
The relationship between advertising and content provision on the Internet

Advertising and
content on the
Internet

677

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Introduction

The distinction between advertising and content may sometimes seem to be blurred on the Net. Consider, for example, the majority of company Web sites, which provide information about the companies and their products and services. From the point of view of their customers and investors, the company and product information is “content”, while from the companies’ perspective, it is “advertising” intended to induce purchases of their products or stocks.

This paper explores the question of whether the traditional practice of bundling advertisements with content will prevail or become less common on the Internet. Given that revenue from advertisers is desirable to content providers, the answer mainly depends on whether advertisers will choose to deliver their advertisements by bundling. The decision to bundle in turn depends on the response of customers to bundling and to other advertising strategies. In particular, the relationship between advertising and content provision on the Internet may be affected by this medium’s distinctive characteristics, which affect the choices of advertisers and the response of customers. Thus, one needs to investigate the choices of advertisers, the behavior of customers, and their dependence on the distinctive technological features of the Internet.

This paper pursues that investigation as follows. First, we propose a classification scheme of advertising strategies relevant to the analysis of bundling. Second, we describe customer behavior in terms of search and blocking. Third, we analyse advertisers’ choices of advertising strategy on the Internet to see whether bundling will be a preferred strategy. Fourth, we look at some empirical evidence.

Alternative advertising strategies

Advertising has often been categorized according to adopted media (e.g. newspaper versus television), targeted audience (e.g. consumers versus businesses), targeted region (national versus regional), purpose (image versus product promotion), and type of advertiser (public versus commercial companies) (see e.g. Bovee and Arens, 1992). However, these classifications are

not well suited for analysing the bundling decision. In the following, we propose a classification of advertising strategies useful for the analysis of this decision.

Direct advertising versus indirect advertising

Advertisers may try to deliver advertisements directly to the attention of potential customers or simply make them available and let customers access them at will. The former can be called “direct advertising” (e.g. telephone marketing, direct e-mail), the latter “indirect advertising” (e.g. company Web sites).

In direct advertising, marketers make decisions about when customers see which commercials and for how long. Conversely, in indirect advertising it is the customers who make these decisions.

Bundling of advertisements and non-advertising content

Advertisers may make advertisements stand-alone or may bundle them with nonadvertising content. Advertisements via direct telephone marketing, direct e-mail, and newspaper classifieds can be considered stand-alone. Other advertisements, such as those integrated into the news sections of newspapers, most advertisements on TV and radio, and advertising banners on Web pages are bundled with other content. By bundling advertisements and non-advertising content, advertisers force content users to view advertisements. Thus, advertising through bundling is direct advertising.

Rewarding customers for viewing commercials

Advertisers may or may not reward customers for viewing advertisements. Coupons in free “shoppers” and promotional checks from telephone companies may be seen as examples of advertising with reward. Most existing advertising does not offer any reward.

For rewarding to be practical, it is necessary for advertisers to be able to check to be sure that customers have indeed read their advertisements. In traditional media, checking and distribution of rewards can usually only be done manually, leading to an impractically large overhead. In the above examples, coupons and promotional checks are tied to purchases, thus are special examples of advertising with reward. On the Internet, however, checking and rewarding can be done automatically by computers. Automated rewarding thus leads to much lower overhead.

Advertising with reward is different from the “reward” given by content providers for accessing and reading content which contains advertisements. In the latter case, the consumer’s benefit comes in the form of a reduced price for the content itself. Advertisers subsidize content development and delivery.

Six possible advertising strategies

Choices between direct versus indirect, bundling versus nonbundling, and rewarding versus no rewarding give eight possible advertising strategies. Because advertising through bundling is necessarily direct advertising, there are actually only six strategies, as represented in Table I.

Among the six strategies, advertising through bundling and advertising through bundling with reward provide revenue for content providers; the other four provide no revenue. When the overhead of rewarding is too large, the three strategies with reward are not practical, reducing the possible strategies to the three shown in Table II.

		No reward	Reward
Direct	No bundling	Pure direct	Direct with reward
	Bundling	Direct through bundling	Direct through bundling with reward
Indirect	No bundling	Pure indirect	Indirect with reward
	Bundling		

Table I.
Possible advertising
strategies

		No reward	
Direct		No bundling	Pure direct
		Bundling	Direct through bundling
Indirect		No bundling	Pure indirect
		Bundling	

Table II.
Possible advertising
strategies without
reward

The choice among these advertising strategies depends on their relative costs and benefits to advertisers. In each strategy, advertisers incur a cost of developing the commercials and producing copies delivered to customers. Advertisers further incur the cost of rewards in strategies with reward. In advertising through bundling, advertisers pay for bundling, which at least must compensate content providers for any reduction of content price charged to content users and/or reduction in units sold. Reduction in content price may be necessary and/or consumption of content may be reduced because bundled advertisements may impose a cost of interruption on users reading the content.

Customers’ search and blocking of advertisements

Customers may search for desired information and block unwanted interruption. This is true in both conventional and newer electronic media. We argue, however, that newer technologies make these actions easier, and can thus have an important effect on advertising strategy.

The decision to search advertising information

Customers may search for information from advertising sources and/or third party sources. The benefit to customers of searching advertising sources includes improved purchase decisions or the elimination of the cost of

third-party information. The magnitude of the benefit depends on the difference between purchasing alternatives and the cost of third-party information. The bigger the difference between the consumer surpluses associated with the different purchase alternatives and the greater the cost of third-party information, the bigger the benefit of searching advertising information. For a customer to search advertising sources, the expected benefit of search should cover its cost.

The decision to block direct advertising

Direct advertising brings both benefits and costs to customers. The benefits to a customer of exposure to direct advertising includes the value of the information obtained from the exposure and, sometimes, an entertainment value. The information obtained can help improve purchase decisions and reduce information costs of searching.

The benefit of exposure also depends on the amount of information absorbed, which depends on customer's attitude toward exposure. The more antagonistic a customer is, *ceteris paribus*, the less information is likely to be absorbed. The attitude of the customer in turn depends on the benefit of exposure relative to the cost of the exposure.

There is no access or search cost in exposure to direct advertising. However, there can be a cost of interruption. The use of a Ford vehicle in a movie may not interrupt the flow of the movie for its viewers. Billboards may slightly increase the risk of driving. Advertisements in newspapers and magazines make it harder to locate content interesting to the readers. Television commercials interrupt programming that is interesting to viewers.

When the cost of exposure, net of its benefit, is positive, the customer may decide to block direct advertising. For example, customers may channel-surf, turn off the television altogether, or install software to filter advertisements from e-mail or Web pages. Blocking has a cost to customers in terms of effort and other costs, such as the effort of pushing the button on a remote control, foregoing some interesting content, or the cost of acquiring and installing blocking software. The decision to block depends on the relative magnitude of the cost of blocking and the net cost of exposure to direct advertising. This can be the case regardless of whether the customer is compensated for the interruption by a reduction in content price. The customer may be able to block the advertisements, retain the content, and receive compensation.

The choice of advertising strategy on the Internet

Advertisers choose strategies to maximize the net benefit of advertising. Which strategy achieves the highest net benefit may depend on customers' responses to the respective strategies. For a given advertising situation, e.g. a given product and a given media, a customer may be classified according to whether they will search pure indirect advertising and block direct advertising.

A customer may not necessarily make the same decision on whether to block pure direct advertising or direct advertising through bundling, given the same

product via the same medium. However, since our interest is to compare direct advertising, especially bundling, with other strategies, we do not need to differentiate between the decisions regarding the two direct advertising strategies.

Apparently, different strategies are usable for different classes of customers (Table III). For class III and IV customers, pure indirect advertising will not be read. For class II and IV customers, direct advertising without reward will be blocked. These advertising strategies will be called unfeasible for reaching potential customers.

Rewards can be used to induce customers in classes III and IV to read indirect advertising. Similarly, direct advertising with reward, and bundling with reward, are feasible for class II and IV customers. Table III presents the feasible advertising strategies for each class of target customers.

The relative use of these advertising strategies can be analysed, imperfectly, from the advertiser's preference for feasible advertising strategies for each class of customers, and the relative size of these classes.

The choice of advertising strategy in traditional media

In traditional media, the large overhead of checking and rewarding customers for reading advertisements makes rewarding impractical in most situations. Thus, the choices of advertising strategies are mainly among the three strategies with no reward, as presented in Table IV.

For class I customers, indirect advertising will be preferred by advertisers over the other two strategies. Class I customers search for information from indirect advertising. For them, products are "shopping goods", instead of "convenience goods". It is believed that "advertising", which is often used synonymously with direct advertising, has no significant effect on the profit

		Direct advertising	
		No blocking	Blocking
Pure indirect advertising	Search	Class I: Pure direct Direct with reward Direct through bundling Direct through bundling with reward Pure indirect Indirect with reward	Class II: Direct with reward Direct through bundling with reward Pure indirect Indirect with reward
	No search	Class III: Pure direct Direct with reward Direct through bundling Direct through bundling with reward Indirect with reward	Class IV: Direct with reward Direct through bundling with reward Indirect with reward

Table III.
All feasible advertising
strategies

Table IV.
Feasible advertising
strategies without reward

		Direct advertising	
		No blocking	Blocking
Pure indirect advertising	Search	Class I: Pure direct Direct through bundling Pure indirect	Class II: Pure indirect
	No search	Class III: Pure direct Direct through bundling	Class IV:

from non-convenience goods (Porter, 1974). The reason is that purchase decisions for non-convenience goods are based on information obtained from search, affected little by direct advertising. Thus, in this situation, direct advertising, pure or bundled, brings little benefit, but would typically cost more. Therefore, indirect advertising is preferred for class I customers.

For class III, neither pure direct advertising nor bundling dominate the other. Admissible strategies for each class of customer are presented in Table V. Once again, admissible strategies are strategies which are not dominated by any other strategy. From Table V, the relative use of the three strategies will depend on the relative sizes of classes I, II and III.

Table V.
Admissible advertising
strategies without
reward

		Direct advertising	
		No blocking	Blocking
Pure indirect advertising	Search	Class I: Pure direct	Class II: Pure indirect
	No search	Class III: Pure direct Direct through bundling	Class IV:

Traditional media, be they newspaper, radio, television, telephone, or billboards, enable only manual search and manual blocking. Although cost per search or block is not necessarily large in absolute value, it is often substantial relative to the small value of the information gained from an advertisement or the small net cost of the interruption by an advertisement. Many customers do not search for indirect advertising or block direct advertising for many products. Thus, class III is likely large, class II small, and classes I and IV somewhere in between. As a result, direct advertising, pure or through bundling, is typically used extensively in traditional media.

The choice of advertising strategy on the Internet

The relative use of advertising strategies on the Internet may be affected by the changes in the relative sizes of customer classes caused by the reduction in searching and blocking costs. The relative use may also be affected by technology for efficiently rewarding customers.

The effects of decreasing search and blocking costs. On the Internet, searches can be done automatically by networked computers. This capability can dramatically reduce the cost of access and search and increase their effectiveness. This has happened already and much more will almost surely take place as search technology, network bandwidth, and user interfaces continue to improve. For example, today one can orally drive Netscape Navigator to surf the Web with IBM's VoiceType technology. One can expect that, not too far in the future, customers may be able to orally instruct powerful search agents to find needed information almost instantly and with a minimum of effort. This reduction in accessing and searching cost, and the increase in its effectiveness, will make it worthwhile for many more customers to access and search for advertising about many more products.

At the same time, the Internet has the potential to reduce costs and increase the ability of customers to block unwanted interruption. It is relatively easy for customers to scroll computer screens, switch between pages, fast forward digital audio or video, and to use the delete key, avoiding interruptions from bundled advertisements. More significantly, customers will be able to instruct computers to automatically filter unwanted advertisements.

Computerized blocking requires that customers tell the computer how to identify advertisements, for example through keywords, e-mail addresses, URLs, type of objects, their position in Web pages, etc. As the technology of blocking progresses, it will likely become cheaper to set up the computer once and block advertisements indefinitely. However, advertisers can try to defeat automatic blocking by changing addresses, keywords, type and position of objects, etc.. It would be expensive for individual customers to follow these changes. However, the changes by advertisers can be followed once and shared by many customers, either through voluntary co-operation or as a service. For example, a library of URLs for WebFilter is provided free; America Online followed Cyber Promotion's changes of e-mail address and blocked its direct e-mail to AOL subscribers. Thus, automatic blocking can be inexpensive by sharing identifying and blocking cost.

Furthermore, the motivation for blocking direct advertising will be higher on the Internet than in traditional media, owing to the increased cost and decreased benefit to customers of exposure to direct advertising. The cost of exposure to direct advertising will be higher on the Internet because the value of time spent there will be higher, owing to its effectiveness and the increasing quantity and quality of information available. On the other hand, the benefit to customers of exposure to direct advertising will decrease, because more information is easily available on demand. Thus, the net cost to customers of exposure to direct advertising will be higher on the Internet than in traditional

media. As a result of the decreasing cost of blocking and the higher net cost of interruption, we argue that many more customers will block advertisements of many more products on the Internet than in traditional media.

The combination of more search and more blocking on the Internet means a smaller class III and a larger class II than for traditional media. Therefore, direct advertising, both pure and bundled, can be expected to be used less, and indirect advertising will be used more on the Internet than on traditional media.

The effect of efficient rewarding on the Internet. Strategies with rewards can be executed cheaply on the Internet. For advertising with reward to be practical, it is further necessary to prevent customers from developing and using software to automatically retrieve advertisements, answer questions, and collect rewards. There is a growing collection of tools to accomplish this. First, answers can be examined for suspicious patterns. Second, collectors of rewards above a certain amount may be required to answer questions about the advertisements and advertised products via telephone. Third, if advertising through reward is in the interests of both businesses and consumers, governmental protection against cheating may be made available if necessary. Thus, it is reasonable to assume that cheating will be kept in check and advertising strategies with rewards will be practical options for advertisers.

Rewards are costs to advertisers. When both are feasible, a strategy without reward is preferable over a corresponding strategy with reward. Thus new strategies with reward on the Internet will not affect the fact that pure indirect advertising is the preferred strategy for class I and II customers. Similarly, for class III customers, direct advertising with reward and bundling with reward will not change the preferred strategies because corresponding strategies without reward are feasible. However, it is possible for indirect advertising with reward to affect the preferred strategy for this class.

Compare indirect advertising with reward and direct advertising through bundling. In direct advertising through bundling, advertisers pay for the interruption imposed on content users by compensating content providers for the reduction in content price, and further pay a premium to content providers. In indirect advertising with reward, advertisers pay for the rewards to make up the difference between customers' cost and benefit of accessing and reading advertisements. The size of the former depends on, and will typically be bigger than, the cost of the interruption; the size of the latter depends on, and will be smaller than, the cost of accessing, searching and reading the advertisements.

As mentioned earlier, the cost of accessing and searching is already (and will further be) reduced on the Internet. Interruption of direct advertising through bundling can also be reduced by automated customization of advertisements bundled and delivered to customers. However, customization cannot eliminate interruption. On the other hand, the cost of interruption can be higher on the Internet, if the Internet is, or will be, an effective technology which leads to higher productivity in using it.

Because of the decrease in access and search costs and the inevitable interruption of bundling, one can expect advertisers' cost of compensating

interruption and paying a premium to content providers in bundling to be comparable to the cost of rewards to induce the access and search necessary in indirect advertising. In other words, advertisers may, in the future, be better off financially by using indirect advertising with reward, rather than using direct advertising through bundling.

In summary, the reduction in search cost and blocking cost on the Internet have the potential to reduce the use of bundling by advertisers, by reducing the size of those class III customers for which bundling is an admissible strategy. Furthermore, the availability of rewarding technology on the Internet can further reduce the use of bundling by making it less preferable even for class III and IV customers.

Evidence from Internet practice

The industries of advertising and content provision are still emerging on the Internet. Existing data are unlikely to allow a conclusive test of the conclusions of the analysis presented above. However, circumstantial evidence is available. The following four observations concerning current advertising practice on the Internet support our conclusions:

- (1) The first observation has to do with the growth of pure indirect advertising on the Internet. One form of pure indirect advertising on the Internet is represented by company Web sites providing free information about their products or services. Most of the exploding number of company Web sites on the Internet fall primarily into this category.

Another form of pure indirect advertising is Web sites which list products and services of other companies (the actual advertisers). The operators of these sites are paid by the advertisers and provide free access to the advertising information. Such sites exist to serve companies which provide products and services ranging from manufacturing products (e.g. Industry.Net), to travel (e.g. www.travelocity.com), automobiles (e.g. www.autobytel.com), and housing (e.g. www.aptfinder.com). Indirect advertising in this form has shown financial success. For example, Industry.Net[1] made profit on sales of \$28 million in 1995 (*Business Week*, 1996). This revenue surpasses the 1996 revenue of \$19 million brought in by Yahoo!, the publisher of the most popular Internet directory, which derives its revenue from bundled advertising banners (Yahoo, 1997). Autobytel was expecting to earn a profit from \$7 million in revenue in 1996 (Reuters, 1996).

- (2) The lackluster performance of advertising through bundling on the Internet. In Web advertising, bundling is typically represented by "banner advertising" where smaller banners, instead of big chunks of text, are bundled in non-advertising content, with further links to advertising information. The revenue generated through bundling by Internet publishers, per reader, is much lower than traditional media.

The number of US Internet users[2], aged 16 and over, has been estimated at 29 million in August 1995 (Hoffman *et al.*, 1996). Forty-nine per cent of Internet users use it daily (Find/SVP, 1997), and over 50 per cent of them use the Internet for more than ten hours a week (GVU, 1996) for purposes of research, education, entertainment, news, etc. (*Business Week*, 1997). Internet advertisement revenue, excluding those of classifieds and yellow pages, and discounted for the acknowledged 15 per cent discrepancy between posted and actual advertising rates, is \$241 million in 1996 (Jupiter, 1997). Using the conservative figure of 29 million readers of Internet publications in 1996, advertising revenue generated per reader of Internet publications is about \$8 in 1996. In comparison, readers of paper-based newspapers constitute 68.5 per cent of US adults (aged 18 and over) in 1996; newspaper advertising revenue, excluding classifieds revenue, was \$23 billion in 1996 (NAA, 1997). Thus, advertising revenue, excluding classifieds, generated per newspaper reader is \$177 in 1996. This is 21 times that for Internet publications.

- (3) The third observation is that pure direct advertising on the Internet, represented by direct e-mail, has met strong resistance from Internet users, and may have no chance to reach the \$35 billion a year level of traditional direct mail (DMA, 1997). A large majority of Internet users is reported to hate direct e-mail advertising passionately (Reuters, 1996).

Finally, we note the appearance of indirect advertising with reward on the Internet. One example is the Million Dollar WebCrawl advertising campaign organized by America Online in 1996. A customer reading a participating advertising Web page could click a button on the advertising Web page, sending her e-mail address. The customer was then automatically assigned an entry number. In November 1996, one entry was drawn from the assigned entry numbers and its holder was awarded \$1 million. This practice continues at www.getrichclick.com operated by Yoyodyne Entertainment.

The emergence of pure indirect advertising and indirect advertising with reward, and the lackluster performance of advertising through bundling and pure direct advertising, are consistent with the earlier analyses of advertising on the Internet. Admittedly, our evidence cannot be considered conclusive. Unfortunately, it would be extremely difficult, if not impossible, to conduct a definitive statistical study of Internet advertising, given its current state of flux.

Conclusion

This paper has analysed advertisers' choices of strategy, as affected by the decrease in searching and blocking costs and the emergence of efficient rewarding technology on the Internet. The analysis suggests that bundling may not be used as extensively on the Internet, as in traditional media.

The basic reasons for this "un-bundling" of advertising and content can be stated quite simply: the Internet increasingly enables customers to filter and block unwanted advertisements, which makes bundling less feasible for reaching potential customers, and it enables consumers to search for product

information more effectively, making bundling less necessary. Meanwhile, the Internet enables advertisers to attract customers to read advertisements by offering explicit reward, which makes bundling less preferable as the cost of interruption becomes more significant relative to access and search cost.

The current practice of advertising and content provision on the Internet is consistent with these conclusions. An implication of these results is that content providers on the Internet may not be able to rely on advertisers as a major source of revenue.

Notes

1. Industry.Net merged with AT&T's New Media Division and formed Nets Inc. in June 1996. Nets Inc. filed for Chapter 11 protection in May 1997 owing to its inability to secure long-term financing. However, the service of Industry.Net providing information about products from about 4,500 companies to some 380,000 engineers and purchasing agents has been maintained and is seeking a new owner (UPI, 1997).
2. More recent estimates put the number of Internet user much higher. Three such estimates are 47 million in the fourth quarter 1996, aged 16 and over (IntelliQuest, 1997); 28 million for February-April 1997, aged 18 and over (Find/SVP, 1997); and 40 million in April 1997, aged 18 and over (*Business Week*, 1997).

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