Chapter 15

Online Advertising

15.1   Forms of Advertising on the Internet

Online advertising means advertisements scattered throughout the internet. Many website operators, among them all large search engine providers, offer their services for free, which allows them to generate large numbers of visits and visitors to their sites. Their customers' attention is sold (or auctioned) to advertising customers. This principle is known from commercial television, having merely been transferred to the World Wide Web, as Evans (2008, 359) describes:

> Many web sites settled on the traditional „free-tv" modell: generate traffic by giving away the content and sell traffic to advertisers.

Internet advertisement has two goals (Hollis, 2005):
- building up and maintaining a brand,
- selling products via the internet (e-commerce).

The basic forms of online advertisements (Faber et al., 2004) are banners (and other graphically oriented elements), which are displayed on websites independently of the person of the user and of any search arguments, e-mails (generally in the form of newsletters), which are sent to limited target groups with the explicit consent of the recipients, and context-specific ads, which appear on the basis of subscribed search arguments, when users enter appropriate queries. Context-specific advertising is called "**search advertising**", banner advertising is called "**display advertising**" (Evans, 2008, 363). Special forms of advertising are viral marketing ("contagious advertising") as well as advertising in digital games. Figure 15.1 summarizes this rough classification of online advertising in an overview.

   From a technical point of view, advertising resources on the Web (thus excluding newsletters, which are sent out in the form of e-mails) are
- graphics (typically banners),
- websites in themselves (typically pop-up windows or interstitials),
- text displays (typically Sponsored Links in search engines).

According to Faber, Lee and Nan (2004, 456), some forms of Web advertising reproduce known patterns from non-digital media. Banners resemble posters, pop-ups and particularly ads that interrupt processes (interstitials) are reminiscent of advertising breaks in commercial television (Barnes & Hair, 2009). Depending on how strongly the forms of advertising impede the user's intended activities on the Web, they are rejected as more or less of an "intrusion". This negative attitude is directed toward the ads themselves, but also to the website that displays them (McCoy et al., 2007).
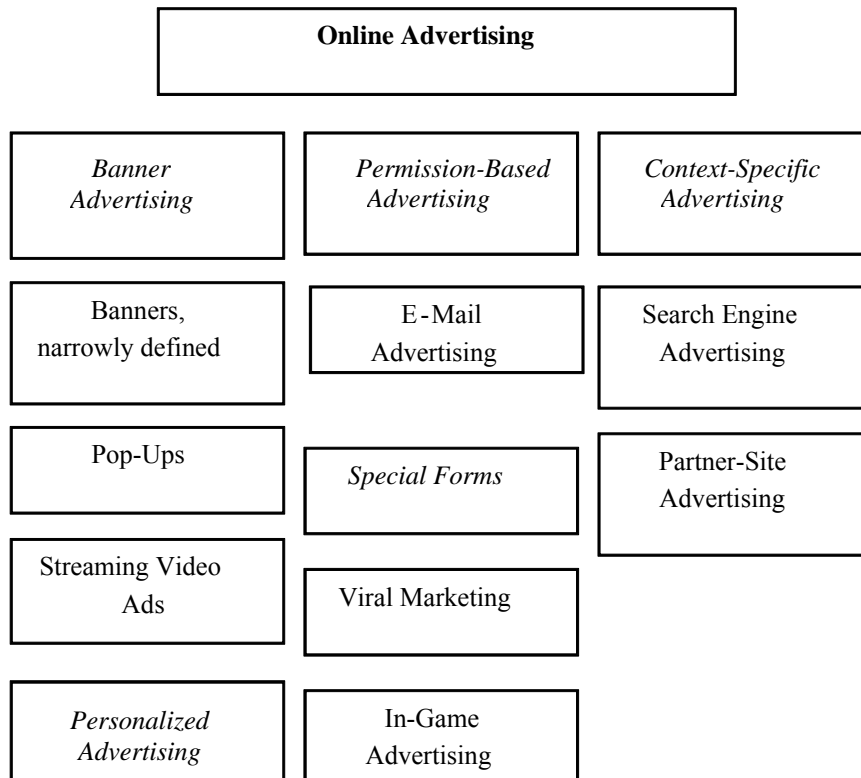
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                    ┌──────────────────────────────────┐
                    │        Online Advertising        │
                    └──────────────────────────────────┘

 ┌──────────────┐   ┌──────────────────┐   ┌──────────────────┐
 │    Banner    │   │ Permission-Based │   │  Context-Specific│
 │  Advertising │   │   Advertising    │   │    Advertising   │
 └──────────────┘   └──────────────────┘   └──────────────────┘

 ┌──────────────┐   ┌──────────────────┐   ┌──────────────────┐
 │   Banners,   │   │     E-Mail       │   │   Search Engine  │
 │narrowly defined│ │   Advertising    │   │    Advertising   │
 └──────────────┘   └──────────────────┘   └──────────────────┘

 ┌──────────────┐   ┌──────────────────┐   ┌──────────────────┐
 │   Pop-Ups    │   │  Special Forms   │   │   Partner-Site   │
 │              │   │                  │   │    Advertising   │
 └──────────────┘   └──────────────────┘   └──────────────────┘

 ┌──────────────┐   ┌──────────────────┐
 │Streaming Video│  │ Viral Marketing  │
 │     Ads      │   │                  │
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 ┌──────────────┐   ┌──────────────────┐
 │ Personalized │   │     In-Game      │
 │  Advertising │   │   Advertising    │
 └──────────────┘   └──────────────────┘
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Figure 15.1: Classification of Online Advertising.

It is important for the advertiser to create an ideal **target site**, to which the ad directs the user (von Bischopinck & Ceyp, 2007, 145 et seq.). This site serves, depending on the goal that is being pursued, either brand management or ventures or

a first step toward a transaction in e-commerce and, eventually, the creation of a longer-term customer relationship.

The business models for online advertising provide for three different **settlement bases** (Mangàni, 2004):

- Cost per View (CPV) or Cost per Impression (CPI), generally billed per thousand ads as "thousand-contact price" (TCP),
- Cost per Click (CPC), billed per number of clicks on the ad,
- Cost per Action (CPA), billed as a sort of realtor fee for sales in e-commerce (Hu et al., 2010), but with the downside that the strategy of brand building, which does not lead to direct profits, is not taken into consideration.
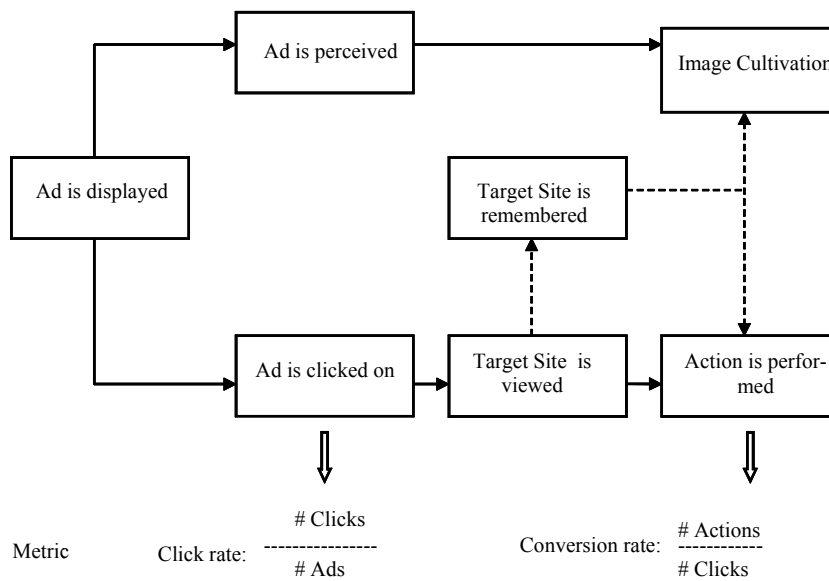
Figure 15.2: Stages of an Online Ad and its Metrics. Note: # : Number.

How does the **customer dialog** for an online ad work (Figure 15.2)? The ad, i.e. the banner or context-specific text, is displayed to the user. If the ad is not clicked on, but still perceived, this serves the advertised product's, or the advertising company's, image cultivation. In the ideal case, though, the ad is clicked on and the target site accessed. Here, we must distinguish between two subsequent paths:

in the first case, an action is directly performed, something is bought or the customer signs up for a newsletter (which, in turn, mutates into permission-based e-mail advertising), whereas in the second case, not direct action takes place, but the customer remembers the website (or product or company), which both image cultivation and can also lead–at a later date–to actions (Manchanda et al., 2006).

We take into account three **metrics**, which serve as the success factors of an online campaign (von Bischopinck & Ceyp, 2007, 237 et seq.):

- Click Rate, as the relative frequency of clicks on an ad with regard to all of its displays: #Clicks / #Ads,
- Conversion Rate, as the relative frequency of user actions (online sales, qualified customer contacts via subscription to a newsletter and similar "leads") with regard to all visits to the website initiated via the ad: #Actions / #Clicks,
- ROI (Return on Investment) as the quotient of the profit (generated via the actions) and the total cost of the marketing campaign: Profit / Costs of Online Advertising.

The crucial value, from an economic perspective, is the last one. Here, we need to be in the black, as the advertising campaign would create a loss otherwise. Let us suppose that a click on "our" ad costs €1, and that 1,000 clicks would generate €1,200 in e-commerce revenue. Not taking into account the costs in our own company, we would then have spendings of €1,000 and a profit of €1,200 - €1,000 = €200. The ROI of this campaign is at €200 / €1,000 = 0.2.

Companies occasionally choose the path of outsourcing their online advertising. Especially for the area of context-specific advertising, **search engine advertising agencies** (which offer both search engine advertising and search engine optimization among their services) have established themselves as their own small industry (von Bischopinck & Ceyp, 2007, 150 et seq.) (see Chapter 10 above).

15.2   Banner Advertising

Every medium has its own advertising standards, e.g. the 30-second commercial on TV or the quarter-page ad in the newspaper. In the early days of online advertising, banners were such a standard (and still are, partly). Depending on size and placement, we can distinguish between four basic forms (Plummer et al., 2007, 83):

- Full Banner (normally 468 * 60 pixels; Half Banner: 234 * 60 pixels),
- Leaderboard (728 * 90 pixels),
- Rectangle (normally 180 * 150 pixels; Large Rectangle: 336 * 280 pixels; Medium Rectangle: 300 * 250 pixels; Square: 125 * 125 pixels; Micro Bar: 88 * 31 pixels),
- Skyscraper (normally 120 * 600 pixels; Wide Skyscraper: 160 * 600 pixels).

In Figure 15.3, we indicate the size and typical placement of the basic banner forms. Instead of graphically oriented banners, there can also be video playbacks– in the Rectangle form.
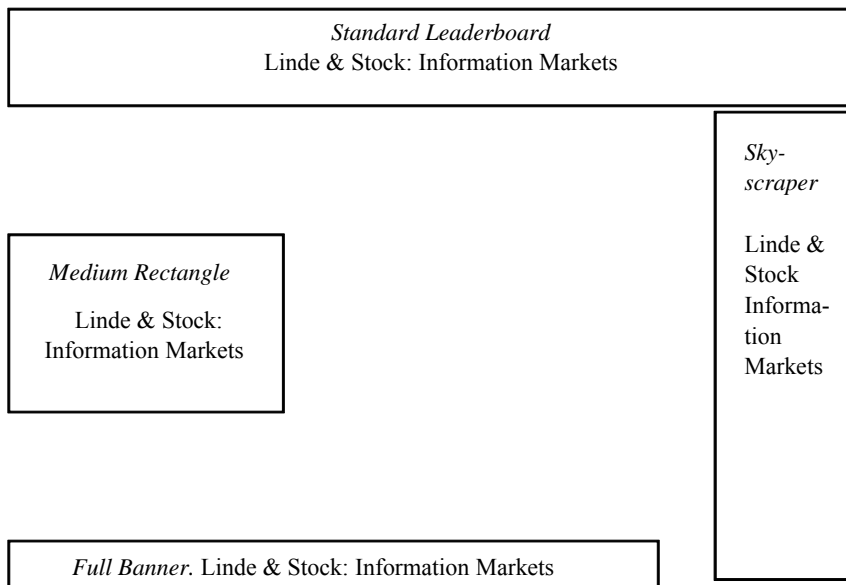

Figure 15.3: Typical Sizes and Placements of Banners.

For banners, we distinguish between **content** and **design** (Lohtia et al., 2003), which both have cognitive and affective dimensions. Cognitive content factors are stimuli, such as competitions, cognitive design options are represented by offers of interactive forms (such as a search function). Affective content factors are emotional tones (suggestions of joy, fear etc.), affective design elements are color and animation. Lohtia et al. distinguish banners addressed to companies (B-to-B advertising) from those directed at the end customer (B-to-C). In an extensive empirical study of the influence of the content and design elements described above on the manifestation of the Click-Through Rate (CTR), the following results arose (Lohtia et al., 2003, 416):

> 1. ... the presence of incentives and interactivity lowered the CTR of banner advertisements. This was especially true for B2B banner advertisements than B2C banner advertisements.

2. ... the presence of emotion and animation increased the CTR for B2C banner advertisements and decreased the CTR for B2B banner advertisements.

3. Medium level of color was better than low or high levels of color for B2B and B2C banner advertisements.

4. B2B banner advertisements had higher CTR than B2C banner advertisements.

Banners do not have to appear, rigidly in place, throughout the duration of a campaign, but can also adjust to the daily rhythm of the customers. Plummer et al. (2007, 21 et seq.) report of successful customer responses depending on the time of day. The brewery Budweiser, for instance, displays certain beer banners every Friday afternoon due to the notion that this will lead customers to preferentially shop for beverages at the end of their working week. Kentucky Fried Chicken successfully displayed ads for a new product, adjusted for the different American time zones, just before the respective lunch hour.

15.3   Target-Group Specific Online Advertising

Certain banners (or other forms of online advertising) are only offered to selected users. In such cases, we speak of **target-group specific online advertising**. This is only possible when the operator of the website has enough information on his users. Basic information is gleaned via statements made by the customer during registration. Additionally, one can collect the user's digital traces, by, for instance, storing and accessing the URLs of all of the websites he has visited with the help of a "toolbox". In social networks such as Facebook, in particular, a lot of very detailed person-related data are collected–depending on the individual users' communicativeness. The customer's profile, collated from basic information and digital traces, is exploited for advertising by having only the ads be displayed that best match the customer profile. If the user is provided the option (as on Facebook) of clicking away ad banners, and if he gives his reasons for doing so ("… is uninteresting", "… is misleading" etc.), the operator can further optimize the user profile and is able to perform **personalized online advertising**. Personalized advertising, the main source of revenue for the operators of social networks, is quick to clash with the protection of privacy (Fuchs, 2010; Tucker, 2010).

15.4   Advertising in Digital Games

A specific area of digital advertising can be observed in "in-game advertising" (Gaca, 2007; Thomas & Stammermann, 2007). In contrast to click-oriented online advertising, it is not possible in this example to click away the ad (as with pop-

ups) or to skip it (as with search engine and partner site advertising). There are static ads which are firmly integrated into the game and are not changeable, and there are dynamic ads, which is varied depending on the situation. Herman and Kaiser (2005, 25) explain this difference on a few examples:

> Where the industry used to work with "static" in-game displays, which were meant to make the game environment more "life-like"–billboards in the city, perimeter advertising in sports stadiums, product placement, theater marquees, a trip by the game's protagonist to McDonald's–now there is the possibility of "dynamic" ads. A game's protagonist might drink a Coke at 2pm, but later in the day, the otherwise identical cut-scene will see him ordering a beer or whiskey, all depending on what company bought the corresponding advertising slot.

We distinguish between three forms of in-game advertising:
- Poster advertising, perimeter advertising, illuminated advertising etc.,
- Product placement,
- Advergames.

Poster, **illuminated** and **perimeter advertising** (the latter particularly in sports games) simulate real-world advertising forms in the digital realm (Figure 15.4). Providing the dynamic concept is being used, this form can be adjusted to target groups with particular ease. Thus, one can offer a German player (registered, in online games, via the point of presence in the internet) can be offered German products, an American player will, however, be shown "his own". In a virtual world, such as Second Life, this sort of advertising is made extensive use of (Barnes, 2007).

   Product placement (Ip, 2009) in games works analogously to product placement in film. We distinguish the passive placement of a branded item in the game's world (e.g. a can of a certain soft drink, placed on a desk somewhere but serving no purpose) from active placement. Actively dealing with a product lets the protagonist "experience" a certain company or product (Gaca, 2007, 12). This includes the aforementioned scene set in a fast food restaurant. Another example is the way Red Bull is advertised in the game Worms 3D: if the player's avatar drinks Red Bull, he enjoys various benefits–he is given wings, can run faster, fly higher etc. The player cannot possibly ignore this, since he needs Red Bull within the game–and is, at the same time, "provided with everything that makes up the image of Red Bull" (Herman & Kaiser, 2005, 29). Product placement is generally static.

Figure 15.4: Poster Advertising in a Digital Game. Source: Herman & Kaiser, 2005, 25.

Advergames are digital games created around a certain product. Here it is not the game, but the product which is in the foreground (Gaca, 2007, 12-13). Thus, for example, Chrysler developed driving games with which customers can "test drive" the company's latest products virtually (Herman & Kaiser, 2005, 28).

Initial results of empirical research into in-game advertising (Cauberghe & De Pelsmacker, 2010) show that players tend to remember brands thus advertised, but that there is no effect on their attitude toward them. If a game is played multiple times, however, this can lead to a negative influence on one's attitude toward the brand, which indicates a short wearout period. The repetition of static advertising in particular is subject to quick rejection by the player for being too obtrusive.

15.5   E-Mail Advertising

Advertising via e-mail is strictly regulated in most countries, and can only be implemented in special cases. Such advertising is allowed if the recipient has given his permission, which can be rescinded at any point (see Chapter 10). Correspondingly, such forms of advertising are termed "**permission-based**" (Godin, 1999). Compared with other forms of advertising, e-mail marketing is cheap and effective

at the same time (Drèze, 2005). However, in order to be granted the permission to furnish customers with ads, it is imperative that the customers trust the advertiser to provide them with useful information. E-mail advertising is usually done in the form of **newsletters**, which reports on products or activities (e.g. training) and contains links to several target sites, and which, for legal reasons, has a specific link allowing the recipient to cancel his subscription to the newsletter ("opting out"). Occasionally, newsletters are used as websites. Three advantages speak in favor of permission-based e-mail advertising (Marinova et al., 2002, 62):

- The recipients enter themselves into mailing lists and thus signal at least a potential interest in accepting certain advertising information.
- The advertiser knows his recipients by name is thus able to personalize the ads ("One-to-One Marketing").
- The ad messages represent (in the ideal case, i.e. if there is a latent information need for the content provided) an information benefit or (in case the information is not currently relevant) at least no particularly sever burden.

The advertiser can never be sure that the customers have ordered the newsletter with their "real" mailing account. Some users deliberately create "spam accounts", from which they conduct certain transactions, but which they never use for communication. It can also never be assumed that the current recipients will tell the advertiser that they have changed their e-mail address. In this respect, the building and maintenance of **qualified mailing lists** are very important tasks (Tezinde et al., 2002, 30).

The goal of e-mail advertising campaigns is to achieve as high a click rate on the links as possible (and, in consequence, the performing of actions). The e-mail's content and design should lead the user to click on at least one of the links it contains. In any case, the most basic goal is to prevent the user from unsubscribing. Newsletters which are sent too often, in too short a time ("overtouching") increase the probability of customers opting out (Ansari & Mela, 2003, 144).

15.6   Context-Specific Advertising

If users work with search engines, they expect to be presented appropriate search results that satisfy their information needs. This fact leads to **context-specific search engine advertising** in marketing. Since we know, in this case, what a user is researching, we will show–in exact accordance with the search arguments entered by the user–advertising texts that might also satisfy the stated information need. Scattering losses are pretty minimal in this case, since the ad matches the query. The market leader in the area of context-specific search engine advertising is Google, with its **AdWords** service (Davis, 2010; Geddes, 2010) (Figure 15.5; the top three results and all results on the right-hand side are ads, marked as "sponsored links").

Figure 15.5: Context-Specific Search Engine Advertising on the Example of Google AdWords. Source: Google.

Which keywords should be selected to lead to the ad display? This is a problem of knowledge representation: one indexes one's target site via expressive terms, which represent the content adequately. Additionally, one chooses words of which one assumes that users could use them to search for the target site. Google offers four formal options for defining a **keyword**:

- Exact match: [Apple Pie]. The Ad is only displayed if exactly the same search argument has been entered.
- Phrase match: "Apple Pie". The ad is displayed if that phrase occurs in the search argument.
- Broad match: Apple Pie. The ad is displayed if the terms occur somewhere in the search argument.
- Negative match (in conjunction with one of the above variants: ─ cinnamon. The ad is not displayed if the term occurs somewhere in the search argument.

The focus in selecting the terms is on **terminological control** over the keywords. Homonyms must be selected so as to prevent their polysemy from taking effect. If, for instance, a company that organizes trade fairs uses the keyword *fair*, its ad will also be displayed if a user searches for *carnival fair*. There are tools for finding synonyms and quasi-synonyms, which suggest (more or less appropriate) terms.

Here, one works either with analyses of log data from search requests, knowledge organization systems (such as thesauri) or with an analysis of co-occurring terms in the ad database at hand (Saramento et al., 2009; Kaiser, 2010, 139 et seq.).

Apart from the keywords, the advertising customer chooses further parameters (Kaiser, 2010, 102):

- Targeting (regional selection, target languages, time zones, exclusion of certain URLs),
- Budget (generally the setting of a daily budget),
- Bid (maximum offer),
- Distribution (AdWords, AdSense, ads in Gmail etc.).

If several advertisers have "booked" a keyword, Google will create a **ranking of ads**. Since it is known from empirical studies (Ghose & Yang, 2009) that both the click and the conversion rate correlate with the ranking (the higher the ranking, the higher the click and conversion rates), it is important for advertisers to place their ad text as high up as possible. The allocation of keywords is an auction procedure, specifically a variant of Second-Price Auctions, also called **Vickrey Auction** (following Vickrey, 1961), in which the winner does not pay the sum of his own offer but that of the bidder closest to himself.

The auction for keywords is fundamentally different from auctions for physical goods (Kaiser, 2010, 150). In the latter, there is only one winner, whereas the former auctions off rankings, which means that there is a winner, but also a second, third etc. A traditional auction ends with the winner getting the prize. The keyword auction, on the other hand, is continual, and the procedure changes with each new bid on the keyword. The search engine has the role of the auctioneer; the advertising customers are the bidders.

Google's Ad Rank is no pure price ranking, but also takes into consideration the "quality" of the text display. To calculate the retrieval status value e of the ad, the maximum price per click (max CPC) that is bid on is multiplied with the ad text's Quality Score (QS):

$$e_{Ad} = \max CPC_{Ad} * QS_{Ad}.$$

The Quality Score has several components, of which the most important is the ad's previous click rate. When an ad text is displayed for the first time, there can be no click rate. Such a cold-start problem (Richardson et al., 2007) can be resolved if the click rates of the same keywords in other advertisers as well as the click rates of similar (quasi-synonymous) terms are used as estimated values.

To calculate the price to be paid per click, Google takes the retrieval status value e of the nearest co-competitor and divides this value by the Quality Score of the current ad (plus 1 Cent). In Table 15.1, we execute the procedure on an example (let the minimum price for an ad be $0.04).

Rank ing	Customer	Max CPC	QS	e	Price Calculation	Price
1	A	$0.40	1.8	0.40 * 1.8 = **0.72**	0.65 / 1.8 + 0.01 = 0.3711	**$0.37**
2	B	$0.65	1.0	0.65 * 1.0 = **0.65**	0.375 / 1.0 + 0.01 = 0.385	**$0.39**
3	C	$0.25	1.5	0.25 * 1.5 = **0.375**	Minimum Offer: 0.04	**$0.04**

Table 15.1: Calculation of Ranking and Price in Google AdWords. Source: Following Kaiser, 2010, 160.

If an ad has a high Quality Score, one may have to pay less than one's competitors and still achieve a higher ranking (like customer A in Table 15.1). By taking into account the Quality Score, what we have now is no longer a classical Vickrey Auction; however, one still orients oneself on the principles of a Second-Price Auction (via the next-placed ad's retrieval status value). This calculation rewards ads that promise the highest profit for Google in comparison with their competitors with a high ranking.

Google offers **context-specific partner site advertising** via **AdSense**, which draws upon the ad database of AdWords. The billing of the site owner is either done via Cost per Click or Cost per View. The website that registers the ad is automatically indexed by Google and algorithmically reduced to (quantitatively) important words. The ad texts are then displayed in accordance with these extracted terms. Target sites for AdSense can also be blogs (Fox et al., 2009). In the example from Figure 15.6, the terms *Kaua'i* (as well as *Kauai*) and *Hawaii* (and *Hawaiian* and *HawaiiWeb*) occur multiple times on the website of HawaiiWeb. The four ads (visible in the Figure) displayed by Google either thematize *Hawaii* or *Kauai*. The selection and arrangement of the ad displays are given their foundation by their retrieval status value. Since ads by competitors might fit the content of one's own site, but one does not want to advertise the competition on one's own Web presence, Google provides a filter with which to pointedly reject ads by certain customers.

Kaua'i, The Garden Isle, where the legends of the Menehune abound. Kaua'i is the oldest island in the Hawaiian chain and often called the Garden Isle because of its endless beauty. It is a place as close to the Garden of Eden as one can find. Perhaps as close the sculptural masterpiece is the Na Pali Coast accessible only by boat, helicopter or foot. Here the scenery is so magnificent it defies description. The only thing that can compare to the natural beauty of this island is the beauty of the people of Kaua'i with their genuine friendliness and spirit of Aloha.

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Kauai Poipu Beach Condo
Poipu Beach steps from the ocean with surfing snorkeling and sunsets

Ads by Google

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Authentic Adventures To The Heart Of Hawaii ! "KapohoKine Adventures"
www.kapohokine.com

Hawaii Vacations
Search Travel Sites Across The Web & Find Amazing Vacation Discounts
www.Kayak.com/Vacati

Kauai Vacation Special
3 Bdrm 2 Bath Condo $150/nt Inclusive of all Costs
www.kauaidreamin.com

Figure 15.6: Context-Specific Partner Site Advertising on the Example of Google AdSense. Source: HawaiiWeb.

Neither AdWords nor AdSense are fraud-proof. Competitor Click Fraud (in AdWords) and Publisher Click Fraud (in AdSense) are regarded as deviant information behavior (see Chapter 4.5.3 above) and are not reconcilable with prevailing law (see Chapter 5.10 above). Google works with a filter system for "invalid" clicks (which, however, is only able to recognize clear patterns) and does not charge the customer for these clicks (Kaiser, 2010, 126 et seq.).

15.7 Viral Marketing

Certain news spread fast and far, others remain virtually unnoticed. The driving force in the case of wide distribution is mouth-to-mouth propaganda. The exploitation of this force in advertising is called "viral marketing". Stuckmann (2010, 97) lists its advantages:

> The advertising message or the product are discovered by the customer and deemed so interesting that he wants to tell others of it, and thus passes his discovery on (…). The consumers reached in this way receive the message with good-will, since it does not reach them via trivial channels, such as TV or radio, but from their circle of friends and acquaintances.
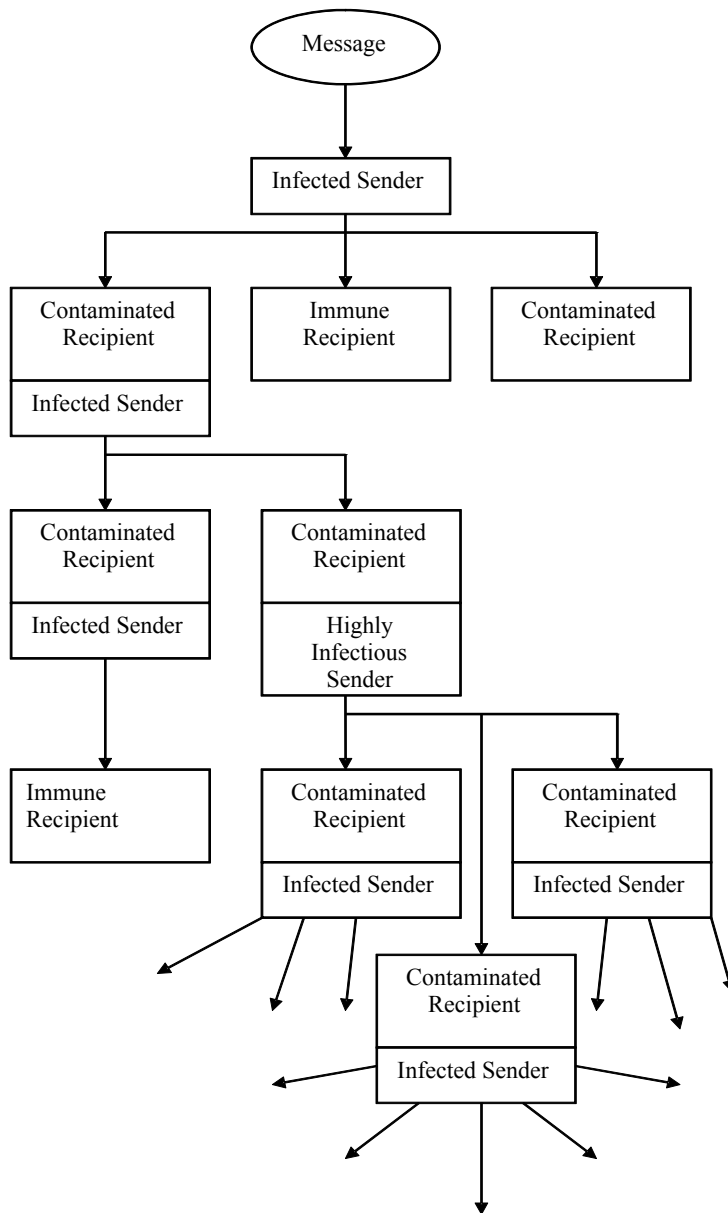
Figure 15.7: Spreading of a Message in Viral Marketing.

Viral information distribution can be observed not only in advertising, but concerns all manner of knowledge. We distinguish two forms:

- self-initiated viral information distribution: the author (e.g. a company for an advertising message) provides the initiative himself,
- foreign-initiated viral information distribution: some third party provides the initiative, where the message may be either positive or negative.

Also and especially on the internet, many forms of viral information distribution are possible. They can be particularly pronounced in recommender services (such as Amazon) (Leskovec et al., 2007; Richardson & Domingos, 2002), weblogs or videosharing services (YouTube) (Stuckmann, 2010), message boards and microblogging (Twitter) (Jansen et al., 2009). Foreign-initiated negative information distribution must be noticed by the enterprise concerned as early as possible in order to be counteracted, ideally via self-initiated actions.

A central role in digital viral marketing is played by the **users**, both as recipients and as senders (Subramani & Rajagopalan, 2003). In Figure 15.7, we want to exemplify this schematically. The "virus" is, in our case, the message. A recipient can be susceptible to this virus and "catch it", i.e. absorb the message; another recipient, on the other hand, might be "immune" against it and pay it no further attention. For the "viral carriers", there are three cases to be differentiated: (1.) the recipient does not pass on the message (as the person on the top right-hand side in Figure 15.7), (2.) the recipient passes on the message but the persons he sends it to do not, (3.) a "highly infectious" sender–possibly a respected individual due to his position in the community–sends the message on, with the consequence that his own recipients in turn massively distribute the message. In self-initiated viral marketing, it is important to use such highly infectious senders, in the sense of a Seed List.

15.8   Conclusion

Only available in the printed version.

15.9 Bibliography

Ansari, A., & Mela, C.F. (2003). E-Customization. Journal of Marketing Research, 40, 131-145.

Barnes, S.B. (2007). Virtual world as a medium for advertising. The DATA BASE for Advances in Information Systems, 38(4), 45-55.

Barnes, S.B., & Hair, N.F. (2009). From banners to YouTube. Using the rear-view mirror to look at the future of internet advertising. International Journal of Internet Marketing and Advertising, 5(3), 223-239.

Cauberghe, V., & De Pelsmacker, P. (2010). Advergames. The impact of brand prominence and game repetition on brand responses. Journal of Advertising, 39(1), 5-18.

Davis, H. (2010). Google Advertising Tools. Cashing in with Adsense, Adwords, and the Google APIs. 2nd ed. Beijing: O'Reilly Media.

Drèze, X. (2005). Lessons from the front line. Two key ways in which the internet has changed marketing forever. Applied Stochastic Models in Business and Industry, 21, 443-448.

Evans, D.E. (2008). The economics of the online advertising industry. Review of Network Economics, 7(3), 359-391.

Faber, R.J., Lee, M., & Nan, X. (2004). Advertising and the consumer information environment online. American Behavioral Scientist, 48(4), 447-466.

Fox, D., Smith, A., Chaparro, B.S., & Shaikh, A.D. (2009). Optimizing presentation of AdSense ads within blogs. Proceedings of the 53rd Human Factors and Ergonomics Society Annual Meeting (pp. 1267-1271).

Fuchs, C. (2010). Facebook, Web 2.0 und ökonomische Überwachung. Datenschutz und Datensicherheit, 34(7), 453-458.

Gaca, C. (2007). Markenmanagement in Video- und Computerspielen. Saarbrücken: VDM Verlag Dr. Müller.

Geddes, B. (2010). Advanced Google AdWords. Hoboken, NJ: Wiley.

Ghose, A., & Yang, S. (2009). An empirical analysis of search engine advertising. Sponsored search in electronic markets. Management Science, 55(10), 1605-1622.

Godin, S. (1999). Permission Marketing. Turning Strangers into Friends, and Friends into Customers. New York, NY: Simon & Schuster.

Herman, D., & Kaiser, S. (2005). Die Eroberung eines neuen Werbekanals. GDI_Impuls, 2(05), 24-31.

Hollis, N. (2005). Ten years of learning on how online advertising builds brands. Journal of Advertising Research, 45(2), 255-268.

Hu, Y., Shin, J., Tang, Z. (2010). Pricing of online advertising. Cost-per-click-through vs. cost-per-action. Proceedings of the 43rd Hawaii International Conference on System Sciences. IEEE Computer Science Press.

Ip, B. (2009). Product placement in interactive games. Proceedings of the International Conference on Advances in Computer Entertainment (pp. 89-97). New York, NY: ACM.

Jansen, B.J., Zhang, M., Sobel, K., & Chowdury, A. (2009). Twitter power. Tweets as electronic word of mouth. Journal of the American Society for Information Science and Technology, 60(11), 2169-2188.

Kaiser, C. (2010). Suchmaschinenwerbung. Sponsored Links als Geschäftsmodell der Suchwerkzeuge. Mit einer Fallstudie über chinesische Suchdienste. Hamburg: Kovač.

Leskovec, J., Adamic, L.A., & Huberman, B.A. (2007). The dynamics of viral marketing. ACM Transactions on the Web, 1(1), art. 5.

Lohtia, R., Donthu, N., & Hershberger, E.K. (2003). The impact of content and design elements on banner advertising click-through rates. Journal of Advertising Research, 43(4), 410-418.

Manchanda, P., Dubé, J.P., Goh, K.Y., & Chintagunta, P.K. (2006). The effect of banner advertising on internet purchasing. Journal of Marketing Research, 43, 98-108.

Mangàni, A. (2004). Online advertising. Pay-per-view versus pay-per-click. Journal of Revenue and Pricing Management, 2(4), 295-302.

Marinova, A., Murphy, J., & Massey, B.L. (2002). Permission e-mail marketing as a means of targeted promotion. Cornell Hotel and Restaurant Administration Quarterly, 43, 61-69.

McCoy, S., Everard, A., Polak, P., & Galletta, D.F. (2007). The effects of online advertising. Communications of the ACM, 50(3), 84-88.

Plummer, J., Rappaport, S., Hall, T., & Barocci, R. (2007). The Online Advertising Playbook. Proven Strategies and Tested Tactics from The Advertising Research Foundation. Hoboken, NJ: Wiley.

Richardson, M., & Domingos, P. (2002). Mining knowledge-sharing sites for viral marketing. Proceedings of the 8th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (pp. 61-70). New York, NY: ACM.

Richardson, M., Dominowska, E., & Ragno, R. (2007). Predicting clicks. Estimating the click-through rate for new ads. Proceedings of the 16th Conference on the World Wide Web (pp. 521-529). New York, NY: ACM.

Sarmeno, L., Trezentos, P., Gonçalves, J.P., & Oliveira, E. (2009). Inferring local synonyms for improving keyword suggestion in an on-line advertisement system. Proceedings of the 3rd International Workshop on Data Mining and Audience Intelligence for Advertising (pp. 37-45). New York, NY: ACM.

Stuckmann, M. (2010). Einsatzmöglichkeiten von Web 2.0 Tools im Marketing: Virales Marketing. Information–Wissenschaft und Praxis, 61(2), 97-101.

Subramani, M.R., & Rajagopalan, B. (2003). Knowledge-sharing and influence in online social networks via viral marketing. Communications of the ACM, 46(12ve), 300-307.

Tezinde, T., Smith, B., & Murphy, J. (2002). Getting permission. Exploring factors affecting permission marketing. Journal of Interactive Marketing, 16(4), 28-36.

Thomas, W., & Stammermann, L. (2007). In-Game Advertising. Werbung in Computerspielen. Strategien und Konzepte. Wiesbaden: Gabler.

Tucker, C. (2010). Social Networks, Personalized Advertising, and Privacy Controls. Working Papers / NET Institute No. 10-07.

Vickrey, W. (1961). Counterspeculation, auctions, and competitive sealed tenders. Journal of Finance, 16(1), 8-27.

Von Bischopinck, Y., & Ceyp, M. (2007). Suchmaschinen-Marketing. Konzepte, Umsetzung und Controlling. Berlin: Springer.