate web advertising tools. According to this, the elements of effectiveness that are important are the number of individual hits and re-visits of one user. Leckenby & Hong (1998) examined Internet advertising based on six width and frequency models used in conventional advertising means, such as television, and reached the conclusion that the Internet is equally effective.

Moreover, user exposure to messages is not equivalent to content reminders. On the Internet, the whole process is hindered by the large amount of alternative means of information that exist. For this reason, advertisements are categorized based on common target groups and are concentrated in websites characterized by high popularity rates for this target group. Still, the broad number of options available for recording visit information on a website provides useful and usually substantial data, a fact that has led to the development of the following tools for measuring advertising effectiveness (Haar 1999):

Real Market

Promoters are interested for results and the final result is sales. It is obvious that a number of 1,000 visitors per website means something but, still, a website with a number of only 5 visitors can mean a lot more if these visitors carry out a purchase. It is also very important to know the amount of money spent by customers.

In a results-based approach, web advertising starts by determining what the promoters want to do with an advertisement. Examples of typical results include influential attributes, consumer motivation in order for them to provide personal information, consumer guidance towards real markets.

7.2 Website Effectiveness Indices (Media effectiveness)

The variables of effectiveness mostly originate from the server log file of the website that hosts the advertisement. When a user visits a website, a communication begins between the user's web browser and the server in which the site is stored (Georgopoulos et al, 2001). The data of this communication are recorded in a log file.

The main raw information is: a) IP address, i.e. the number received by the visitor's computer when the connection was established, b) the duration of the visitor's stay in the portal, and c) the files requested during the session. Data are collected using specialized software and are later analyzed and presented either by the host company or by third parties (web auditing agencies, log analysis services).

The main variables of effectiveness that are presented in this way are the following:

- Pages viewed by the user: This method measures the number of different websites visited by a user. The disadvantages of this method include the lack of information on the amount and profile

of users that visit a page. It is not easy to estimate the number of visitors only by knowing this index, as a lot of page views from a single user can be included in the numbers.

- Click-through: This method is used to count the number of times that an online advertisement is clicked through. It is a primary criterion for advertisement billing, as it associates the advertisement directly to the desired result, i.e. consumer motivation. Advertising space in websites with high variable numbers costs more. Its disadvantages include the lack of information on users or on any possible browser exits while loading. Finally, a relatively small percentage of those who see an advertising banner actually click on it.

- Unique visitors: It allows for recording the unique URL addresses of the users who visited the advertisement. Unfortunately, neither this tool is reliable for purely technical reasons that relate to random, and often common, addressing at separate times and of different users.

- Visit: This index considers the possibility of consecutive access requests by the same user and regards a series of hits by the same person and within a period (time-out period) as a single visit. This time-out period is usually 30 minutes.

- Reach: This method counts the visits of a sample group of users. Therefore, if 40% of a sample group visits a site, then access in this site reaches 40% of the target group. This reasoning requires supplementary research in order for the information on sample-group user behaviour to be reduced to the website user electronic profile.

- Page hit count: It counts the *total* number of hits for a website. The main problems of this index are that it does not offer any information on users, while there may be a lot of hits on the same page by the same user, and that the same page has a lot of files (e.g. images) that produce additional hits.

- Number of views (impressions): This index counts how many times a banner was viewed in its hosting site.

Review and Comparative analysis

The measuring of the click-through rate (=clicks/ impressions) has indicated a misleading tendency of decrease. It is not the users who produce fewer hits. Using simple mathematics, it is clear that there are currently many more advertisements to choose from. In light of the above studies, every advertiser should wonder whether the click-through rate forms the most appropriate method for measuring online advertisement effectiveness. As mentioned above, the number of clicks is only a small indicator - usually a misleading one - on the effectiveness of the promotion of products and services via the Internet. The use of third parties that count website advertising traffic can improve advertising campaigns by setting criteria, such as the exact position of a banner on a page and the effectiveness of the message itself.

To sum up, companies that restrict their success based on the number of hits on their advertisements have an uncertain future. Yet, for those companies that focus on long-term strengthening of their brand name and on increasing their amount of sales, online advertising can prove to be an extremely powerful tool of modern marketing.

7.3 The Effect of Online Advertising

Online advertising increases physical (offline) sales

A challenge for all online advertisers is the assessment of the effect of online marketing in offline transactions, i.e. sales in traditional commerce. As "physical" companies increase their investments on online advertising more and more, the effect on their amount of sales becomes more and more apparent.

The effect of online advertising on brand names

Several independent studies have shown that the exposure on banners can "impress" a brand name on the mind of consumers to a large extent.

Maintaining and expanding a customer base

According to a prevailing notion, web marketing constitutes a tool for obtaining new customers (a means that promotes the advertised company and increases its transaction traffic). It is rarely referred to as a means of maintaining one's customer base. As mentioned, further proof is provided that efficient creativeness and targeting are elements of significant importance. Technologies used by advertisers today allow for the "charting" of customers, and even for distinguishing "first-time" customers from a company's loyal returning customers. As technology evolves, advertised parties will have access to more and more tools for establishing a personalised relationship with customers and improving this relationship.

Advertising banners increase the association of a slogan with a company

Advertised parties very often seek to associate their trademark or a specific product or service with a slogan, in order to strengthen the product's perception by consumers. The "Message Association" index refers to the percentage of people that have associated in their mind a specific message directly with the advertised company (e.g. associating the slogan "Just do it" with Nike).

7.4 Online Catalogues

An important factor in Electronic Commerce is the way with which products and services are presented to users. This is often done using online catalogues.

The Development of Online Catalogues

Printed paper was for many years the only means used to create advertising catalogues. Recently, electronic catalogues have become popular in the form of CD-ROM or on the Web. For traders, the purpose of **online catalogues** is to advertise and promote their products or services, while the purpose of customer catalogues is to provide an information resource on products and services. **Electronic catalogues** can be easily searched through agent software. Moreover, the task of comparing catalogue products can now be done very efficiently.

Electronic catalogues consist of a product database, catalogue and search options and a presentation feature. In electronic trade centers, a web browser application along with Java (and sometimes virtual reality features) plays the role of presenting static and dynamic elements.

The majority of the initial online catalogues were online copies of printed catalogue text and images. However, online catalogues were developed to be more dynamic, adapted and integrated with sales and purchasing procedures. As online catalogues become more complete by incorporating ordering and payment features, the tools to create online catalogues are integrated with commercial websites.

Electronic catalogues can be divided using three main criteria:

- The dynamics of the presentation of information. There are two categories:

Static catalogues: The catalogue is presented with text descriptions and static images.

Dynamic catalogues: The catalogue is presented with animation, and even sound, in order to enrich its static content.

- The level of adaptation. There are two extreme categories:

Standard catalogues: Traders provide the same standard catalogue to all customers.

Adapted catalogues: The distribution and appearance of the catalogue varies depending customer characteristics.

- The rate of catalogue integration with the following business procedures:

Receiving and serving orders, Electronic payment systems, Software and Internet workflow systems, Stock and accounting systems, Supplier or customer extranets and Printed catalogues

Comparing Online with Offline Catalogues

Even though online catalogues include significant advantages, such as easy information, the ability to incorporate purchasing procedures and cover a broad number of products with powerful search capabilities, there are still certain disadvantages and limitations in their use. The main one is the fact that customers need a computer and Internet access in order to view them. However, since computers and Internet access are easily spread, we may expect that a large part of printed catalogues will be replaced or at least supplemented by electronic catalogues. On the other hand, given the fact that printed newspapers and magazines have not disappeared following the launching of their online versions, one may say that printed catalogues will not disappear despite the popularity of their online counterparts. There seems to be enough room for both means.

Advertising in Online Catalogues vs. Electronic Trade Centers

Certain catalogues in indicative websites provide text and images without incorporating any ordering features. Indicative websites have one to many electronic catalogues. However, there is no reason for a catalogue to not contain any ordering options, at least by providing an email address. Thus, dedicated advertising websites appear to be a transitional phase of electronic trade centers. Yet, advertisements promoting a company's image can be associated only with electronic trade centers, as such advertisements do not correspond to a specific product.

Adapted Catalogues

An adapted catalogue is a catalogue that is prepared for a particular company, usually a client of the catalogue's owner. In many cases, it can also be adapted for individual buyers. There are two approaches on catalogue adaptation. The first approach is to allow customers to isolate their elements of interest out of a catalogue. Customers do not need to deal with products they are not interested in.

This type of personalization provides customers with an added value experience and strengthens their willingness to visit a website again, creating faith in the company's products. Despite strong competition, personalization offers a valuable means to match customers with products and information of interest in the fastest and easiest possible way.

8. Conclusions

Electronic advertising wins a continuously growing market share out of the overall turnover of the advertising market, a fact that can be justified by the multiple benefits and advantages described above. It becomes more and more effective, in both electronic and physical markets. It is certain that a large percentage of total sales, even in traditional markets, own their success to electronic advertising. Despite difficulties in accurately assessing the effectiveness of electronic advertising, it is certain that it will be measured in better ways with time; the methods used to measure it have been presented above. When it is possible to measure the effectiveness of electronic advertising, it is without doubt that it is also possible to bill it. Theoreticians who study advertising should work towards this direction.

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