

Emerging Trends in Online Advertising

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Resumen

En los 90 los consumidores asociaban la publicidad on line con banners, pop-up y publicidad a través de e-mail. Hoy en día, la publicidad on line está surgiendo como un componente muy atractivo de marketing y esta experimentado unos niveles de crecimiento importantes en EEUU, Europa Occidental y parte de Asia. En este trabajo examinamos herramientas como el marketing de búsqueda, media enriquecida, publicidad contextual, marketing social, estudio de comportamientos, y publicidad a través de video. También discutimos nuevas tendencias y nuevos formatos de publicidad on line, incluyendo juegos on line ,texto on line, media social, blogs, y formatos móviles.

Palabras clave:

Publicidad a través de la web - publicidad on line - publicidad contextual - estudio de comportamientos - blogs - media social - instrumentos móviles - publicidad por video.

Abstract:

In the 1990's, consumers associated online advertising with banner, pop-up, and e-mail advertisements. Today, online advertising is emerging as a compelling marketing component with rapid growth in the United States, Western Europe, and parts of Asia. We examine the importance of search marketing, rich media, contextual advertising, behavioral targeting, social marketing, and video advertising. We also discuss trends and new formats in online advertising, including online games, in-line text, social media, blogs, and mobile formats.

Key Words:

Web advertising, online advertising, rich media, contextual advertising, behavioral targeting, blogs, social media, mobile devices, video advertising.

1. The Emergence of Online Advertising as a Market Force

Online advertising, once synonymous with banner, pop-up, and e-mail advertising, has developed into a multi-faceted advertising channel with enormous growth prospects. Today, online advertising includes not only evolved banner, pop-up, and e-mail ads but also search marketing, pay-per-click, pay-per-action, rich media, contextual advertising, geotargeting, behavioral targeting, social marketing, video advertising, and user-generated online video. Advertising also is appearing in online games, in-line text, social media, blogs, and mobile formats.

In 2006, all forms of online advertising expenditures reached \$16 billion in the United States and \$6 billion in Europe. Online advertising growth in the United States is forecast at 18-19 % and European growth is estimated at 25% per year (Stone, 2007).

The healthy growth outlook for online advertising is from the increasing number of online users worldwide. Today, over 1 billion people, 16.6% of the world's population, are online (Internet World Stats, 2007). In the U.S., about 210 million people, 70% of the population, are online. There are 136.1 million people online in the five largest European Union (EU) countries – France, Germany, Italy, Spain, and the United Kingdom (Phillips, 2007).

The percentage of population online varies widely by country – 74% online in Sweden; 70% in the United States and Australia; 67% in Japan; over 60% in South Korea, the UK, Germany, and Canada; over 50% in the EU in general; over 40% in Spain and Chile; over 30% in Argentina; 16% in Russia; and 10% in China (Internet World Stat, 2007).

The economic impact of online advertising is documented in a report by Patti Freeman Evans, a senior analyst in the business-to-consumer market at Jupiter Research. She forecasts U.S. online sales will be 116 billion in 2007. Offline sales influenced by online research should reach \$1 trillion by 2011 (Dawley, 2007). Advertisers will spend \$7.5 billion to reach all Western Europeans in 2007 (Phillips, 2007).

Based on a decade of research, what do we know about online advertising? How did Internet advertising evolve into an advertising and economic generator? What are some of the different types of Internet ads? What are the trends in online advertising? Are there concerns about using this medium?

2. The Evolution of E-mail and the Commercial Web

The Internet started out as an academic and government research network that linked government laboratories, universities, and some government contractors. E-mail was first developed in 1972 by Ray

Tomlinson who worked at BBN. By the mid 1980's, academic researchers frequently exchanged e-mail (Zakon, 2006). In 1985, Dan Lynch invited vendors from different companies to learn about TCP/IP, a suite of Internet protocols that connect hosts to the Internet (Leiner, 2003).

“In September of 1988 the first Interop trade show was born. Fifty companies made the cut. 5,000 engineers from potential customer organizations came to see if it all did work as was promised (Leiner 2003).” In 1988, Vincent Cerf permitted MCIMail to link into the National Science Foundation Network. CompuServe also began service in 1988.

In 1991, the restriction on the commercial use of the Internet was lifted by the United States government, and the World Wide Web using HTML 1.0 and hypertext was released by Tim Berners-Lee. This hyperlink approach made surfing the web appealing to millions of people. In March 1994, Marc Andreessen released a web browser called Mosaic (later Netscape) that could read text and display images in the same browser.

“On April 12, 1994, Laurence Canter and Martha Siegel, two immigration lawyers from Arizona, flooded the Internet with a mass mailing promoting their law firm's advisory services...The 'Green Card Lottery' notice they sent out reached thousands of people using Usenet newsgroups and, on one level, qualified as an unqualified success. But it also triggered a fire storm of criticism from purists outraged at a breach of the informal rules prohibiting the transmission of unsolicited junk mail and advertising over the Internet (Feist, 2022).”

The world of e-mail would be divided by permission based or opt-in e-mail and the hated spam. E-mail would become a major commercial vehicle. “An October 2006 report by technology market research firm The Radicati Group estimates there are '1.1 billion e-mail users and 1.4 billion active e-mail accounts worldwide.' The same report suggests some 183 billion e-mails were sent each day in 2006 and wireless e-mail users will grow 'from 14 million in 2006, to 228 million in 2010 (Brownlow, 2006).”

3. Banner Advertising, Click-Through Rates (CTR), and Cost-Per-Thousand (CPM)

“The first simple static banner appeared on HotWired in 1994 for AT&T. The advertisement asked, 'Have you ever clicked your mouse right here?' and an arrow pointed to a button that stated 'You will.' When people clicked on the button, they were taken to the AT&T site (Hollis, 2005 p.255).” Other banner ads for Zima, Club Med, and a large number of technology companies would appear measuring 60 pixels by 468 pixels (Bruner, 2005).

In the late 1990's banner ads were sold on a cost-per-thousand (CPM) basis. Web sites that had very desirable audiences could charge more for 1000 impressions of an ad than web sites that had less affluent, or less consumer-focused audiences. The CPM standard, which is used to purchase traditional

print media, was a familiar media buying model applied to a new medium. The Interactive Advertising Bureau (IAB) established standards for other advertising formats, including rectangles, pop-ups, half-banners, and buttons.

Banner ads often were served over networks such as the DART system by DoubleClick. At first, the measurement of advertisement effectiveness was click-through rates (CTR) or how many users clicked on an ad. Frequently, ads were placed based on the keywords used in the meta tags of web pages.

Between 1995 and 1998, many large companies established web sites and increased their online marketing. By the late 1990's, companies such as Amazon, CNET, CDNow, Egghead, AOL, and Microsoft were major online advertisers.

Pop-up advertising, where an ad is served in a new window, gained in popularity in the late 1990's. "Pop-up ads generate a click-through 13 times that of the standard 468 × 60 pixels bannerThe analysis was done over a one-week period with 15 million Internet users served 168 million ad impressions on the Advertising.com network of sites (Morrissey, 2003)."

By 1998, over \$1 billion were spent in Internet advertising. The major format continued to be the banner ad. The IAB notes: "Banner advertisements continue to be reported as the predominant type of advertising, accounting for 53%, with sponsorships (30%), interstitials (6%) and other (11%) rounding out the category. Reflecting the growth of e-commerce, hybrid deals accounted for 52% of revenue transactions with CPMs or impression-based deals at 43% and performance-based deals at 5% of revenues (IAB, 1999)."

4. Search Marketing, Pay-Per-Click (PPC), and Rich Media

In 1998, Overture (Goto.com) offered paid or sponsored searches. Sponsored searches provided the money for the growth of web portals such as MSN and Yahoo. In 2003, Yahoo purchased Overture for 1.7 billion. Sponsored search on Yahoo is now described at <http://searchmarketing.yahoo.com/>.

Search marketing is based on advertisers who place bids for keywords. For example, a car company might pay for keywords such as "buying cars," "car reviews," or "automotive awards." In search marketing, the advertiser pays when a user clicks on an ad. This is called pay-per-click (PPC). Keyword prices vary and may fluctuate at different times of the year. About 50% of online buyers use related search terms before making a purchase (DoubleClick, 2005). Search marketing created the industry of Search Engine Optimization (SEO).

Rich media transformed online advertising from a direct response model to a brand marketing model. Rich media "...allow advertisers to take traditional media assets like video, audio, animation, and photos, and combine them into a multimedia branding experience that streams from an ad server to

the client machine (Koegel, 2003).” Rich media technologies include Flash, Unicast, Eyeblaster, Eye-Wonder, and PointRoll. At first, consumers had to download a plug-in to play ads using rich media technology; today, most ads play on operating systems that have Flash and Shockwave software pre-installed.

Online advertising theorists, including Briggs in 1998 and Drèze and Hussherr in 2003, stated online advertising builds brands. Because rich media make ads more interactive, the audience becomes more engaged with the brands. Studies by the IAB, DoubleClick, and others revealed Flash and other rich media produce a lift in brand metrics. Big brands, including Toyota, Hewlett Packard, American Express, and Sony began to showcase ads using rich media in 2002 and 2003 (Koegel, 2003).

Boom to Dot.com Bust

On March 10, 2002, the NASDAQ reached a high of 5048.62. Online advertising revenues in the United States spurred by NASDAQ and the high-flying tech sector helped online advertising to reach 8.2 billion in 2000 (Bruner, 2005). The Dot.com bust, during which the tech sector fell, firms closed, and layoffs increased, had a short-term, two-year impact on Internet advertising. Internet advertising fell in 2001 to \$7.1 billion and to \$6 billion in 2002 (Bruner, 2005). By 2003, online advertising began to recover and rose to \$7.3 billion, followed by an upsurge to \$9.6 billion in 2004 (Bruner, 2005). Despite the brief downturn in Internet advertising dollars, the number of people online increased annually.

Google, Contextual Advertising, and Geotargeting

Google opened its web site in September 1998. With a new approach to web search-based link analysis, Google grew quickly using the standard keyword advertising approach. Because the consumer audience flocked to Google, advertisers soon followed.

Google started Google AdWords in 2000 to appeal to the small business audience. By filling out a form and supplying a credit card, small firms could advertise on Google in competition with major brands. However, problems with high cost-per-impressions or CPM rates led to an auction-based model by the spring of 2002 using cost-per-click (CPC).

In 2003, Google changed online advertising with AdSense – contextual targeted ads based on the technology of its new acquisition – Applied Semantics. Contextual advertising uses the context of an article or story a user is reading and matches it with associated product or service advertising. Someone reading articles on a new baby might receive ads related to baby clothing, baby products, or books on babies. Yahoo, Kanoodle, and ValueClick also offer contextual advertising.

Google continues to innovate with Froogle, a database of listings; Google maps for geotargeting; Google Base for lists; and YouTube for enhanced video. All of these Google additions offer many new online advertising opportunities.

Tacoda and Behavioral Targeting (BT)

Tacoda explains behavioral targeting as the ability to reach desired segments outside of contextually relevant areas. “*Behavioral targeting*” is a technology that recognizes when web-site visitors are seeking a particular product or service and then serves an ad relevant to their search – at a later date – on another, unrelated page (Oser, 2004 p.4).” For example, a surfer who looks at real estate listings on a newspaper site on a Monday might be served an ad from a real estate agent on Thursday night when the surfer views the Sports section (Oser, 2004).

Tacoda has an audience network of 4,500 sites which reach 120 million monthly users on sites such as NYTimes.com, MSNBC.com, and USAToday.com. Tacoda claims the surprise effect generated by behavioral targeting results in a brand lift of 17%. Tacoda uses the larger online advertising pixel sizes such as the 728x90 Leaderboard, the 160x600 Wide Skyscraper, and the 120x600 Skyscraper favored by recent research. The audience is segmented into groups, including the Auto Enthusiast, the Business Decision Maker, the Business IT Influencer, the Career Watcher, the Active Gamer, and many other colorful segments. Behavioral advertisements can employ rich media. Tacoda pricing is based on a cost-per-action (CPA) model.

Other companies that use behavioral targeting include Microsoft, Revenue Science, and Yahoo. The belief is repeated behaviors are a better way to predict consumer information-seeking and buying behavior. These companies use other properties, such as e-mail sign-ups or other Internet services on news or personalization, to access basic demographic data and then match Internet surfing behavior to behaviorally target user ads.

YouTube, Video Advertising, and User-Generated Online Video (UGOV)

YouTube became one of the world’s most popular web sites in 2006. As broadband adoption grew, more people were able to download video. In 2006 at the age of 18 months, YouTube was acquired by Google for \$1.65 billion.

In January 2007, YouTube claimed to show 70 million videos each day, including those produced by Coca-Cola, Dove, and the National Hockey League. User-generated videos from Alka-Seltzer, Chevrolet, Doritos, and the National Football League will air on television during the premiere advertising showcase in the U.S. – the Super Bowl. Advertisers expect Super Bowl ads to spur viral advertising, as people send e-mails containing the ads to friends and family.

The online video ad market will rise to \$640 million in 2007 and to \$1.5 billion in 2009 (EMarketer, 2005). Screen Digest calculated 47% of online video was user-generated (UGOV) in 2006 and it will increase to 55% by 2010 (EMarketer, 2007). Video ads may be in-banner or in-stream. In-banner ads start when a consumer clicks or rolls-over a banner ad with a mouse. In-stream ads usually are shown

pre-roll or before other video content that customers want to play. Video ads also can be shown after other content (post-roll) or in the middle of other content (mid-roll). Most video ads are 15 seconds in length.

A study for Pointroll cites the comparatively low cost of online video: “A pre-roll streaming video ad unit averages about \$25-\$30. An embedded video ad unit is going for approximately \$8-\$25. Internet music radio sites with gateway video ads are priced at about \$20 (Palumbo, 2006 p.16).” Yahoo, MySpace and MSN all show videos. The audience for online videos crosses generational lines. “Web surfers ages 35 to 64 make up anywhere from 48% to 65% of YouTube’s audience (Hau, 2006).”

Overall Considerations

Online advertising will grow to over 16 billion in 2006 (IAB, 2006). The breakdown of the types of online advertising are: search engine (40%); display-related ads (21%) classifieds (20%); referrals (7%), rich media (6%), sponsorship (4%) and e-mail (2%) (IAB, 2006, p.8).

Outsell, Inc. estimates search engine ad spending will leap 39% in 2007, which represents: “The greatest increase of any online media method (eMarketer, 2007).” Cost-per-action ad share will grow 8% percent, and online sponsorships will rise 12% (eMarketer, 2007).

One caveat in online advertising concerns pay-per-click ads. PPC ads will fall 1% in 2007 over growing concerns about click fraud (eMarketer, 2007). In 2006, the percentage of click fraud rose and averaged 14% for the year. However, the fourth quarter percentage was 19.2%, showing an upward trend (eMarketer, 2007).

Online Advertising Issues and Trends

No portrait of the emergence of online advertising is complete without noting the issues raised by its increased use. Early and still prevalent concerns are consumer frustration with spam and intrusive pop-up ads. However, there are abundant tactics, including cyberbuzz, cyberbashing, and even cyberstalking, that can threaten a company’s reputation and personnel.

Corporate Reputation

In classic print and broadcast campaigns, advertisers are reasonably assured their messages are controlled and will be delivered to the target audience as created. In an increasingly interactive online world, messages can be distorted, rumors circulate in seconds, and false information can be hard, if not impossible, to counteract.

People with claims against companies, disgruntled employees, and dissatisfied customers have a First Amendment Freedom of Speech right and a web forum to state their beliefs. Anti-corporate blogs

are commonplace. Perhaps no company has received more cyber attention than Wal-Mart Stores, Inc. Two anti-Wal-Mart blogs in the spotlight are www.walmartwatch.com and www.againstthewal.net. The first of these blogs is an advocacy site that takes issue with Wal-Mart's values and practices; the second contains the views of Arkansas residents who do not approve of Wal-Mart's presence in their backyard.

Other web issues for companies include unauthorized promotion or use of a company's products and services, copyright and trademark infringement, and phishing – imitating a company's legitimate site for fraudulent purposes. Many large companies, including eBay, PayPal, and Bank of America, are fighting widespread and troublesome imitative sites.

To protect their corporate and brand image, trademarks and copyrights, and credibility with customers, companies are monitoring the web and using legal recourse under defamation laws and copyright and trademark judicial decisions to protect their reputation and bottom line. A fast-growing web monitoring industry exists to protect companies.

Monitoring companies include established public relations service companies, such as Bacon's (MediaSource Monitoring) and PR Newswire (eWatch), as well as monitoring companies founded in the 1990's or later. These include CyberAlert, Cyveillance, and Web Clipping, a Division of All Research, Inc.

Monitoring companies may offer print, broadcast, and Internet monitoring and note any mention of their clients in these media. Internet monitoring extends beyond web pages to include web-generated publications and video.

E-Mail Advertising

The positive and negative sides of e-mail advertising continue to evolve. "The average return on every dollar spent on e-mail is \$57.25. The channel seems to be gaining traction on several fronts, and JupiterResearch expects the marketing spend on e-mail to exceed \$1.1 billion by 2010 (Baker, 2006)." On the negative side, spam continues to proliferate worldwide. "Unsolicited junk mail now accounts for more than 9 out of every 10 e-mail messages sent over the Internet. Much of that flood is made up of a nettlesome new breed of junk e-mail called image spam, in which the words of the advertisement are part of a picture, often fooling traditional spam detectors that look for telltale phrases (Stone, 2006)."

Pop-Up Advertising

Pop-up advertising continues despite the use of pop-up blockers by 80% of users. To overcome user-resistance, advertisers are using new formats, such as on-line games and contests. Pop-up ads most frequently appear on sports, news, community, music, financial services, and travel sites (Ryan, 2003).

In-Game Advertising

“Massive CEO Mitch Davis said he believes in-game advertising will be a billion-dollar industry by 2010. CEO of Double Fusion Jonathan Epstein predicts seven years from now the in-game advertising will be worth between 5 and 10 billion (FierceGameBiz, 2006).”

In-Line Advertising

In-line advertising is the latest form of online advertising to generate controversy. In line advertising is described by Vibrant Media: “IntelliTXT in-text advertising allows words and word phrases across the Internet to become opportunities to engage. IntelliTXT is delivered in a user-driven format allowing you to engage with your audience while they are reading content that is relevant (Vibrant Media, 2007).”

Vibrant, one of the fastest growing companies in the tech sector explained the growth of in-line ads: “More than 1,200 publishers are now running Vibrant Media’s IntelliTXT campaigns in seven languages, and the company serves four billion double-underlines each month. Vibrant Media has the capability to deliver 200 million user-initiated video commercials for its advertisers, which include Eidos, Microsoft, Sony, Nike, Intel, and Warner Brothers (Vibrant Media, 2006).”

Major publishers, such as Forbes, pulled in-line ads after receiving complaints from their journalists and readers in-line ads cross the journalism/advertising divide (Kesmodel and Angwin, 2006).

Social Advertising

Advertising on social networks or on social media, such as MySpace, Facebook, Bebo, AIM pages, and Orkut, is starting to surge because Internet users enjoy creating their own pages and looking at their friends’ pages. “eMarketer estimates that worldwide social network ad spending will reach 1.1 billion in 2007, up from 445 million in 2006. By 2010, spending is expected to rise to \$2.8 billion (Oser, 2006).”

Blogs

The presence of advertising on blogs is a growing trend. Blogs are small or large websites that express opinions in user postings arranged in chronological or topical order. With over 40 million blogs on the Internet, advertisers are taking notice (BlogPulse, 2007). Companies, such as Google (AdSense), Federated Media, Reviewme, and Blogads l, advertise on blogs. Ad rates are based on readership and link popularity. Some bloggers have used an RSS feed, which is a news or topic feed, to drive customers to their blog or podcast.

One firm, PayperPost, has come under fire because companies pay bloggers to post favorable stories about their companies or brands without revealing to users the paid association.

Mobile Advertising

Mobile advertisements are placed on cell phones, smart phones and other mobile devices. The ads can be in many formats: banner, games, coupons, text messages, audio or video. Mobile advertising is expanding, accounting for \$360 million in revenue for 2006. It is estimated that it will reach \$720 million in 2007 (Burns, 2007). Some consumers view mobile advertising as too intrusive, a threat to privacy, or as a spamming threat; others regard it in stride as part of the media mix.

Worldwide Growth in Online Advertising

Based on information from PricewaterhouseCoopers (2006), online advertising revenues by 2010 will be \$25.5 Billion in the United States, \$14.9 Billion in (EMEA) Europe, the Middle East and Africa, \$9.9 Billion in the Asia Pacific, \$812 million in Canada, and \$512 million in Latin America. Much of this growth is attributed to an increase in broadband access and continued economic growth in Asia and Latin America.

Conclusion

Online advertising has grown from static banner ads, intrusive pop-up ads, and e-mails in 1994 to include a variety of rich media formats, behavioral targeting, and pricing models in 2007. Online advertising has expanded with the growth of the online audience and improved technology. Advertisers indicate they plan to spend a greater portion of their media dollar on online advertising in 2007 while decreasing their print and broadcast budgets.

Negative news regarding online advertising is the growing concern about click fraud, which is turning advertisers away from pay-per-click spending. There also are concerns about preserving corporate reputation when ads are misconstrued, poorly conceived, or mocked. The same mechanism that disseminates an ad worldwide in an instant also can have an immediate global impact on a company's public image. Although many believed consumer resistance to banner ads and pop-ups heralded the end of online advertising, the reverse is true. Advertisers are using new formats and technology to make online advertising a medium of choice to reach consumers worldwide.

References

- Baker, D. (2006). "Email Focus: Method, Not Madness", Retrieved December 27, 2006 from http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_aid=53189
- Blogpulse (2007). Blogpulse Stats. Retrieved January 30, 2007 from <http://www.blogpulse.com/>
- Briggs, R. (1998, March). "A road map for online marketing strategy", *Admap*, 27-31.
- Brownlow, M. (2006). Email and Webmail Statistics. Retrieved November 20, 2006 from <http://www.email-marketing-reports.com/metrics/email-statistics.htm>

- Bruner, R. E. (2005). The decade in online advertising,1994-2004. *DoubleClick*, Retrieved August 29, 2006 from http://www.doubleclick.com/us/knowledge_central/documents/RESEARCH/dc_decaderin_online_0504.pdf
- Burns, E. (2007). “Third Screen Bolsters Data Offering with Telephia”, *Click Z*. Retrieved January 27, 2007 from <http://www.clickz.com/showPage.html?page = 3624755>
- Dawley, H. (2007). Forecast: Online retail will hit the wall, *Media Life*. Retrieved January 30, 2007 from http://www.medialifemagazine.com/artman/publish/article_9825.asp
- Drèze, X. & Hussherr, F.X. (2003). “Internet advertising: Is anybody watching?”, *Journal of Interactive Marketing*, 17 (4), 8-23.
- DoubleClick (2005, February). Search before the Purchase. Retrieved May 2005 from http://www.doubleclick.com/us/knowledge_central/documents/RESEARCH/searchpurchase_0502.pdf
- eMarketer (2007, January, 18). User-generated online video comes into focus. Retrieved January 18, 2007 from <http://www.emarketer.com/Articles/1004477>
- eMarketer (2007, February 1). Click fraud reportedly up. Retrieved February 1, 2007 from <http://www.emarketer.com/Articles/1004530>
- Feist, S. (2002, March 26). Newsmaker: The father of modern spam speaks. Retrieved January 23, 2005 from <http://news.com.com/2008-1082-868483.html>
- FierceGameBiz (2006, December 22). In-game advertising becoming a virtual reality. Retrieved January 25, 2007 from <http://www.fiercegamebiz.com/story/in-game-advertising-becoming-a-virtual-reality/2006-12-22>
- Google (2007). Google Milestones. Retrieved January 15, 2007 from <http://www.google.com/intl/en/corporate/history.html>
- Hollis, N. (2005). Ten years of learning on how online advertising builds brands. *Journal of Advertising Research*, 45, 2, 255-268.
- IAB (1999). Internet advertising revenues exceed \$1 billion for the first time. Retrieved January 22, 2000 from http://www.iab.net/news/pr_1999_02_09.asp
- IAB (2006, September). IAB Advertising Revenue Report. Retrieved October 20, 2006 from <http://www.pwc.com/extweb/industry.nsf/docid/D27520F1CEC4CD6C85256A4E0064B89A/FILE/IAB2006.pdf>
- Internet World Stats (2007). Internet Usage Statistics - The Big Picture. Retrieved January 25, 2007 from <http://www.internetworldstats.com/stats.htm>

- Kesmodel, D. & Angwin, J. (2006, November 27). “Is it News...or is it an ad?”, *Wall Street Journal* , R8
- Koegel, K. (2003, July). “Rich media: What? Where? Why?” Retrieved November 20, 2006 from http://www.doubleclick.com/us/knowledge_central/documents/research/dc_richmedia_0307.pdf
- Leiner, B. M . &. Cerf, V. G & Clark, D. D. &. Kahn, R. E & Kleinrock, L., Lynch, D. C. et.el. (2003). A brief history of the Internet, version 3.32. Retrieved September 22,2004 from <http://www.isoc.org/internet/history/brief.shtml>
- Livinginternet (2006). NSFNET – National Science Foundation Network. Retrieved January 20, 2007 from http://www.livinginternet.com/i/ii_nsfnet.htm
- Morrissey, B. (2003, May 28). Pop-ups work. Retrieved October 4, 2005 from <http://www.internetnews.com/IAR/article.php/2213101>
- Oser, K. (2006). Ad Spending on Social Networks to Reach 2 Billion by 2010: eMarketer’s New Report Says MySpace Will Continue to Dominate. Retrieved January 17, 2007 from http://www.marketwire.com/mw/release_html_b1?release_id = 178843
- Oser, K. (2004, November 15). “Tacoda ties ads to surfing behavior”, *Advertising Age*, 75, 4,
- Outsell, Inc. (2007, January 29). New study of ad spending from Outsell, Inc. shows online’s share growing to 20 percent, search engine ad spending to leap 39 percent. Retrieved January 29, 2007 from http://home.businesswire.com/portal/site/google/index.jsp?ndmViewId = news_view&newsId = 20070129005878
- Palumbo, P. (2006, April). “Streaming Video Advertising Guide 2006”.
 - AccuStream iMedia Research & Pointroll. Retrieved October 22, 2006 from <http://www.pointroll.com/docs/AccuStreamStreamingVideoGuide2006.pdf>
- Phillips, L. (2007, January). “Europe online advertising: Spend, trends and audience”, *Emarketer*, Retrieved January 18, 2007 from http://www.emarketer.com/Reports/All/Em_euro_ad_jan07.aspx?src = report2_home,
- Phillips, L. (2007). “Europe: One Continent, Many Online Ad Markets”, January 18, 2007 <http://www.emarketer.com/Article.aspx?1004475>
- PricewaterhouseCoopers (2006). Broadband growth drives global online advertising and access spending to more than \$260 billion by 2010. Global Entertainment and Media Outlook: 2006-2010. [http://www.pwc.com/extweb/pwcpublications.nsf/docid/C987CEB2D179131F852572090083B4B3/\\$FILE/Internet_KH_ls.pdf](http://www.pwc.com/extweb/pwcpublications.nsf/docid/C987CEB2D179131F852572090083B4B3/$FILE/Internet_KH_ls.pdf)

- Ryan, M. (2003, September, 9). “Pop-up Review”. Nielsen/Net Rating report. Retrieved October 4, 2005 from <http://www.iab.net/events/adforum/presentations/mryanpopreview.ppt>
- Stone, B. (2006, December, 6). ‘Bad guys are winning’ despite fight against spam. International Herald Tribune. Retrieved January 20, 2007 from <http://www.ihl.com/articles/2006/12/06/business/spam.php>
- Stone, P. M. (2007, January, 23). Europe started slower than the US in embracing Internet advertising opportunities, but it has caught up real fast – In percentage terms it’s 2007 web advertising spend is forecast to just exceed the US and gain even more in the years to come. Retrieved January 23, 2007 from <http://followthemediamedia.com/spots/internetads23012007.htm>
- Tacoda (2007). FAQ’s. Retrieved January 12, 2007 from <http://www.tacoda.com/>
- Vibrant Media (2006, September,18). Vibrant Media Named New York’s Second Fastest Growing Company in Deloitte’s Technology Fast 50 Program. Retrieved October 19, 2006 from http://www.marketwire.com/mw/release_html_b1?release_id = 163707
- Vibrant Media (2007). FAQ’s Retrieved January 12, 2006 from http://www.vibrantmedia.com/advertisers/intellitxt_faq.asp
- YouTube, Inc. (2007). “About YouTube”. Retrieved January 19, 2007, from <http://youtube.com/t/about>
- Zakon, R. H. (2006). Hobbes’ Internet Timeline version 8.2. Retrieved December 1, 2006, from <http://www.zakon.org/robert/internet/timeline/>

