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The Future of Newspapers

A study of the World Wide Web and its relationship to electronic publishing of newspapers.

by

Edward C. Lindoo

A Dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy

School of Computer and Information Sciences
Nova Southeastern University

1998

Dissertation Approval

We hereby certify that this dissertation, submitted by Ed Lindoo, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the dissertation requirements for the degree of Doctor of Philosophy.

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An abstract of a Dissertation Submitted to Nova Southeastern University in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

The Future of Newspapers: A study of the World Wide Web and its relationship to electronic publishing of newspapers.

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Edward C. Lindoo

May 1998

The purpose of this study was to determine the effects that the World Wide Web (Web) is having on newspaper publishing. With the development of the Web, more than 4,000 electronic publishers have created Web sites, and are now in competition, not only with each other, but also with traditional media such as newspaper, magazines, radio and television. Due to a variety of factors, including advertisers expanding into Web markets, newspaper publishers perceive this new competition to be not only the most immediate, but also the most serious, systemic, long-term threat to traditional newspaper publishing to date. Therefore, the goal of this dissertation was to study the development of electronic newspapers, to ascertain how newspapers are currently using the World Wide Web, to suggest how new technologies, such as the Web, might be used by newspaper companies in the future to keep their share of the information dissemination marketplace, and to draw conclusions as to the importance of the Web to newspapers, now, and in the future.

Millions of dollars have been spent by newspapers to get their product on the Web, and millions more will be spent to keep their presence on the Web. However, few publishers are making money on the Web, and some have ceased Web operations, almost as quickly as they started. Through the implementation of a survey, questions such as profitability, staffing, pricing, promotion, and subscriptions were answered. Ultimately, this information can be used by newspaper publishers to enhance their Web product as they move into the future.

The success of this project was based on the literature review, the results of the survey, and the final analysis, which has put into perspective where the electronic publishing industry is today, and what newspaper publishers need to do in the future to remain competitive, while maintaining their share of the market. Although the literature contained much hype about the Web, the final results of this paper show that the newspaper industry, as a whole, is not in as much danger as most publishers fear. And because most newspapers have created Web sites, they have positioned themselves well to fight off competition.

Acknowledgments

There are a number of people and organizations that I wish to thank for their assistance and support.

I would like to extend my thanks to my advisor, Dr. Maxine Cohen, for her dedication, extra efforts, and time each week to meet and discuss the progression of this project.

In addition, I would like to extend my appreciation to the dissertation committee members, Dr. Guild and Dr. Scigliano for their time and input and to the project.

Also, thanks to Editor & Publisher for their assistance with the survey mailing list, and Tom Dahlin of Editor & Publisher for his help in the analysis of survey data.

Lastly, I would like to dedicate this work to my daughter Tiffany, and extend my deepest appreciation to my parents for their support and financial assistance, to my fiancé, Linda, and to all those who were in someway affected by the many hours spent by myself on this project.

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Chapter I

Introduction

Relevance and Need for the Study

The transformation from mechanical printing presses and pulp paper to digital print media, offers numerous opportunities for newspaper publishers to create and profit from a wealth of new products and services. However, competing with an array of nontraditional information providers on the World Wide Web, while simultaneously defending the newspaper franchise and reeducating staff, will present enormous challenges (Fidler, 1997).

The World Wide Web has seen "dramatic growth" (Dean Witter, 1995, p.1) during the last two years, and the ability for anyone to become an information provider is easy with "low barriers to entry" (O'Reilly, 1996, p.79). Phillips (1998) pointed out, that in just over three years (1995 - 1998), more than 8,000 Web sites have been built which are operated by print, radio, television, and non-traditional news organizations. Seybold (1995) believed this is a critical time for newspapers, but it is not clear what role newspapers will play as the future world of on-line communications is being shaped around them. Unfortunately, according to Seybold, there are few strategies for newspapers to follow when entering the World Wide Web. He contended that publishing on the Web presents a series of new challenges. Making a poor choice could prove costly (Seybold, 1995, #25-1, p.8).

Rogers (1996) maintained that many publications are rapidly setting up Web sites without considering the consequences. Moreover, he argued that this rationale is a "reflex action," (Rogers,1996, p.25) and one that is not conducive to newspapers' survival into the next century. Pogash (1996) stated that millions of dollars are being spent on newspaper Web sites, yet no one knows how to make it profitable. Pogash pointed out that even with huge amounts of money being spent on newspaper sites, most are offering the news free, and, few have been able to sell subscriptions to the on-line version. Furthermore, it is unclear what effect on-line newspapers will have on circulation figures at their print parents.

Though many newspapers are providing a home page, or Web site, in an effort to keep existing advertisers, there are varying degrees to which this is being done, none of which are cutting a clear path in the market place. There is no doubt that the movement toward interactive newspapers "is growing like gangbusters" (Seybold, 1995, p.3). The real question is whether or not this is the direction all newspapers should be taking, and are they investing in this new product (the Web), wisely?

Conniff (1994) pointed out, newspapers have spent more time and money than any other medium in trying to figure out the future. Fidler (1997) contended that with the announcement of practically every major discovery, or breakthrough in the past two centuries, there has followed a deluge of wild speculation proclaiming the birth of a new era, or a revolution in the making. For newspaper and magazine publishers, Fidler believed the transformation from mechanical printing presses and pulp paper to digital

print media, offers numerous opportunities to create and profit from a wealth of new products and services, and at the same time, presents enormous challenges. As a result, there is great relevance and significance in producing a research paper that will provide newspaper executives with a clear picture of past, present, and future direction possibilities for electronic publishing.

"Many motivations drive publishers to distribute news publications via the Internet" (Somogyi, 1995, p.23). However, the electronic edition tries to attract more readers as opposed to taking them from the existing paper readership. Traditional newspapers have always had some sort of borders; streets, rivers, lakes, and neighboring competition that effectively created invisible borders for their circulation area. Since the "Net knows no borders," news from a World Wide Web server halfway around the world is as close as news that originates from just around the corner. With the lack of "boundaries," special problems arise as publishers try to defend their markets. Where publishers were once in competition only locally, they now face competition from neighboring cities, states and countries. On the other hand, most of the monies that contribute to the prosperity of the local Web site, come from local advertisers (Somogyi, 1995, p.23).

Somogyi (1995) also pointed out that any enterprising ad agency with an account for a world-wide brand could find a Web site that sees traffic from all over the world and advertise there. Agency advertising is quite profitable for any newspaper, and loss of this revenue could be devastating. Publishers should be aware of this fact when explaining the

value of Web sites to potential advertisers. The bottom line is that publishers are being forced to compete in a new and difficult market.

In addition to new competition from the Web, there are other significant issues forcing newspapers to go digital. The NAA found, through their statistical research, that newsprint costs have risen dramatically, from $176 per metric ton in 1970 to $632 per metric ton in 1996. And, as publishers raise advertising rates and circulation prices to offset these costs, advertisers and consumers go elsewhere. With these environmental and competitive pressures, newspapers are in a state of rapid change that will last into the 21st century (Outing, 1996c).

Another significant issue is in the presence of the newspaper on the Web. Just getting a site up on the Web may not be enough. Cochran (1995) stated that too many products are "shovelware," where the printed material from the newspaper is simply made available in an electronic version on the Web. As Cochran pointed out, reading screen after screen of a 50-inch story can be a painful experience. Maniscalco (1997) agreed that just being a newspaper Web site is insufficient. As executive director of Boston.com, Maniscalco contended that newspaper Web sites must have a lot of content, and she believed that end users are looking for more interactive, user friendly sites. End users are searching for more community information, and if they cannot find it through the electronic newspaper, they will go elsewhere (Mansicalco, 1997). Fidler (1997) concurred, explaining that newspapers need to become the focal points on the Web for people who have an interest in their community.

With 30 million people using the Internet (according to a 1996 Internet survey) in North America (United States and Canada) at the end of 1996, the battles for audiences and advertising dollars are certain to be waged. Fidler (1997) stated that all media companies now see themselves struggling not just against each other, but also against potentially formidable competitors, and a public that seems to increasingly distrust and disregard mass media. A similar problem presented itself in the early 1980s as Videotex (an early electronic newspaper) was being launched.

Mantooth (1982) studied problems associated with digital media, examining the development of electronic newspapers in the United States, specifically those experimenting with the Videotex project. Ultimately, Mantooth discovered that newspapers had been unimaginative and subsequently unsuccessful in trying to create new products. She also discovered an important characteristic of new information dissemination technologies, such as Videotex, eroded traditional geographic barriers. In her findings, she concluded that competition could now come from neighboring communities statewide, from within the United States or from anywhere around the world. According to Mantooth, newspapers would be "vulnerable to a host of other [electronic] information providers" (Mantooth, 1982, p.iii).

At the time of her writing, Mantooth (1982) could not have known that Videotex would become "one of the biggest busts of all time"(Conniff, 1994, p.3), having failed after newspaper companies poured hundreds of millions of dollars into the development of Videotex. However, Mantooth's speculations may prove to be precedent in the age of the

Internet and the World Wide Web. For instance, Mantooth noted that "The touch of a computerized button will allow the reception on home television screens, in color" (Mantooth, 1982, p.2), information from news and feature stories, detailed weather reports and sports scores, stock listings, price and product information, restaurant menus, airline and bus schedules, TV and radio program listings, as well as Real Estate and classified listings.

Mantooth (1982) predicted two major changes in American newspapers as a result of the technological advancements: first, a reshaping of the newspaper, both as a daily product and as an organization; and second, a stronger need for newspapers to provide better dissemination of the news. Mantooth believed better dissemination was necessary because, with the vast amounts of information available, newspapers would need to structure, organize, analyze, and synthesize this information into something meaningful for the average American.

Mantooth (1982) concluded that an electronic publication was not economically feasible at many newspapers (in 1982), and would not be, until such a time when "a great many more people in the United States" (Mantooth, 1982, p.151) have home computers. With the explosion of the World Wide Web, the increasing ownership of personal computers, and WebTV, now commercially available, Mantooth's prediction may become tangible fact. Therefore, there is great relevance and importance in reviewing, not only the history of these services, but also more recent successes and failures of on-line services.

Problem Definition

Newspapers today are faced with increased competition, declining circulation and decreasing advertising revenues, according to the Newspaper Association of America (NAA) statistics from 1996 (NAA, 1996). The NAA also reported that newsprint costs have increased dramatically, rising 225% per ton from 1973-1996, with a 67% increase per ton from 1992-1996. O'Mara (1996) claimed that the decline of newspaper readership is a widely known fact. The NAA substantiated this with statistics showing that newspaper circulation has been in a steady decline since 1988 (NAA, 1996). O'Mara also found that as circulations continue to go down and layoffs, buyouts and down-sizing become the norm, newspapers are finding it more and more difficult to operate at a profit. Circulation, which drives advertising rates (the greater the circulation, the more that can be charged for an advertisement), is declining for a variety of reasons, such as changing reader preferences (people's tastes change), their living arrangements change, or their work patterns changes.

As an example, O'Mara (1996) cited the fact that society has become a service industry, with people moving out of the factory and into offices. These people now start work later, return home later, and are usually too busy in the office to read a newspaper, and too tired when they get home at night to bother with it. O'Mara pointed out that as a result of this social change, there is now more demand for early morning newspapers and very little demand for evening newspapers. O'Mara found that more than 500 evening newspapers have closed or switched to a morning edition over the past 35 years. Other

factors such as radio and television have also contributed to newspaper's declining circulation.

A major contributing factor to newspaper advertising revenue decline over the years has been "niche publications." Competition from "Auto Trader™", "Boat Trader™", and locally produced real-estate magazines for example, has had a severe impact on newspaper revenue (Maniscalco, 1997). Today, however, there is a new threat to newspapers that could radically change newspapers as we know them. At a newspaper industry sponsored seminar in January, 1997, Maniscalco stated that "the World Wide Web can kill us" from both a circulation and advertising point of view.

O'Mara (1996) contended that the World Wide Web, is viewed by many newspaper executives, as having the biggest potential to further erode newspaper circulation figures. Paterno (1996) agreed that the potential threat of the Web, with increasing competition from electronic publishers, has "left the newspaper industry in turmoil" (Paterno, 1996, p.16). Although Kelsey (1995) did not believe that the print newspaper business would disappear in the near future, he does point out that interactive, electronic distribution vehicles will "continue to eat away at both the circulation and advertiser foundations" (Kelsey, 1995, p.17TC).

Another concern for newspapers, classified advertising, represents, on average, 37% of newspapers' revenue (Reina, 1996, p.24). Reina pointed out that new Web publishing competitors, such as Autobytel™ (an automobile finding service), Match.com (personals), and on-line real-estate listings, are taking an increasing portion of the

classified revenue. New electronic publishers are going on-line, causing a potential for the serious decline in newspaper classified revenues (Reina, 1996). Resnick (1997) substantiated this in her findings, which show that overall newspaper operating profits could fall from the 1996 level of 14%, to just 3% in the next five years, if newspapers fail to address Web competition.

Levitan (1996) concurred and stated, there is no worse competition than on the Internet. As an example, Levitan explained that realtors are now setting up their own Web sites for the purpose of publishing their listings. This, he felt, would ultimately reduce, if not eliminate the advertisements realtors currently place with newspapers. Additionally, Criner (1996) stated that many cable companies are positioning themselves to provide Internet access for their customers. In doing so, cable companies will be able to offer their own services, including classified advertising , bringing them into direct competition with newspapers (Criner, 38).

Maniscalco (1997) explained that the Web is extremely conducive to searching classified advertising, and, anyone with a computer can compete against newspapers. Maniscalco pointed out that there are 22 year old kids with a server in their garage, "stealing our [newspapers] classified ads and competing against us" (Maniscalco, 1997). Forrester Research, an Internet research firm (as reported by Albers, 1997), predicted that by the year 2001, newspaper classifieds will have lost 40% of their real-estate advertising, 30% help wanted and 20% of their automotive advertising to Web competition. As a

result, the Web is viewed by many newspaper executives, as having the biggest potential to further erode newspaper circulation and classified figures (O'Mara, 1996).

An April 1996 issue of the Seybold Report on Publishing Systems stated, "The future world of on-line communications is being shaped around us, and it is not clear what role the newspaper will play." The report elaborated that newspapers are being challenged locally, nationally and internationally, as a source for information, news, and advertising. Furthermore, Equity Research, a Dean Witter publication, reported in their November 1995 issue, that paid advertising on the Web is easily expected to exceed $2 billion by the year 2000. The report suggests that this will have a profound effect on newspaper companies.

Dean Witter (1995) also stated that advertisers will continue to restrict their commitment to advertising in newspapers. As a result, Peterson (1996) explained that the attitude of many newspaper publishers is that they have to defend their market by offering some form of on-line services. Many newspaper publishers view the Web as being their greatest threat, and, at the same time, their greatest resource to expand their revenue, and most importantly, to protect their current market. Operating in "near panic mode" (Stoltman, 1997), these newspapers went on-line to protect their share of the local market. This is evidenced by the more than 2,500 newspapers that have placed their publications on the Web since 1995. Specifically, Outing (1996c) found that at the beginning of 1995 there were approximately 100 newspapers offering on-line services. This included bulletin board services (BBS), proprietary services such as Compuserve™, America Online™,

Prodigy™, and about 40 Web sites (exact count of each is not available). Editor & Publisher magazine (http://www.mediainfo.com) reported that as of July 1997, there were 1786 newspapers on-line, 1708 of which are on the Web.

Outing (1996c) indicated that he expected the number of newspapers offering on-line services to increase in number to over 2000 by the end of this century. As of February 1998, however, Editor & Publisher was reporting 2,544 newspapers on the Web. With the rapid growth of competition on the Web, as well as the unprecedented expansion of the newspaper industry on the Web, other media companies, such as magazines, television, and radio, have felt their market share threatened as well, and have responded by producing Web sites in rapid fashion. Phillips (1998) found that Web sites offered by other media companies at the end of 1997, included magazines (2,577), television (918), and radio (1386) sites.

With the rapid growth of the Web, newspapers are facing competition from an unprecedented number of other information providers. Due to a variety of factors, including advertisers expanding into Web markets, newspaper owners perceive this new competition to be not only the most immediate, but also the most serious, systemic, long-term threat to traditional newspaper publishing to date (Stoltman, 1997). The Web is viewed as having, potentially, the most marked, future impact in the continual rapid loss of advertising dollars for the newspaper industry. As a result, the newspaper industry views the competition of the Web to be a very serious problem.

Goal

The goal of this dissertation was to study the development of electronic newspapers, to ascertain how newspapers are currently using the World Wide Web, to suggest how new technologies, such as the Web, might be used by newspaper companies in the future to keep their share of the information dissemination marketplace, and to draw conclusions as to the importance of the Web to newspapers, now, and in the future. Through a review of current literature, attending various industry related conferences, and by conducting a survey of electronic publishers, including newspapers, magazines, radio and television stations that are operating Web sites, information was compiled and analyzed to compare and contrast the various practices used in the production of their electronic editions, and to reveal any industry trends that were taking shape.

A survey of Web publishers was implemented as a part of this dissertation, and was a major part of the goal of this dissertation. The purpose of the survey was to:

1. to gain a better understanding of the driving force behind Web publishing activities.
2. to measure the level of interest in the Internet among the four media groups, newspapers, magazines, radio, and television.
3. to understand who survey participants consider to be their major competitors.
4. to report how survey participants measure consumer activity within their Web site.

5. to understand if Web products are helping or competing against core products.
6. to report the staffing sizes of various media, and to identify any trends with regard to staffing size.
7. to ascertain if Web publishing is profitable.
8. to provide a comprehensive analysis of the survey data.

Barriers and Issues

Outing (1996c) found that many publishers seem to think the Internet is a fad that will die out, and that it is not a true technological revolution like telephony. As a result, these same publishers are showing little concern towards the potential threat of the Web. Fidler (1997) pointed out that newspapers were faced with a competitive situation in the early 1920s with broadcast radio.

Much like the Web today, the development of relatively low-cost, home radios and broadcasting stations, created a great deal of anxiety in many newspaper publishers. Some pundits argued that printed newspapers would be replaced by this new broadcasting media. As a result of this threat, a number of newspaper publishers started their own radio stations. Once the novelty wore off, however, publishers became discouraged, and in just a few years, many had sold their stations, or abandoned their sponsorships (Fidler, 1997, p.70).

During the 1950s, television rapidly displaced radio, as well as many general circulation magazines, such as Life, Look, and The Saturday Evening Post. Once again,

pundits predicted the death of print media. By the end of the 1960s, many publishers feared they might be right (Fidler, 1997, p.70). However, the death of the newspaper industry, as a result of radio and television competition, never came about. Undeniably, readership of newspapers dropped as a result, yet it had little effect on the overall health of the industry (Fidler, 1997).

Fidler (1997) contended that the past experience of early radio and television threats, and the resulting non-effect on the industry, are the most likely reasons why some publishers are not concerned about the Web. Outing (1996b) stated, at a time when companies like Microsoft, America Online and the telephone companies are sinking hundreds of millions of dollars into Internet content (much of it aimed at local newspaper markets), ignoring the Web and the competition it brings, appears to be a dangerous viewpoint.

Fidler (1997) explained that another, more recent failed threat to newspapers, Videotex, has contributed to feelings of déjà vu in a number of media pioneers, who, in the early 1980s poured hundreds of millions of dollars into various Videotex projects. Again, in 1979, pundits were predicting the death of mass media, which would come about from the growth of this on-line service. Videotex was a simplistic version of today's Web, and Knight-Ridder as well as the Times Mirror admittedly spent tens of millions of dollars in an effort to take defensive action in their market

Using a proprietary box connected to a television set, users of the service connected to the newspaper's database via modem. Unlike the Web, which allows world-wide access, Videotex users were limited to information on the local newspaper's database. As head of

the Videotex project for Knight-Ridder, Fidler (1997) witnessed much excitement, but not a lot of market penetration. Fidler explained that no matter what they did, customers followed the same predictable pattern -- they played with the system for awhile and then quit. These same traits are beginning to show up on the Web. As an example, CyberAtlas (1996) reported that the average number of hours users spend on-line, declined from 16 hours per month in 1995, to 12 hours per month in 1996. The report is based on 707 telephone interviews with on-line users conducted May 7 through June 2, 1996, with a margin of error plus or minus 4%. This 25% drop in usage suggests that once the newness wears off, consumers tend to use the Web less.

Fidler (1997) discussed the similarities between Videotex and the Web. For example, Videotex services were viewed as logical extensions of traditional printed newspaper, much like the thought behind newspapers on the Web today. Fidler stated that the perceived benefits of these services were their ability to provide news and information that was more timely, more thorough, and more personal. Videotex personnel found that with the exception of major breaking news, such as an approaching hurricane, subscribers spent a remarkably small portion of their time retrieving news.

Fidler (1997) believed that the lesson learned is that most subscribers view on-line news services as information faucets, to be turned on only when there is a need not being satisfied by other readily available sources. Rather than becoming a family information center, as many people involved in Videotex had hoped, it was used much more as a reference library (Fidler, 1997, p.148-153). Interestingly, the reference library trend is beginning to appear in Web usage today.

Another problem that Fidler (1997) discovered was wait-time. Subscribers had little patience for delays. Waiting two or three seconds for a page to display was not good enough. What customers wanted was nothing less than nearly instantaneous response times. And, unlike a newspaper, Videotex lacked an obvious structure that could be easily browsed. Although the Videotex design staff put a great deal of effort into visually enhancing the Videotex pages, the medium could not compete with the compelling moving images of television or the ease of reading newspapers and magazines. Instead, subscribers were confronted with a seemingly endless labyrinth of information.

Fidler (1997) contended that one of the critical lessons the Videotex experiment brought forth, was to treat market research for emerging media technologies with caution. In the real world people do not always want what they say they want, nor do what they say they will do, said Fidler. Fidler also stated that companies who launched the first U.S. Videotex services were misled into believing that a new media technology alone would be enough to instantly create a strong market demand. The issue at hand is whether or not the newspaper industry is seeing another Videotex in the Web, and, is this simply a new technology looking for a new market.

Kelsey (1995) believed that the real challenge for newspapers is to prepare for the future by finding ways to provide useful information faster and better than any of their competition. At the same time, newspapers need to deliver it in a manner that the consumer will be willing to use. Paul (1996) felt that the Internet, or more specifically, the Web, may become the delivery method for newspapers. Today, however, 35% of U.S. households have a personal computer, yet only 10% to 15% use the Web (Lorek, 1997).

Because of this low market penetration, a variety of companies are looking for ways to attract new users.

Dean Witter (1995) pointed out that 97.7% of the U.S. households have a television set, 61% have cable television, and as much as 93% of all U.S. households have the opportunity to connect to cable television. A number of companies, such as Sony, Phillips, and WebTV Networks have realized the large market penetration of cable television and the new audience of novice users it can bring to the Internet. As a result, these companies, and others, have begun partnering with cable companies, offering a new service, commonly called WebTV, a $300 component that turns a TV set into an Internet accessing computer terminal (Levins, 1997).

A 1996 study of non-Internet users, by Yankelovich Partners (as reported by Outing, 1996e), found that 52% would prefer to surf the Web on a television set as opposed to a personal computer. Although sales of WebTV devices were less than expected by the end of 1996, Jupiter Communications (an Internet research firm) predicted that the number of U.S. households accessing the Web will increase to 36 million by the year 2000, using some combination of personal computers and WebTV (Emigh, 1997). These figures, however, indicated that U.S. Web access will only be in the 25% range by the year 2000.

Fidler (1997) explained, a great majority of consumers are likely to remain content with the array of media and telecommunication technologies currently available to them (newspapers, magazines, radio, television), until they perceive clear and compelling reasons to adopt to new forms of cybermedia. In other words, just putting content on-line

is not going to attract consumers. Ease of use, low cost, and a variety of ways to get information (via personal computer, Web TV, personal digital assistants) will be required to attract new users to the market (Stoltman, 1997).

Another issue facing newspapers, is in generating new revenue while decreasing costs and increasing circulation/readership. Today, more than one half of a typical publisher's overall costs for the print product are associated with manufacturing and distributing. Shaw (1995) explained that because the cost of newsprint continues to rise, new methods for delivering the newspaper need to be found. As an example, Shaw described the Sunday Atlanta Journal Constitution which prints 700,000 copies. If just 350,000 copies could be delivered electronically, newsprint costs would be dramatically reduced.

Although the presence of newspapers publishing on the Web has increased dramatically, from less than 100 at the beginning of 1995, to 2,544 today, Levins (1997) found that over 90% of these Web sites lost money in 1996. A number of newspapers have tried to charge for subscriptions to their Web site, however, most have found consumers unwilling to pay, generally because they can find what they are looking for elsewhere. Only a few niche publications, such as The Wall Street Journal have been relatively successful in charging subscriptions to on-line editions (Stoltman, 1997).

Compounding the issue of Web site profitability, Levins (1997) found that many American newspapers are operating on business plans calling for their Web sites to become profitable within two years after start up. Levins explained that this may be un-realistic for many newspaper publishers because it is inconsistent with the Internet

advertising market. Levins pointed out that turning a profit on a new publishing product in two years is pretty remarkable. As an example, Levins cited the magazine industry which normally takes five to six years for a new product to become profitable. The underlying issue is whether or not newspaper publishers will continue to fund non-profitable Web sites, and will they be able to find ways to generate new revenues to make these sites profitable.

As digital print media expands into the general consumer market, publishers who own their own printing facilities will need to protect their huge investments in presses, distribution equipment, and facilities. At the same time, these publishers will be competing with a new generation of digital competitors who can afford to sell content and space at a substantially reduced cost to both consumers and advertisers. Until the digital print media market becomes large enough, publishers will be forced to support dual production and distribution operations. Thus, the challenge for print publishers will be to keep the demand for mechanically printed editions from falling too quickly, thereby turning their presses into expensive albatrosses.

The recent and rapid expansion of the industry partially explains why the goal of this dissertation has not previously been met, and, although it could have proved to be a barrier in the analysis proposed later in this report, it did not. Expansion of the Internet and the Web has resulted in numerous pundits providing newspaper industry related articles, in newspapers, magazines and trade journals. However, few scholarly pieces have been written about the newspaper industry and the problems they currently face. This potential problem is more fully discussed in the approach section of this dissertation.

Research questions to be investigated

Although the survey instrument asked over 60 different questions with specific content, the following nine questions capture the essence of what the research is trying to uncover and better understand.

1. Where do newspaper Web sites stand compared to their competitors in terms of archival information, page views, staffing requirements, content, and profit?
2. Does the size of the content on the Web site impact audiences, both in terms of size and number of page views? How does this influence banner prices and ultimately revenue?
3. What are the trends in staffing and integration of the Web staff to the core product newsroom among the four media groups?
4. Are alliances being formed among the four media groups? Are alliances being forming with any other business ventures? If they are being formed, what types of alliances are being formed?
5. What trends in technology can be seen among the four media groups? (i.e., common Web authoring tools, push technologies, outside measurement, and standardization of banner ads)
6. How wide-spread is the use of "shovelware" among the four media groups, and does this impact any other areas? (i.e., page views, standardization of banner ads, banner pricing, outside measurement, promotion budget, and staffing levels)

7. Where do newspapers stand compared to their competition in offering Web classified ads? Does having classified advertising impact the number of page views?
8. What trends in spending for promotion, staff, and equipment can be seen among the four media groups? Are any of these trends related to profit and loss issues?
9. Who do the each of the four media groups perceive to be their biggest competitors? How strong is this competition?

Definition of terms

The terms and definitions listed below are relevant to this proposed thesis, and unless otherwise noted, were retrieved from the techweb on-line encyclopedia at: http://www.techweb.com/encyclopedia

ActiveX - Independent program modules that work together at runtime in a Windows environment. Based on the Component Object Model (COM), ActiveX is Microsoft's third-generation component architecture (VBX and OCX were the first two). ActiveX objects may reside in stand-alone machines, on a LAN or intranet or on the Internet. Specialized for the Internet, ActiveX objects are automatically downloaded if the object is not in the user's machine.

Advertorial - an advertisement that imitates editorial format (Webster's Dictionary)

Agent - A software routine that waits in the background and performs an action when a specified event occurs. For example, agents could transmit a summary file on the first day of the month or monitor incoming data and alert the user when a certain

transaction has arrived. Agents are also called intelligent agents. When used with PDAs (Personal Digital Assistants), they are often called personal agents.

ASCII (American Standard Code for Information Interchange) - Pronounced "ask-ee." A binary code for text as well as communications and printer control. It is used for most communications and is in the built-in character code in most minicomputers and all personal computers. ASCII is a 7-bit code providing 128 character combinations, the first 32 of which are control characters. Since the common storage unit is an 8-bit byte (256 combinations) and ASCII uses only 7 bits, the extra bit is used differently depending on the computer.

Bandwidth - The transmission capacity of an electronic line such as a communications network, computer bus or computer channel. It is expressed in bits per second, bytes per second or in Hertz (cycles per second). When expressed in Hertz, the frequency may be a greater number than the actual bits per second, because the bandwidth is the difference between the lowest and highest frequencies transmitted.

Baud - The signalling rate of a line, the switching speed, or number of transitions (voltage or frequency changes) that are made per second. Only at low speeds are bauds equal to bits per second; for example, 300 baud is equal to 300 bps. However, one baud can be made to represent more than one bit per second. For example, the V.22bis modem generates 1200 bps at 600 baud.

BBS (Bulletin Board System) - A computer system used as an information source and message system for a particular interest group. Users dial into the BBS, review and leave messages for other users as well as communicate to other users on the system at the same time. BBSs are often used to distribute shareware. Software vendors use BBSs to obtain customer feedback and distribute updates and program fixes. A BBS may provide access to running an application via a technique known as a door.

BBSs had their heyday before the World Wide Web became popular. However, they still exist and many organizations maintain their support BBSs as an alternate to their Web sites. A BBS may often be a faster source for downloading popular software.

Broadband - (1) High-speed transmission. The term is commonly used to refer to communications lines or services at T1 rates (1.544 Mbps) and above. (2) A technique for transmitting data, voice and video using the same frequency division multiplexing (FDM) technique as cable TV. Modems are required for this method, because the digital data has to be modulated onto the line.

Browser - The program that serves as your front end to the World Wide Web on the Internet. In order to view a site, you type its address (URL) into the browser's Location field; for example, www.computerlanguage.com, and the home page of that site is downloaded to you. The home page is an index to other pages on that site that you can jump to by clicking a "click here" message or an icon. Links on that site may take you to other related sites.

CD-ROM (Compact Disc Read Only Memory) - A compact disc format used to hold text, graphic's and hi-fi stereo sound. It's like an audio CD, but uses a different track format for data. The audio CD player cannot play CD-ROMs, but CD-ROM players usually play audio CDs and have output jacks for a headphone or amplified speakers. CD-ROMs hold 650MB of data, which is equivalent to about 250,000 pages of text or 20,000 medium-resolution images. Sometimes 680MB is used as the capacity. It depends on whether the total number of bytes (681,984,000) is divided by 1,000,000 or 1,048,576, which is million on the binary scale.

Classified ads - (in-column versus display ad). In-column classified ads are generally considered "word" ads in the newspaper business in that they consist mostly of words, in a single column format (i.e. personals, autos for sale). On the other hand, classified display ads generally have borders around them, larger text, often have pictures or line art, and typically span multiple classified columns.

Click through - On the Web, the act of linking to a third party. Click-through rates are used to measure the effectiveness of one site persuading a user to go to another site. On "click-through advertising," royalties may be paid on this number.

Co-branding - a deal made between the newspaper organization and a Web site that offers some type of specialized content (niche) that the newspaper does not have. The newspaper gets a ready-made niche service to add to its overall Web site. The business model is a sharing of revenue between the newspaper and the niche publishing partner. Typically the publisher gets 5% to 20% of subscriber revenues from subscriptions generated by the co-branded site; the exact amount depends on the particular deal. Advertising revenues also are split, with the selling party keeping the majority share. Other factors in a co-branding deal can include an exchange of promotion and advertising between the two parties. (Note: from Editor & Publisher archives, http://www.mediainfo.com)

Communications - The electronic transfer of information from one location to another. Data communications refers to digital transmission, and telecommunications refers to analog and digital transmission, including voice and video.

Communications satellite - A radio relay station in orbit above the earth that receives, amplifies and redirects analog and digital signals contained within a carrier frequency. There are two kinds. Geosynchronous (GEO) satellites are 22,300 miles above the earth and rotate with the earth, thus appearing stationary. The downlink from GEO satellites back to earth can be localized into small areas or cover as much as a third of the earth's surface. Low-earth orbit (LEO) satellites reside no more than 500 miles above the earth and revolve around the globe every couple of hours. They cover small areas, and multiple LEOs are required to maintain constant coverage in one area.

Cookie - Data created by a Web server that is stored on a user's computer. It provides a way for the Web site to keep track of a user's patterns and preferences and, with the cooperation of the Web browser, to store them on the user's own hard disk. The cookies contain a range of URLs (addresses) for which they are valid. When the browser encounters those URLs again, it sends those specific cookies to the Web server. For example, if a user's ID were stored as a cookie, it would save that person from typing in the same information all over again when accessing that service for the second and subsequent time.

Cyberspace - Coined by William Gibson in his novel "Neuromancer," it is a futuristic computer network that people use by plugging their minds into it! The term is now used to refer to the Internet or to the on-line or digital world in general. See Internet and virtual reality.

Database - A set of related files that is created and managed by a database management system (DBMS). Today, DBMSs can manage any form of data including text, images, sound and video. Database and file structures are always determined by the software.

Electronic publishing - Providing information in electronic form to internal users or to subscribers via the Internet or an on-line service. The term also includes the publication of databases on floppy disk and CD-ROM.

E-mail - The transmission of memos and messages over a network. Users can send mail to a single recipient or broadcast it to multiple users. Sophisticated systems prompt recipients for a reply if they haven't responded within a certain time frame. With multitasking workstations, mail can be delivered and announced while the user is working in an application. Otherwise, mail is sent to a simulated mailbox in the network server or host computer, which must be interrogated.

FTP (File Transfer Protocol/File Transfer Program) - In a TCP/IP network (Internet, UNIX, etc.), a set of commands used to log onto the network, list directories and copy files. It can also convert between the ASCII and EBCDIC character codes. FTP programs are designed to handle all types of files. Unlike e-mail programs where graphics and program files have to be "attached," FTP is designed to handle binary files.

GUI (Graphical User Interface) - A graphics-based user interface that incorporates icons, pull-down menus and a mouse. The GUI has become the standard way users interact with a computer. The three major GUIs are Windows, Macintosh and Motif. In a client/server environment, the GUI resides in the user's client machine.

Hits - The number of times a program or item of data has been accessed or matches some condition. For example, each time you download a home page on the Web, that is considered one hit to that Web site. If a search yields 100 items that match the searching criteria, those 100 items could be called 100 hits.

Home page - The first page retrieved when accessing a Web site. It serves as a table of contents to the rest of the pages on the site or to other Web sites. See World Wide Web and URL.

Host - A computer that acts as a source of information or signals. The term can refer to almost any kind of computer, from a centralized computer that is a host to its terminals, to a server that is host to its clients, to a desktop PC that is host to its peripherals. In network architectures, a client station (user's machine) is also considered a host, because it is a source of information to the network in contrast to a device such as a router or switch that directs traffic.

HTML (HyperText Markup Language) - The document format used on the World Wide Web. Web pages are built with HTML tags, or codes, embedded in the text. A subset of SGML (Standard Generalized Markup Language), HTML defines the page layout, fonts and graphic elements as well as the hypertext links to other documents on the Web. Each link contains the URL, or address, of a Web page residing on the same server or any server worldwide, hence the "Worldwide" Web.

HTTP (HyperText Transport Protocol) - The communications protocol used to connect to servers on the World Wide Web. Its primary function is to establish a connection with a server and transmit HTML pages to the client browser. Addresses of Web sites begin with an http:// prefix; however, Web browsers typically default to the HTTP protocol. For example, typing www.yahoo.com is the same as typing http://www.yahoo.com.

Hypergraphic - A linkage between related information by means of a graphic image. It is the graphics counterpart of hypertext. Instead of clicking on a word, you click on an icon to jump to the related section, document or file.

Hyperlink - A predefined linkage between one object and another. The link is displayed either as text or as an icon. On World Wide Web pages, a text hyperlink displays as underlined text typically in blue, while a graphical hyperlink is a small graphics image. See hypertext and hypergraphic.

Hypertext - A linkage between related text. For example, by selecting a word in a sentence, information about that word is retrieved if it exists, or the next occurrence of the word is found. Hypertext is the foundation of the World Wide Web. Links embedded within Web pages are addresses to other Web pages either stored locally or in a Web server anywhere in the world. Links can be text only, in which case they are underlined, or they can be represented as an icon of any size or shape. The hypertext concept was originally coined by Ted Nelson as a method for making the computer respond to the way humans think and require information.

Interactive - Back-and-forth dialog between the user and a computer.

Internet - A large network made up of a number of smaller networks. The Internet is made up of more than 100,000 interconnected networks in over 100 countries, comprised of commercial, academic and government networks. Originally developed for the military, the Internet became widely used for academic and commercial research. Users had access to unpublished data and journals on a huge variety of subjects. Today, the Internet has become commercialized into a worldwide information highway, providing information on every subject known to humankind.

Internet TV - An Internet service for home TV use. It uses a set-top box that connects to the service via modem and telephone line and to the TV set for display. The service provides a user interface and signalling that has been specialized for display on a TV set rather than a computer monitor. WebTV was the first Internet TV service to obtain widespread distribution, initially licensing Sony and Magnavox to make set-top boxes.

Internet Service Provider (ISP) - An organization that provides access to the Internet. Small Internet service providers (ISPs) provide service via modem and ISDN while the larger ones also offer private line hookups (T1, fractional T1, etc.). Customers

are generally billed a fixed rate per month, but other charges may apply. For a fee, a Web site can be created and maintained on the ISP's server, allowing the smaller organization to have a presence on the Web with its own domain name. The major on-line services, such as America Online and CompuServe, provide Internet access but are still known as "on-line services," not ISPs. They generally offer the databases, forums and services that they originated over the years in addition to Internet access. While they may host a customer's home page, they typically do not host Web sites with unique domain names.

Intranet - An in-house Web site that serves the employees of the enterprise. Although intranet pages may link to the Internet, an intranet is not a site accessed by the general public.

Java - A programming language for Internet (World Wide Web) and intranet applications from the JavaSoft division of Sun. Java was modeled after C++, and Java programs can be called from within HTML documents or launched stand alone. The first Web browsers to run Java applications were Sun's HotJava and Netscape's Navigator 2.0. Java was designed to run in small amounts of memory and provides its own memory management.

Killer app - An application that is exceptionally useful or exciting. When new operating systems are on the horizon, people wish for one or two killer apps that run under the new system in order to justify the migration effort and expense. Otherwise known as rationale.

LCD (**L**iquid **C**rystal **D**isplay) - A display technology that uses rod-shaped molecules (liquid crystals) that flow like liquid and bend light. Unenergized, the crystals direct light through two polarizing filters, allowing a natural background color to show. When energized, they redirect the light to be absorbed in one of the polarizers, causing the dark appearance of crossed polarizers to show. The more the molecules are twisted, the better the contrast and viewing angle. Because it takes less power to move molecules than to energize a light-emitting device, LCDs replaced LEDs (see light emitting diodes) in digital watches years ago. The LCD was developed in 1963 at RCA's Sarnoff Research Center in Princeton, NJ.

LED (Light Emitting Diode) - A display technology that uses a semiconductor diode that emits light when charged. It usually gives off a red glow, although other colors can be generated. It is used in readouts and on/off lights in myriads of electronic appliances. It was the first digital watch display, but was superseded by LCD, which uses less power.

LEXIS-NEXIS - A service that provides on-line legal and business information. LEXIS was the first full-text information service for the legal profession. NEXIS provides the archives of The New York Times as well as Wall Street industry analysis, public records, tax information, political analysis, SEC filings and more.

Micropayment/microcommerce - Low-value transactions in electronic commerce. The ability to charge pennies for a transaction enables the selling of single articles from a newspaper or individual lookups from a dictionary or encyclopedia.

Mosaic - A Web browser created by the University of Illinois National Center for Supercomputing Applications (NCSA) and released on the Internet in early 1993. Mosaic was "the killer app" that caused interest in the World Wide Web to explode. Originally developed for UNIX, it was soon ported to Windows.

Motion video - Refers to moving video images, but does not imply a frame rate. Full-motion video refers to fluid, TV-like images displayed at a rate of 24 to 30 frames per second.

Multimedia - Disseminating information in more than one form. It includes the use of text, audio, graphics, animated graphics and full-motion video. Multimedia programs are typically games, encyclopedias and training courses on CD-ROM. However, any application with sound and/or video can be called a multimedia program.

On-line services/industry - The collection of service organizations that provide dial-up access to databases, shopping, news, weather, sports, e-mail, etc.

Outside measurement - Use of an independent self-regulatory auditing organization, responsible to advertisers, advertising agencies and the media they use, for the verification and dissemination of members' circulation data and other information for the benefit of the advertising marketplace (Lindoo, 1998)

PDA (Personal Digital Assistant) - A handheld computer that serves as an organizer for personal information. It generally includes at least a name and address database, to-do list and note taker. PDAs are pen based and use a stylus to tap selections on menus and to enter printed characters. The unit may also include a small on-screen keyboard which is tapped with the pen. Data is synchronized between the PDA and desktop computer via cable or wireless transmission.

PointCast - An Internet news system from PointCast, Inc., Cupertino, CA, (www.pointcast.com). It is a free service that transmits selected news and stock quotes from the Internet to your computer. Supported by ad revenues, it displays the information as a screen saver. Users permanently connected to the Net can request downloads at regular intervals. Dial-up users can download on demand. The PointCast software can be download from their Web site.

Push model (push technology) - A data distribution model in which selected data is automatically delivered into the user's computer at prescribed intervals or based on some event that occurs. Contrast with the pull model, in which the user specifically asks for something by performing a search or requesting an existing report, video or other data type.

Browsing the Web is an example of the pull model, while PointCast and Castanet are push models. PointCast was the first Internet service to become extremely popular due to pushing selected news and stock quotes into a user's machine at prescribed intervals. Marimba's Castanet provides a push model delivery system for updating applications as well as distributing publishing content.

RealAudio - The most popular streaming audio technology for the Internet and intranets from Progressive Networks Inc., Seattle, WA, (www.realaudio.com). A browser

equipped with a RealAudio plug-in enables news, sports and other programs transmitted from RealAudio servers to be heard on the user's computer.

Scoop (Scooping) - A slang term used in the news business which describes the act of being first to release the news in a particular product. As an example, Dallas Morning News chose to publish the alleged confession by Oklahoma City bombing suspect Timothy McVeigh on its Web site (www.dallasnews.com) rather than waiting for Saturday morning's paper.

Search engines - See Web search sites.

Shockwave - A browser plug-in that lets output from Macromedia's Director, Authorware and Freehand software be viewed on the Web. Shockwave is a popular plug-in for viewing animated sequences.

Shovelware - A term used to describe the method of copying the content from a print product and re-distributing it on the Web, with no modifications (Lindoo, 1997).

Spamming - To send copies of the same message to large numbers of newsgroups or users on the Internet. People spam the Internet to advertise products as well as to broadcast some political or social commentary

SPSS - A statistical package from SPSS, Inc., Chicago, (www.spss.com), that runs on PCs, most mainframes and minis and is used extensively in marketing research. It provides over 50 statistical processes, including regression analysis, correlation and analysis of variance. Originally named Statistical Package for the Social Sciences, it was written by Norman Nie, a professor at Stanford. In 1976, he formed SPSS, Inc.

Supercomputer - The fastest computer available. It is typically used for simulations in petroleum exploration and production, structural analysis, computational fluid dynamics, physics and chemistry, electronic design, nuclear energy research and meteorology. It is also used for realtime animated graphics.

Telecommunications - Communicating information, including data, text, pictures, voice and video over long distance. See communications.

Teletex - A broadcasting service that transmits text to a TV set that has a teletext decoder. It uses the vertical blanking interval of the TV signal (black line between frames when vertical hold is not adjusted) to transmit about a hundred frames. See Videotex.

Telnet - A terminal emulation protocol commonly used on the Internet. It allows a user to log onto and run a program from a remote terminal or computer. Telnet was originally developed for ARPAnet and is part of the TCP/IP communications protocol.

URL (Uniform Resource Locator) - The Internet addressing scheme that defines the route to a file or program. For example, a home page on the World Wide Web is accessed via its URL. URLs are used as the initial address to a resource, and they are embedded within World Wide Web (HTML) documents to provide a hypertext link to another document, local or remote.

The URL defines the protocol used, the name of the server (domain name), the port address, which is often a default and the path to the particular file. For example, the following URL is the address for the ordering page on The Computer Language Company's Web site, the publisher of the software you're using. The page is ORDER.HTML, which is stored in the public directory at the domain WWW.COMPUTERLANGUAGE.COM. The following URL is embedded within an icon on the home page. When that icon is clicked, the ORDER.HTML page is downloaded. http://www.computerlanguage.com/order.html

User friendly - A system that is easy to learn and easy to use. This term has been so abused that many vendors are reluctant to use it.

Videotex - An interactive information technology for home shopping, banking, news, weather and e-mail. It is delivered by telephone line to a subscriber's TV through a decoder box and attached keyboard. Information is broadcast and stored in the decoder as predefined frames that are retrieved by menu. Videotex delivers simple graphics and

limited animation. Videotex is currently used in several countries worldwide. It was tried in the U.S. during the mid 1980s, but failed after several companies invested hundreds of millions of dollars.

Viewtron - Knight-Ridder's version of Videotex.

Virtual reality - An artificial reality that projects the user into a 3-D space generated by the computer. Virtual reality, or VR, can be used to create any illusion of reality or imagined reality and is used both for entertainment and training. Virtual reality has been around for some time now. For example, flight simulators, used to train airplane pilots and astronauts, have provided a very realistic simulation of the environment, albeit extremely expensive.

Web search sites - There are various Web sites that maintain directory databases of other Web sites. Yahoo! was the first to gain worldwide attention. Some sites search other sites. Most sites are free and are paid for by advertising, while others charge for the service.

Web server - (1) A Web site, which includes the hardware, operating system, Web software and all other software and data contents. (2) The software that manages the Web networking functions in a Web server. It accepts requests from Web browsers to transmit HTML pages and other stored files.

Web site - A server that contains Web pages and other files which is on-line to the Internet 24 hours a day. See World Wide Web, intranet and HTTP.

WebTV - The first Internet TV service that obtained widespread distribution of its set-top boxes to the retail channel. See Internet TV.

World Wide Web - An Internet function that links documents locally and remotely. The Web document is called a Web page, and links in the page let users jump from page to page (hypertext) whether the pages are stored on the same server or on servers around the

world. The pages are accessed and read via a Web browser such as Netscape Navigator or Internet Explorer.

Summary

In the 1980s, many large daily newspapers considered Videotex a "can't-miss" technology, one that would boost an industry that was suffering from stagnate circulation and rising newsprint costs. Videotex, however, was a technology trying to drive the consumer market, and failed due primarily to lack of interest. Today, newspaper publishers are again looking at a similar technology, substituting the Internet and World Wide Web for failed Videotex experiments like Knight-Ridder's Viewtron and Times Mirror's Interactive TV.

Fidler (1997) argued that the news industry's focus on on-line interactivity is misguided. He contended that the need for real-time interconnectivity is a must for academics and business professionals, but that it will not attract the average family. Even-so, a lot of money will be spent developing all sorts of Web and interactive television services that people neither want, nor are willing to pay for, says Fidler. Ultimately, the possibility of newspapers investing heavily in the Web, with little return, may prove to be a harsh reality.

The idea that everyone is a publisher, that everyone can create a wonderful and exciting Web site, while being nice in theory, defies the laws of common sense. "Everyone is not a publisher, no more than everyone is capable of climbing Mount Everest" (It's the Future, 1996, p.2). Newspaper publishers should realize that not everyone will be their

competition, that their newspaper has a strong presence in the market, and that the Web is nothing more than another niche publication that the newspaper needs to compete with at some level.

Chapter II

Review of the Literature

Introduction

Almost overnight, the World Wide Web has grown into a mass medium which is perceived by most traditional media producers (newspapers, magazines, radio and television) as a very serious threat to their long term existence. New media competition is not a foreign concept to newspapers, with experiences occurring first in the early 1920's with radio, and then again with television in the 1950's.

Today, the Web seems to be a new threat to traditional media, even though few electronic publishers are making money on the Web. Much has been written about the Web, and there are wild predictions and there is much hype about what may happen. Mann (1997) stated that with the Web, as with any new technological development, there is an enormous difference between the potential of the technology and its actual uses. The end result, therefore, may be far from the fantastic predictions being put forth.

This dissertation offers a look into past experiences by electronic publishers, reviewing their successes and failures, and providing an intensive study of some 3,000 Web publishers, with the primary focus being on the relationship between the Web and traditional print newspapers.

History of newspaper competition

During the golden age of print media, that period from about 1890 to 1920, publishing entrepreneurs such as William Randolph Hearst, Joseph Pulitzer and Lord Northcliffe, flourished and became as well know to their readers as celebrities and world leaders. Fidler (1997) explained that during those years, publishers' power and influence were so great that they could make or break politicians and rally support for their own personal causes.

After 1920 however, newspapers were forced to redefine their role with the introduction of a new, far more powerful mass medium called broadcast radio. Like the Internet and cyber media of today, the development of low-cost radio receivers and electronic broadcast media created a great deal of anxiety as well as excitement. Even then, people argued that printed newspapers were doomed by electronic media. However, in the early years, broadcast radio had little effect on print publishers (Fidler, 1997).

By the beginning of the 1930's, advertisers discovered that broadcast radio could deliver a large national audience. Print publishers saw radio as a formidable competitor for advertising dollars as advertisers eagerly spent their money on radio exposure. Fidler (1997) found that the majority of print publishers attempted to boycott advertisers who placed radio ads, and refused to publish radio schedules and promotions. As a result of the perceived threat from radio, many publishers revamped their formats and content to broaden their newspapers' appeal, and began experimenting with special sections, departments, and packages, targeted at specific groups. Weekend magazines, women's sections, children's pages, features pages, and comics flourished.

Reporting styles changed as well, and newspapers began expanding stories to provide more in-depth coverage than radio. During the 1930's and 1940's, Fidler (1997) explained that newspapers provided more background information and analysis than ever before, and, as a result, this is considered one of the most significant developments in the newspaper industry during that period.

Shortly after World War II, newspapers were faced with yet another new, and even more powerful electronic medium, television. But television's immediate threat was to radio, not newspapers. TV rapidly displaced radio as a customer preferred media. Once again, pundits predicted the death of print media, which never happened, and by the early 1980's, most newspapers had, once again, undergone substantial changes in content, design, and technology. Today, print media professionals have conceded that no future redesigning, content improvement, or advanced color press can be expected to displace electronic media.

Thirty years ago, electronic media were confined to radio and broadcast television. Computers, cellular phones, lasers, fiber-optic networks, CD's, digital fax machines, and video cameras were not even thought of, except within the realms of a few research laboratories.

Today, a revolution, brought on by the explosion in consumer on-line and Internet services, is unfolding for traditional publishers. Consumers and publishers are facing a quantum leap in the amount of information and other content that can be easily accessed. With this vast amount of information comes many opportunities, and competition (Fidler, 1997).

As an example, Fidler (1997) stated that more than three-fourths of the U.S. newspaper industry's revenue comes from a combination of classified and retail advertising. Advertising accounts for about one-half of the magazine business revenue, while being the only source of revenue for radio and television broadcasters.

Overall, newspapers continue to have high consumer acceptance, reaching about two-thirds of all U.S. households (NAA, 1997). With only five major categories of information competitors:

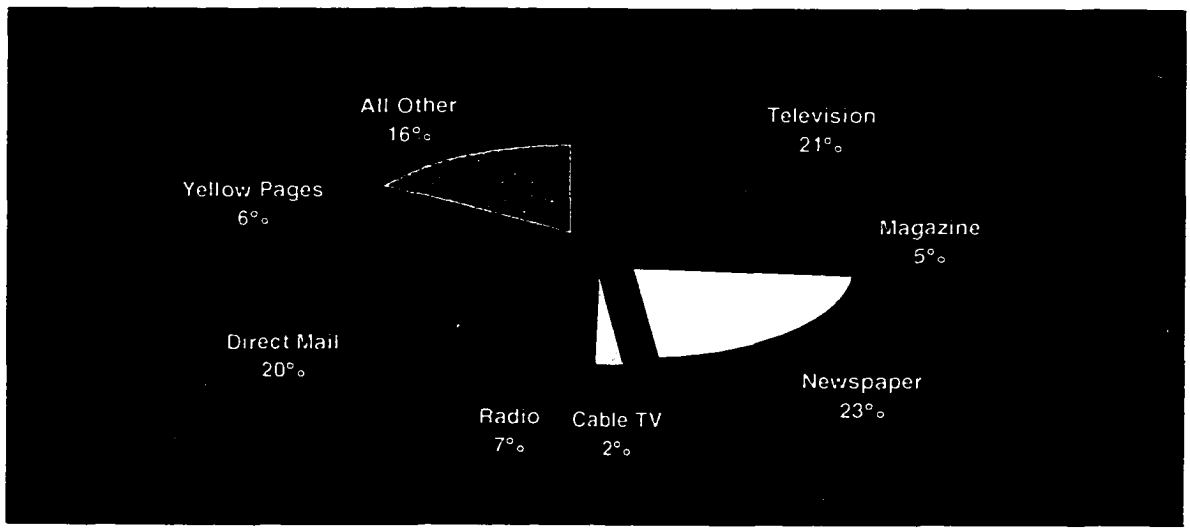

Figure 1. Percent of 173 billion dollar U.S. advertising revenues earned by media related companies during 1996 (source Newspaper Association of America, 1997).

print, radio, television, computer companies and the telephone industry, newspapers, in 1996, led all competition for advertising dollars with revenues of 38.2 billion dollars, according to 1996 statistics from the NAA (Figure 1).

Although newspapers and television moderately compete with each other, Elderkin (1996) believed that the multimedia arena is where newspapers and television may ultimately go "head-to-head." Elderkin stated that newspaper articles will eventually be

accompanied with voice synthesis, music, and more color photographs, as well as motion video. This will ultimately create greater consumer interest, resulting in a larger audience, which means higher advertising revenues.

Elderkin (1996) does point out, however, that newspapers will have to restrict themselves on how far they carry multimedia, because of multimedia's complexity and the expense to produce it. Consequently, newspapers will have to find the point where they can use multimedia to maximize their audience while maximizing their advertising potential.

History of Electronic Publishing

Many newspapers have attempted to take advantage of the shift to a digital medium for several decades. Paul (1996) pointed out the first major change was in the shift from hot to cold type (electronic) production systems which swept the newspaper industry worldwide. This allowed newspapers to compile databases of the text that flowed through the production system, and the by-product was the electronic news archive. As a result, newspapers saw the potential of reselling access to information that had initially run in discardable paper form.

Today newspaper companies perform two essential functions. First, they gather, edit, deliver, and archive local news. Many store their files in digital form which can be accessed on a customized, real-time basis from anywhere in the world. Second, they gather the local advertising dollars to pay for their activities. In 1996, this amounted to

some 38 billion dollars in business, according to 1996 statistics from The Newspaper Association of America (NAA, 1997).

Various forms of electronic publishing have been in use for a number of years. Many cable systems have devoted at least one channel to a continuous "scroll" of news, weather and stocks, a primitive kind of teletex. Technological advances, declining costs, marketing initiatives and convenience, are all reasons why electronic publishing is becoming a mass medium. Electronic publishing offers users access to a vast library of information. Distance is no longer a barrier as users in small towns can dial up databases anywhere (Fidler, 1997)

The concept of electronic publishing is simple: pages of text and graphics are displayed on a television set or other inexpensive screen. Neustadt (1982) stated that the technology is relatively inexpensive and easy enough to use that it may become a mass medium. It can give people information they now get from newspapers, magazines and books, and can do it quickly, conveniently and with access to vast information resources. The actual publishing function includes deciding what content to provide, operating the computers that will hold the electronic pages, and selling the service to consumers. Neustadt (1982) believed that this part of the business has the potential for considerable diversity.

With the thought of great potential in mind, a number of companies including Knight-Ridder began experimenting with a product called Videotex in the early 1980's. The intent of Videotex was to provide subscribers with electronic access to news, weather, sports, and a variety of services provided by the local newspaper. Interest in Videotex was expressed by a wide variety of business and industrial concerns, including newspapers,

magazines, radio, and television companies. Mantooth (1982) found companies such as ABC, CBC, NBC, Fox Cable, and Times Mirror, all had a great deal of interest, as well as financial backing in the project.

As a member of the original Knight-Ridder Videotex development team, and ultimately the director for Viewtron (Knight-Ridder's version of Videotex), Fidler (1997) had the privilege of sharing in the excitement as well as the problems associated with this new medium. The concept of Videotex was somewhat similar to the WebTV model of today. The big difference is that WebTV has access to databases around the world, whereas Videotex had access only to the local newspaper database. Sigel (1980) described the Videotex service as electronic information from a local newspaper's database, that would be broadcast on unused lines of the normal TV picture and displayed on any TV set equipped with a special adapter to read the information.

From the inception of Videotex, U.S. Videotex services were viewed as a logical extension of traditional printed newspapers. It was perceived by most publishers that the benefit of these services was their ability to provide news and information in a timely, thorough, and more personal fashion. The assumption was that Viewtron would become an up-to-the minute newspaper, capable of providing a wealth of information not typically found in mainstream media. "This proved to be wishful thinking" (Fidler, 1997, p.151).

One over-riding problem that was revealed early on, and that no-one wanted to hear at the time, was that access to a database of general news, information, and advertising was not nearly as appealing as having the ability to communicate with other subscribers. Fidler (1997) stated that nearly everyone involved in the project saw Viewtron as an advertiser-supported electronic newspaper, not as an interpersonal communication medium. Videotex

customers also complained about the access speeds, which were only 1200 baud at that time. Drawing graphics on the screen was an extremely slow process, and although 33,600 baud access is available today, even faster access speeds are still being demanded by consumers.

Another serious problem with Viewtron was in keeping information up to date. Despite the extensive effort and expense put forth by the Viewtron staff in covering neighborhood events, subscribers frequently found that the desired information was either out of date, or simply nonexistent. Fidler (1997) explained that, for sports enthusiasts, this was particularly disappointing, because the service found it difficult to maintain current scores and statistics for local high school and community teams. And, even though volunteers were enlisted to provide coverage of local games, they were generally unreliable. For the most part, Fidler found that subscribers could get the information they wanted more easily and more quickly from other sources.

From the start, Videotex was a new technology looking for new markets. In 1983, during the startup of Videotex, newspaper publishers were asking the same questions that are being asked today: "How many customers want pushbutton access to information?" "What are they willing to pay?" "What is the proper audience for these services?" and "What type of information is best suited to electronic dissemination in general?" (Fidler, 1997, p.156).

Similar to what we read about Web publishing today, Mantooth (1982) found dozens of major corporations convinced that the Videotex industry would grow dramatically in the 1980's. A conservative forecast by AT&T at that time estimated that as many as 7% of all U.S. households, some eight million homes, would have Videotex

terminals by 1990. Many others, including Strategic Inc., a San Jose, California based marketing firm felt the AT&T predictions were too low. Strategic Inc. estimated that as many as 12 million homes would have some form of Videotex service (Mantooth, 1982).

The conservative predictions from AT&T never came true, and, after hundreds of millions of dollars were spent on Videotex experiments around the country, the services were discontinued in the mid 1980's. Hollander (1994) stated that Videotex failed, not because of hardware and software problems, but because of a lack of reader interest. Consumers that did use the service, however, did so to communicate with each other over important community issues, rather than to search out news.

After the Videotex failure, several years passed before newspapers aggressively started trying other electronic publishing avenues such as bulletin board systems and commercial on-line services. By the beginning of the 1990's, the U.S. market for consumer on-line technology had changed dramatically. Three major on-line services (Prodigy, CompuServe, and America Online) began attracting a modest base of subscribers. Paul (1996) explained, in what he called "2 BW" (2 years before the Web, or about 1993), most newspapers, motivated by a fear of being left behind, began experimenting with electronic publishing. Publishers had a choice of using Prodigy, CompuServe, or America Online, all three providing e-mail, chat forums, Internet access, file transfers, and electronic versions of popular newspapers and magazines. Most newspapers went with America Online because of its ease-of-use, and although publishers initially planned to take a low-budget approach, they quickly discovered that on-line publishing was much more labor intensive than they had anticipated (Fidler, 1997).

Bulletin Board Services (BBS) have been slowly developing since the first one started in Chicago in the late 1970's, providing an extremely efficient way for consumer, commercial, and nonprofit special interest groups to share information. Philo (1995) explained that a BBS is simply an interactive information service that enables customers, via a personal computer and modem, to share information on related interests, exchange advice, and socialize using PC-based BBS software.

In effect, the BBS are micro on-line services catering to an incredibly diverse range of special interests. There are currently over 60,000 BBS in the United States and over 100,000 worldwide, organized around a variety of content categories including news, entertainment, education, shareware, software, information services, and adult entertainment (Philo, 1995). A BBS is typically accessed through a standard phone by calling a local number. Consequently, any BBS out of the consumer's local phone market would result in a long distance call, making it somewhat prohibitive to call beyond the local calling area. Today, however, many BBS systems are connected to the Internet and World Wide Web.

Another early form of electronic publishing was found in a technology called CD-ROM, which became popular in the early 1990's. Used mainly by libraries and researchers, CD-ROM technology gives the user immediate access to the full texts of newspapers, magazines, and encyclopedias. Through his research, Stover (1991) found a number of newspapers producing CD-ROM versions including the Wall Street Journal, Christian Science Monitor, Los Angeles Times, San Jose Mercury News, and the Boston Globe. CD-ROM publishing, however, is not for the average person. Stover explained that the average price for a CD-ROM of these newspapers, in 1991, was about $1,700 for

the first year, then $1,000 each additional year. Another problem associated with the CD-ROM technology was updates. Half of the companies supplied monthly updates, while the other half gave quarterly updates. One of the disadvantages of the early CD-ROM technology was the lack of images, both photos and electronic drawings, that went along with the article. The CD-ROM merely contained the ASCII text from the original article.

In summary, by 1993 (pre-Web), few newspapers were available via computer. Those that were available were generally found on America Online, while the remainder maintained their own Bulletin Board systems. Some CD-ROM versions of newspapers were being produced, mostly for on-line retrieval services (which charged for their services), or for libraries.

Early problems of electronic publishing

Michael Noll, an AT&T executive involved in the market trial of Viewtron (as reported by Fidler, 1997), publicly challenged the fundamental hypothesis underlying the Videotex movement. Noll argued that large databases of general interest information would not satisfy the information needs of consumers because ways of satisfying these needs are not well understood. Fifteen years ago, Noll raised concern that computerized databases might be too time consuming, difficult to use, and inadequate for most people. Noll's suggestion that transaction and interpersonal message service might be of more importance than information retrieval to on-line customers, has proven to be quite prescient, said Fidler (1997).

While Viewtron was promoted as an electronic newspaper, there was very little about the service that resembled its print counterpart. Fidler (1997) explained that the electronic edition lacked an obvious structure that could be easily browsed. Instead of a familiar, manageable package of information with a definite beginning and end, such as a newspaper, Viewtron subscribers were confronted with a strange, seemingly endless labyrinth of information. Today, this information overload problem is compounded one hundred fold, with literally millions of places to retrieve information on the Web.

In the end, the Viewtron design staff found that no matter now much effort they put into visually enhancing the Videotex pages, the medium could not compete with the compelling moving images of television or the ease of reading newspapers and magazines. In hindsight, Fidler (1997) claimed that the attempt to position Viewtron as an electronic newspaper was a mistake. He believed the key error was not recognizing quickly enough that Videotex derived most of its dominant attributes from the interpersonal domain, rather than the document or broadcast domains.

In 1995, about the time the Web started being used seriously, an interesting project based on cable television feeds into the home was started in the northwest suburbs of Orlando Florida. This was known as Time Warner's interactive TV system, an experimental program made up of 4000 users connected to large media servers via cable TV. McKinnon (1996) described the system as one in which subscribers use their TVs, not just for regular cable programming, but also to order movies-on-demand, customized news, games, shopping and banking services, even pizza delivery, all at the touch of a button. In various trials around the country, including Orlando, subscribers selected for test marketing of the interactive system appeared to be enthusiastic about the service, but

not enthusiastic enough to pay a lot more for interactive TV. With a few extra whistles and bells, the interactive TV experiment was little more than Videotex ten years later. After two years of test marketing, Time Warner's interactive TV system still has an uncertain future, especially since the April, 1997 announcement that Time Warner would eliminate much of the system services by the end of 1997 (Ellis, 1997). At the time of this writing the system had in fact terminated operations.

McKinnon (1996) believed that the interactive TV industry has gone into a stall because people are not willing to pay more than $10 per month as an additional charge on their cable bills, and, when it comes to the Internet, these same people expect most everything to be free. Another major problem with both interactive TV and the Web lies in the distribution model. Imagine newspapers today being distributed a little differently. For example, what if the newspaper company did not deliver a daily paper to the consumer's home, unless that consumer telephoned the newspapers circulation department every day to request it. Crosbie (1996) asked "Would consumers phone each and every day?" and "Would that print newspaper build and maintain appreciable circulation and attract advertisers?" (Crosbie, 1996, p.8). The answer is "no" to both questions, however that is the precise circulation model that most Web newspapers are using today.

Print newspapers, compared to their electronic counterparts, are much easier to use. As an example, Crosbie (1996) stated that once the consumer subscribes to the paper, it is on the doorstep each and every day. On the other hand, to get the newspaper electronically, the consumer has to boot up a computer, dial an Internet service provider (ISP), run Netscape or some other browser, and revisit a Uniform Resource Locator (URL) day after day to get to the newspaper's site. Then, to retrieve what the consumer is looking

for, they wait as each page, photo, and graphic, downloads at various speeds while tying up the household phone line, and paying an access charge for this privilege.

There are other problems with electronic publishing. Harper (1997) stated that although many American newspapers offer an on-line edition, most are simply an electronic version of the printed newspaper, or as it is referred to on the Internet, "shovelware." Kline (1996) concured, stating that hundreds of newspaper are making a big mistake, focusing on simply putting their content on-line.

McAdams (1997) noted that when a major newspaper first goes on the Web, it often does something unique in its design. Then, however, the designers tend to stay with one design, making few, if any, changes. This action is probably deep rooted, back to the print version, where it was always a major event to change the design. McAdams (1997) stated that with the printed version of the newspaper, many proposals are submitted and evaluated before one is chosen, and the process can take months. Furthermore, years may go by before another redesign is even considered. However, in the rapidly changing environment of the Web, McAdams (1997) believed that new functionality needs to be introduced several times each year.

On-line publications need to make allowances for continual, rapid change and create designs that are not so rigid and similar across an entire site. A different kind of production environment from those that exist in most newsrooms in North America, is called for, according to McAdams (1997). Editorial workers need to be able to communicate easily with the graphic designers, artists and programmers. For instance, editors need to understand the technology, and the programmers and other technical people need to understand editing.

Even with the Web in its infancy, there have been layoffs, cutbacks, and closing of some newspaper Web sites. In May 1997, Noack (1997) found the Web site of The Gazette-Times in Corvallis, Oregon, was taken off line by the newspaper's management, because it "wasn't working." At about the same time, Web staff cutbacks also occurred at The Winona Daily News in southeastern Minnesota, and the Web site of the Griffin Daily News in Georgia was shut down.

History of the Internet

The Internet (initially called ARPANET) was launched in 1969 by the United States military. The purpose was to have a communications system that did not have a central nerve center, and thus could not be easily destroyed by a nuclear attack. The Internet was designed in such a way that if a message was sent, but blocked on the way to its destination, the Internet would keep searching until it found a way around the block. During the 1970's, the Internet grew slowly, and was, for the most part, used by researchers and scientists to communicate with each other and transfer information.

In 1982, a similar network, Eunet was established in Europe. By 1984, the Japanese Unix Network was set up. With the U.S., European, and Japanese networks in place, as well as the American National Science Foundation's five networked supercomputing centers, tremendous growth resulted. As an example, Forbairt (1995) stated that in February, 1986, there were 2000 host computers, however, by November 1986 there were over 5000 host computers. Fidler (1997) stated that at the end of 1989, more than three million users were connected via 5,000 hubs in 26 countries.

A turning point in the commercial use of the Internet was seen in 1991, with the formation of the Commercial Internet Exchange (CIX), a group of commercial Internet providers. The formation of the CIX established co-operative agreements to let users communicate with others, regardless of which network provided their network connection. As a result, numerous colleges around the world were connected to the Internet, as well as users on some of the more proprietary networks such as CompuServe, America On-line and Prodigy. By 1995, Fidler (1997) found an estimated 30 million people in more than 100 countries had access to the Internet, an increase of 27 million users in just five years.

Though the original purpose of the Internet was to facilitate the electronic exchange of research, programming, mail, and other information among educators and researchers, it evolved in ways no one planned or expected. What has mattered most to Internet users, said Fidler (1997), is the free exchange of ideas and discussion of values, and much of this has been done through the use of e-mail.

Forbairt (1995) explained that e-mail, the electronic version of a letter, was, and still is, the most widely used option on the Internet. E-mail is highly efficient, speedy and an inexpensive means of sending and responding to messages. Also used extensively, Telnet (a terminal emulation program that allowed access to remote systems), FTP (a file transfer protocol) for transferring files between systems, and various Internet search utilities (for finding articles, people, general information), the Internet was a somewhat crude, yet efficient way to send and receive information.

In 1992, the Switzerland based CERN Research Institute introduced the World Wide Web, sparking a flood of new users to this new medium. Forbairt (1995) stated that, as a result of the Web, host computers on the Internet reached a staggering 6.6 million by

July 1995, 63% of which were located in the United States. The Web, however, is not the Internet. The Web is simply a tool that runs on top of the Internet, effectively providing the end user with a very friendly graphical user interface (GUI). The Web is the multimedia section of the Internet, and although sound and video are being used more and more, in most cases they are very slow to download to a computer. Forbairt stated that improvements are being made all the time, however it will be a number of years before the Web becomes a truly multimedia environment.

Software, commonly referred to as a browser, is required to access the Web from a computer. Also required is a physical network connection, from the computer the end user is working on, to a host computer on the Internet. Once this connection is established the user simply points (with the mouse) and clicks to get what they want, or to" jump" from site to site around the world.

Today, the primary vehicle for interactivity is the Internet, which is supported by a worldwide network of computers based on common software and communications standards. Although many of these technologies have been around for over 25 years, Philo (1995) noted that, only recently, has the Internet been embraced by a wide variety of companies. These companies see the Internet and the Web as an opportunity to develop new products, services, and markets around the world.

Weber (1995) stated that in 1991, there was disbelief that networked information and a commercialized Internet would happen. However, it did happen, and Weber describes this paradigm shift from "Old World" or the traditional print based medium, to "New World" or on-line publishing. One of the trends that surfaced as early as 1991, was the personalization of information, referring to the premise that individuals acquire

information in small chunks -- articles, chapters, paragraphs and single images -- rather than in larger units, such as books and issues of periodicals.

Wilson (1997) felt that the Internet and Web are here to stay, and will continue to grow in its diversity of services. Currently, a variety of goods and services can be purchased via the Internet, including items ranging from automobiles to airline tickets, and every day, new services are being added. As an example, Wilson found that citizens in Massachusetts can even renew driver's licenses and license plates over the Internet. The major difficulty lies not only in what is out there, but also where and how to find it.

O'Reilly (1996) stated that one of the greatest challenges facing the Internet over the next five years is the need to commercialize its activities. Some of the most useful economic models for this, come not from the telephone, cable, or computer industries, but from print publishing. O'Reilly (1996) pointed out that the model of information supported by advertisers, subscriptions, and the creation of products and brand identities, that stand out in a sea of information, will be a key to the development of future information services on the Internet.

Interestingly, a 1996 study by Scarborough Research found that on-line users are more likely to be heavier newspaper readers or radio listeners and light television viewers. Thus, Scarborough Research (Consoli, 1997) concluded that the growth of on-line usage could negatively impact television much more than newspapers.

History of the Web

Two major developments came about in the period from 1989 to 1994: Mosaic and the World Wide Web. Fidler (1997) stated that without these technologies, or their equivalents, widespread commercialization of the Net would not have been possible. Mosaic was developed in 1992, by a small group of software developers at the University of Illinois's National Center for Supercomputing (NCSA), led by Marc Andreesen. Mosaic is a dynamic graphical user interface (GUI) that greatly facilitated the browsing of Internet databases.

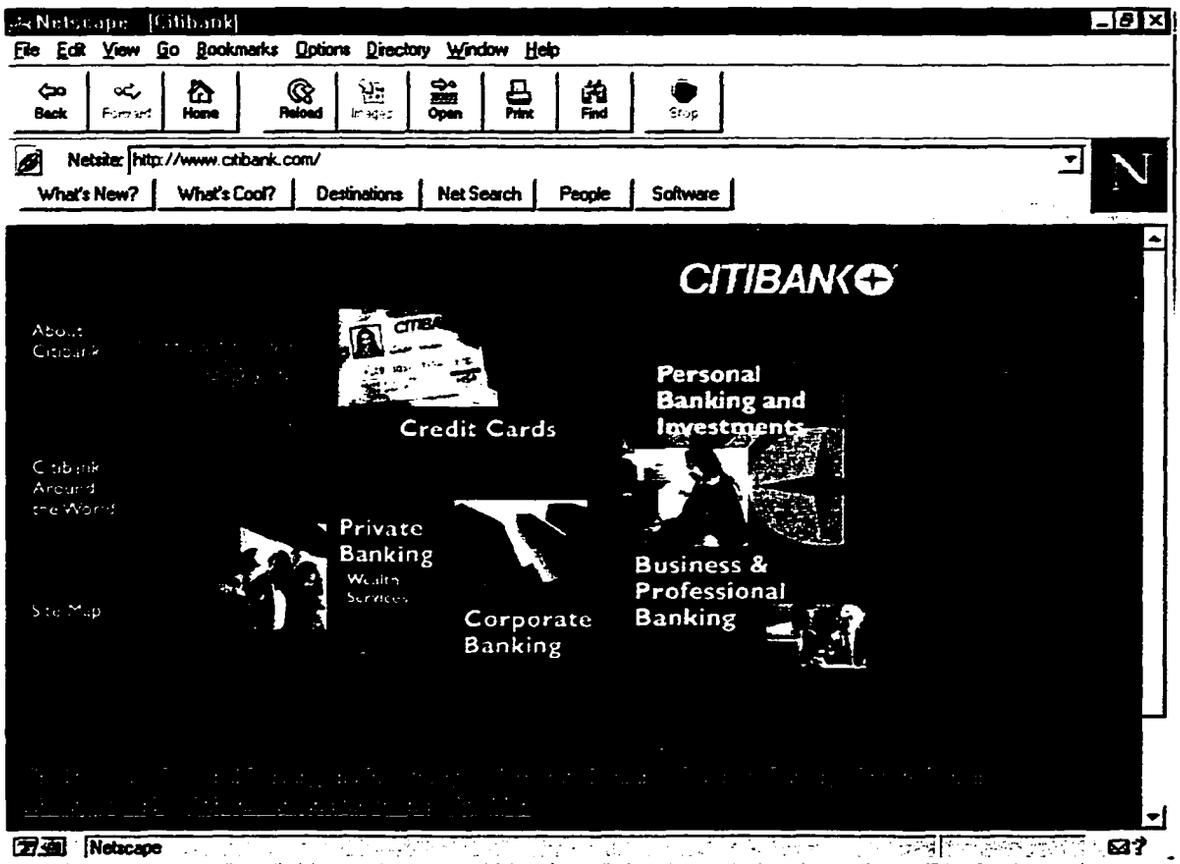

Figure 2. A Web page as seen through the Netscape browser, with hyperlinks (underlined) along the bottom.

About a year after its development, free copies of Mosaic began circulating throughout the Internet. Within months, Mosaic-based pages were being widely used on the Net. Mosaic's appeal was its simplistic approach, which immediately gave nearly everyone using it, the ability to create and use easy-to-follow visual road maps to the Web.

The Web is a graphical, easy-to-use, client-server software based technology for end users to access the Internet. Philo (1995) explained that the unique feature of the Web is the ability to Hyper-link a word, icon, button, or picture to any other part of a document on a Web site, anywhere in the world. This can be done using a graphical, point-and-click browser, without the user having to know computer commands in order to navigate through the Internet. It should be noted, however, that users can quickly become lost and/or distracted by the millions of options (Web sites to visit) they have on the Web.

As a result of the Web becoming so popular, on-line networks, such as America Online, Prodigy, and CompuServe, were forced to offer Web access to their customers. Prior to 1996, subscribers to the on-line networks could only retrieve information or use e-mail within the confines of the service they subscribed to. Once the proprietary walls came down, however, and subscribers had Web access, they had world wide access to hundreds of thousands of sites. (Fidler, 1997)

The Web enables individuals and businesses to publish or set up shop on the Internet with relative ease, and generally, at a low to modest cost (Philo, 1995). The Web also provides the means for sending a targeted message to millions of worldwide consumers, giving companies a vehicle for customizing marketing to the individual. From a company's point of view, putting a Web site up on the Internet is similar to opening a

store-front. It is the window through which the on-line world can view a business' product.

An advantage that the Web has over all other media is that consumers can get customized news at any time of the day or night. Consumers no longer have to wait for the newspaper to arrive, or for the 6 o'clock news to come on. Instead, information will be stored in digital form, at various sites on the Internet, waiting for the consumer to access it, when he/she is ready for it. Although major news archives such as Lexis/Nexis have been available for years, for a fee, consumers now have a wide choice of news on the Web for little or no cost, and they can access all of this from the comfort of their homes (Hume, 1995).

Outing (1996a) stated that 1995 was the year newspapers going on-line became mainstream, and the Web is clearly the on-line publishing platform of choice. This is a trend that is unlikely to change. Outing found that nearly 90% of all on-line newspaper services worldwide were accessible via the Web, while only a handful were still operating on proprietary systems such as Prodigy and America Online. Many newspapers that previously operated BBS systems, such as The Fort Worth Star-Telegram, The Seattle Times, and the Kansas City Star have moved from the BBS environment to the Web (Outing, 1996a).

The shift from paper to electronics impacts how individuals access, view, sort and, most importantly, pay for, material needed. Bort (1995) stated that newspaper ads are very static because there is only so much space available. With Web technology, however, there is no limitation, so a company can construct a message that is several layers deep,

with animated graphics, sound, even full motion video. The problem with doing this today, however, is the slow speeds at which users are able to access the Web.

Philo (1995) agreed, but contended that mass market, affordable broadband connections into the home, will enhance the on-line industry's penetration and usage rates. He goes on to say that this enhancement will most likely happen by the end of the century. As PC's are connected to broadband networks deployed by the telephone and cable industries, Internet and Web technologies will use the increased bandwidth to provide voice and video-augmentation, providing two-way interactive services.

The key assets offered by this new medium are increased connectivity, portability, and accessibility to both wider, as well as narrower, market segments. Philo (1995) explained that markets, uneconomical to reach through traditional media, are now available through on-line services via the Web. Paul (1996) stated that as the attractions of the Internet grew with greater tools and connectivity options, and because the advantage of partnering with an information service, such as Prodigy or America Online, wore off, "Why be just a boutique in someone else's mall when you can open up shop right on the main boulevard?" (Paul, 1996, p.32).

Explosive growth of the Web

The Web can be viewed as being the greatest threat to the newspaper publishing industry, while at the same time, the greatest resource to expand revenue and to protect the current market. Operating in "near panic mode" (Stoltzman, 1997) since 1995, 1600 newspapers went on-line to protect their share of the local market. Specifically, Outing

(1996c) found that at the beginning of 1995, there were approximately 100 newspapers offering on-line services. However, by December 1997, there were 2,544 newspapers on-line, 2466 of which are on the Web (Phillips, 1998). This phenomenal growth is depicted in Figure 3.

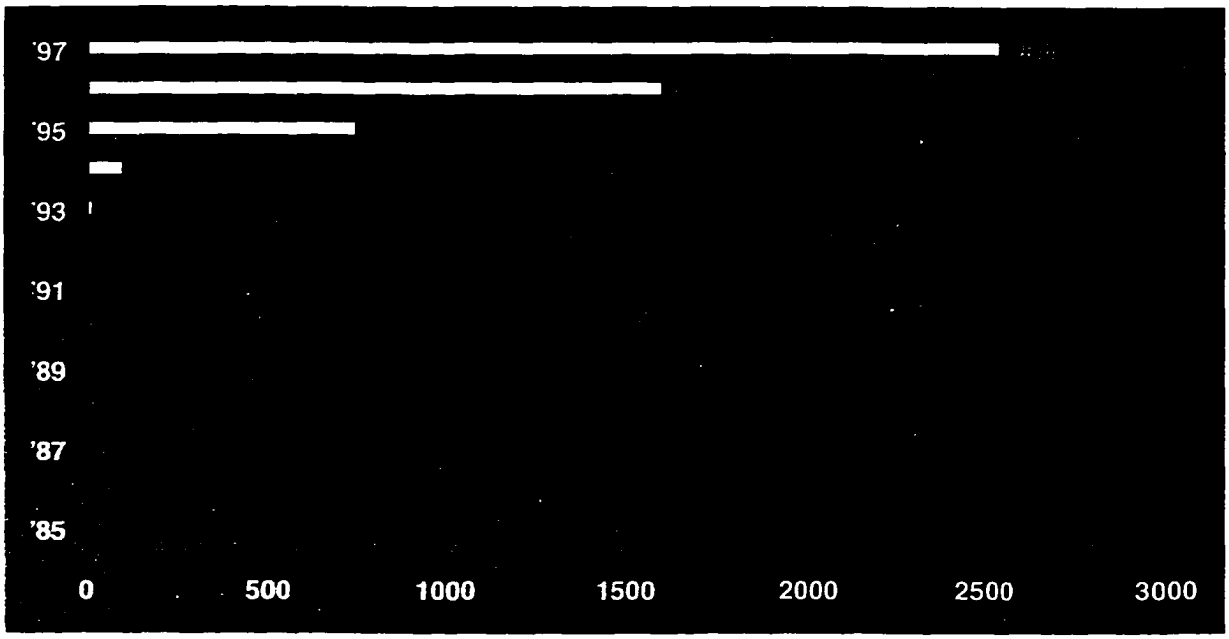

Figure 3. Growth of on-line newspapers from 1985 through 1997 (source Editor & Publisher, 1998).

Outing (1996c) indicated that he expected the number of newspapers offering on-line services to increase in number to over 2000 by the end of this century. With the rapid growth of competition on the Web, as well as the unprecedented expansion of the newspaper industry on the Web, other media companies, such as magazines, television, and radio, have felt their market share threatened as well, and have responded by producing Web sites in rapid fashion. Phillips (1998) found that Web sites offered by other media companies at the end of 1997, included magazines (2,577), television (918), and radio (1386) sites. This is up significantly from the 1996 numbers shown in Figure 4.

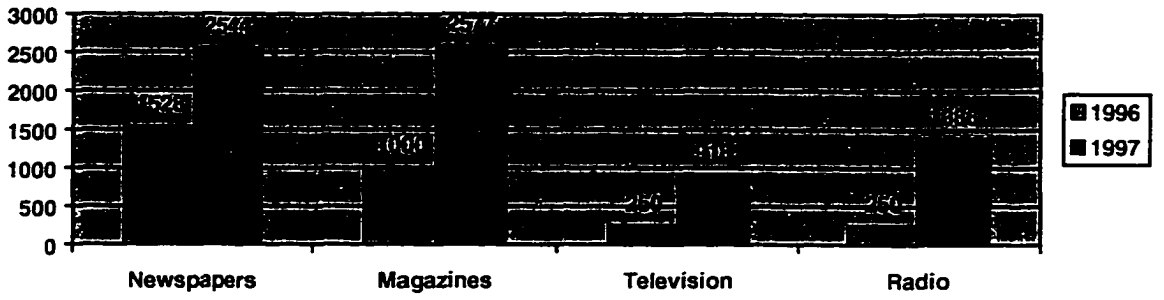

Figure 4. Number of Web sites by media category at the end of 1996 and 1997.

"Millions upon millions of dollars are being spent" (Pogash, 1996, p.28) by newspapers, even though no one really knows how to turn a profit, or what long-term effect newspapers on-line will have on circulation figures at their print parents. And despite the costs of starting and maintaining a Web site, nearly all the news on the Net is being offered free to everyone. Each site is trying to make itself appealing, and is doing so by offering clever page designs, colorful artwork, and in some cases, animation. As Pogash (1996) pointed out, the newspapers on-line are not only competing against other forms of media, but also against thousands of other sites.

One appealing feature of the Web is the potential for profit. Numerous articles as well as research firms, are predicting phenomenal growth and profits on the Web. In just two years, for example, ABC's ESPNet SportsZone has become one of the top web sites, averaging nearly one million dollars per month in advertising (Keane, 1997). One New York market research firm, Web Track (as reported by Fonda, 1996), found a dramatic increase in advertising spending on the Web, but also determined that 66% of all on-line advertising was done by the top ten Web publishers, such as Yahoo, ESPNSportsNet, and The Wall Street Journal. This confirms Pogash's (1996) findings that only a few publishers are generating a profit as a result of their Web activities.

Various people from all walks of life use the Web. A 1996 survey of 12,000 Web users by Georgia Tech (as reported by Pentz, 1996) revealed the following demographics:

Average age: 33

Female: 32% (a 100% increase from 1995)

Access the Web daily: 80%

Average household income: $59,000

In education or computer jobs: 57%

Access primarily from home: 55%

Use 28.8 kbps/14/4 kbps modem: 39%/25.5%

Use Web over TV daily: 36%

Won't pay for access to Web pages: 65%

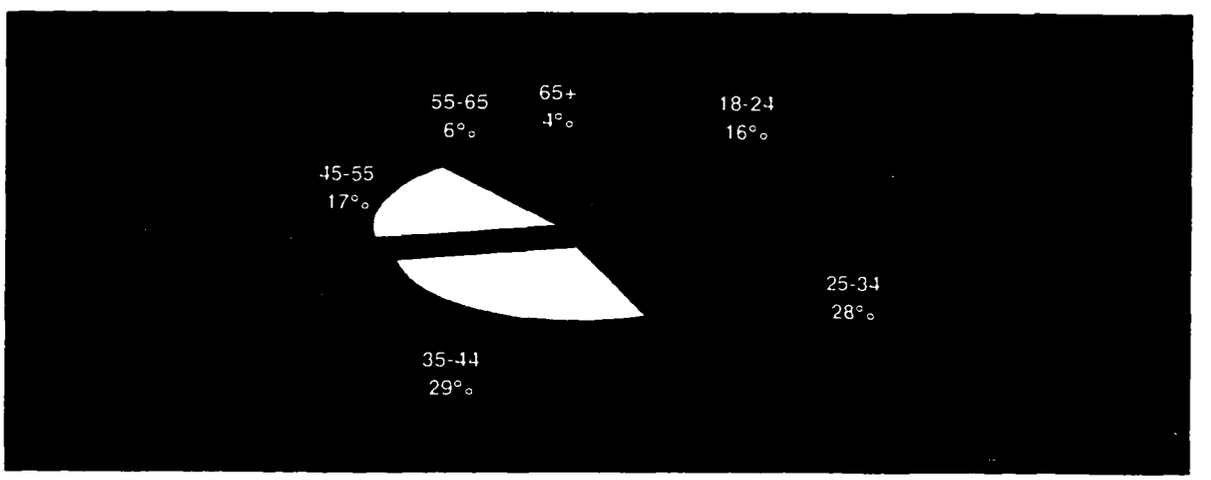

Figure 5. Percent usage of the Web by age group (source Scarborough Research, 1996).

The Web threat to newspapers

Almost a half century ago, TV was in its infancy and a new breed of entrepreneur began to experiment with this new medium. Although the first television programs were little more than radio shows with pictures, they eventually developed into much more. Radio of course, did not die, but TV ultimately stole radio's thunder, curbed its growth, and gave birth to a new communications and advertising medium. Eiley (1996) believed that a similar drama should unfold on-line.

Today, nearly half of all American newspaper executives feel their papers could be harmed by Internet-based competition, according to a 1996 survey sponsored by the Hearst Corporation. Another study from Editor & Publisher Interactive (1996), located at (www.mediainfo.com), found 45% of U.S. newspaper publishers, editors and advertising directors worried about the long-term impact of the Internet. More than 30% polled felt the Internet was the biggest reason that print newspaper companies would be less profitable in the future, and they felt the Internet would be the biggest single competitor in 10 years or less.

Eiley (1996) felt that Web-based city directories will be the application with the most potential on the Web, by providing convenience, focus and sophistication beyond that of its paper counterparts. This is where newspapers and telephone yellow pages are vulnerable to infiltration by the Web. Eiley (1996) stated that the only way to challenge this competition is by providing the same focus on-line in more localized markets.

Other media competition

Kelsey (1995) stated that newspapers have one thing in common with each other: To remain the number one information provider in their market. To maintain their position as an information provider, Larson (1995) found that Television stations were jumping on the Web, much like their newspaper counterparts. In doing so, these new electronic publishers are creating products that are quite similar to on-line newspapers.

Larson (1995) described television sites as having such things as news anchor profiles, a station programming guide, news releases, job listings, sports, weather, community information, and links to other destinations. Although going on-line is a popular alternative today, Larson (1995) pointed out that, as with on-line newspapers, television lacks the fundamental revenue streams to make being on-line profitable as well as popular. A television station Web page is shown in Figure 6.

Blinch (1996) reported that Microsoft teamed up with NBC, launching a news service called CityScape, which will likely offer information in direct competition with newspaper on-line efforts. Although Bill Gates, CEO of Microsoft stated that the "Internet is the printing press of the future," and "no one entity is going to control it" (Blinch, 1996, p.10), many analysts and industry experts feel that Microsoft will be a major threat to newspapers (Blinch, 1996).

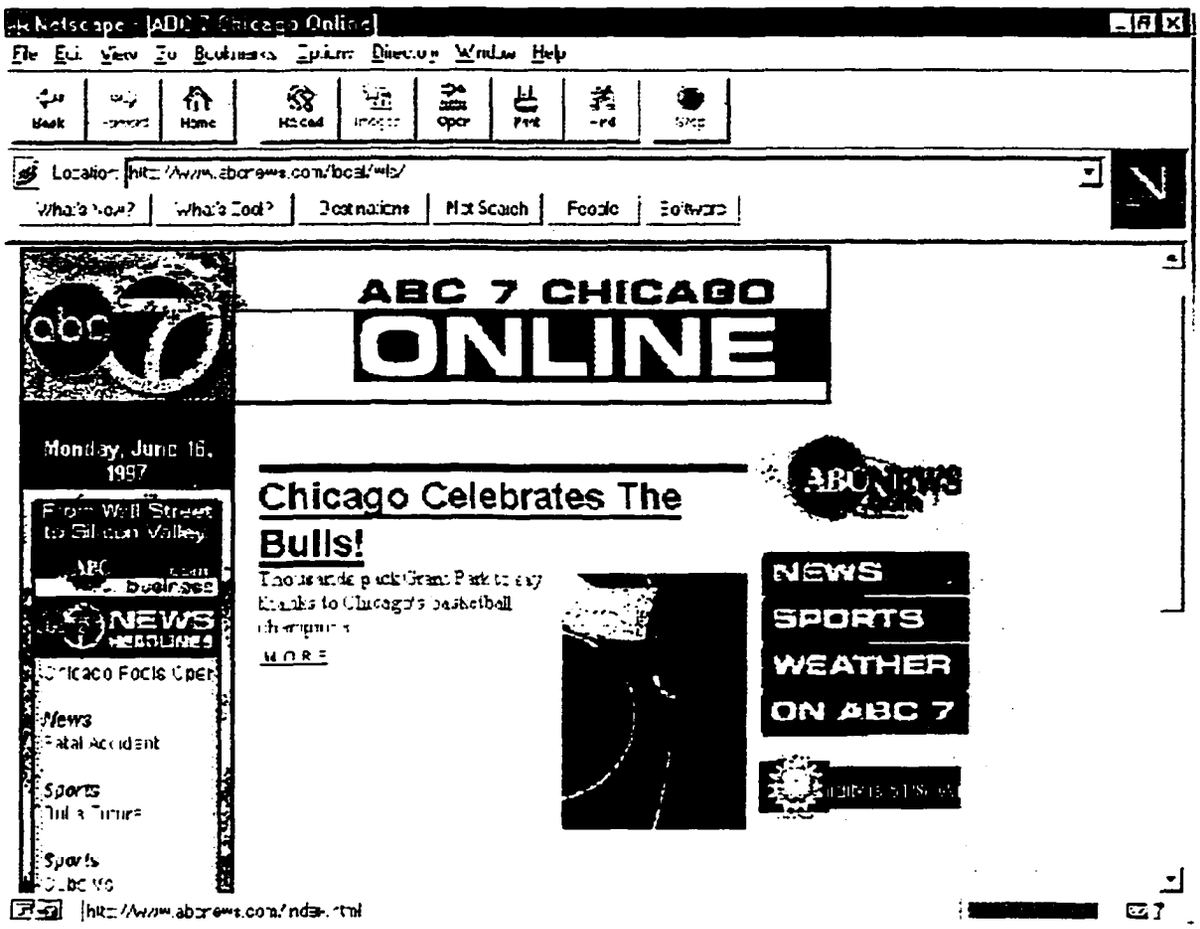

Figure 6. The Web page of ABC news (television) in Chicago.

Microsoft is not the only threat, however, because new competitors arrive daily. If the entertainment section of a newspaper is vulnerable, what about sports, news and weather? Eiley (1996) stated that these sections are the target of Digital City, a division of America Online. At the end of 1996, Digital City was on-line in eight cities, and more than 30 are planned for 1997, with an ultimate goal of 88 by the end of the decade. Like CityScape, America Online plans to bring Yellow Page directories and transactions to the local level, but will not be producing original content in-house. Instead, Digital City sites

are partnering with local newspapers for content, and providing content links to a number of TV stations and magazines.

Meanwhile, Eiley (1996) reported that CitySearch, backed by AT&T and Goldman Sachs, is targeting local community news and announcements. Newspaper publishers should pay particular attention to this group as their plans call for 30 sites, staffed by more than 1,000 employees, by the end of 1997 (Eiley, 1996). Even Yahoo, the Web-directory and search-engine company has newspapers worried as Yahoo branches out, offering a new service called Lycos.

Other competition is appearing in a new area called "push" technologies. All day long, news and information are pushed out to the user at their desktop. One method of "push" is in the form of e-mail, where the user is updated, usually several times a day, via e-mail. Another method is being offered through the Internet via the corporate network, where news updates are fed automatically and continuously to the users' desktops. PointCast is one such company, offering free software and free information, charging advertisers to offset costs. Stross (1996) reported that in September 1996, PointCast had 1.4 million registered viewers, and was growing at a rate of 250,000 per month. Remarkably, the PointCast Web site receives as many as 38 million hits per day. Advertisers and advertising agencies are lining up to place ads with PointCast, says Stross (1996). The advertisers are interested in the unique demographic group that PointCast reaches--office workers with an average annual income of $76,000 (Stross, 1996).

Moreover, PointCast ads resemble TV commercials. "They are in constant motion, shrinking, expanding, cavorting and doing everything but screaming out loud `LOOK AT

ME'" (Stross, 1996, p.55). One innovative feature of PointCast is when a viewer finds an ad to be of interest, with one click he/she is transported to the sponsor Web site.

Push technology is of particular interest to Toner (1997), who found that people do not want to wait for the Web, starting up their computer, connecting to the Internet, and clicking the same buttons every day to get to a particular site. Pushing on-line content out to the consumer seems to be what more people are looking for, and Toner contends this could become a $5.7 billion business by the turn of the century.

Toner believed that "push technologies will be the dominant buzzword for 1997" (Toner, 1997, p.42), with dozens of publishers exploring as many different variations. Pushing versus pulling is really the difference between getting home delivery of the newspaper, or going down to the corner newsstand to get the paper. Toner explained further, that today, there are basically three ways to use this push technology: through e-mail, where text or multimedia messages are sent directly to a user's electronic in-box; by Internet-broadcast systems such as PointCast, where software passively displays news and advertising on idle computers; or draw-down tools, such as FreeLoader and WebEx, that automatically download multimedia content to a user's hard drive.

Toner (1997) stated that Mercury Mail, another push technology, sends 325,000 subscribers more than 1 million e-mails daily, ranging from news and sports summaries to selected stock quotes, horoscopes and television lists. He also states that e-mail will likely remain the leading push tool, and today, most publishers approach push in two ways: with a lower-bandwidth product for consumers, such as e-mail, and a broadcast system as PointCast.

Up to now the Web has grown on the pull approach, (i.e. customer demand), however the push approach is attracting advertisers because they can now target their audience, choosing a level of specificity all the way down to the individual household, if they so choose (Krapf, 1996). There is little doubt that pushing news to the consumer is an attractive way for the newspaper to keep them interested. Providing a HyperText Markup Link (HTML) e-mail version of the newspaper's Web site front page, with links to additional stories, will certainly make it convenient, if not simple for the customer.

Even time itself appears to be a threat to newspapers. People spend most of their time working and sleeping, with the remainder of time fragmented among various activities. Philo (1995) believed that all traditional media (newspapers, magazines, books, television, etc.) will suffer as consumers devote increasing amounts of time to interactive (Web) activities. These traditional media may lose the market share of consumers' time over the next ten years, with national media impacted the hardest. In other words, national media companies will face relative (to other media) audience erosion as their audiences devote more time to more compelling special-interest electronic communities and multimedia activities. However, Philo (1995) went on to say that, the ability of consumers to retrieve news based on user-selected criteria over an on-line service, will take away only marginal numbers of readers from a national newspaper, and perhaps, only marginal numbers of viewers from broadcast news, also.

Classifieds

The on-line environment is ideal for classifieds. Rather than going page by page, column by column as must be done in the print product, on-line consumers can search for ads quickly and easily. Anderson, Brannigan and Outing (1996) found that automated request queries can be set up and personalized to match a person's desires, sending them ads as soon as they enter the database. For example, a person looking for a 1960 - 1965 Corvette could set up a request for this information to be sent to them as soon as someone places an ad in the newspapers on-line database.

Whether or not Web publishing ever fulfills the revenue expectations of newspaper publishers, it is already forcing these publishers to defend their classified ad franchise. At the Interactive Newspapers '97 conference in Houston in February 1997, the general theme was that newspaper publishers need to take action to protect their classifieds in the wake of on-line intervention into this area of information dissemination. Pundits warned of classified advertisers such as auto dealers, real estate brokers and employers moving rapidly onto the Web, and away from print newspapers. These same warnings were presented a year later at the Interactive Newspapers '98 conference in Seattle in February 1998. The NAA (1997), however, reported that print classifieds continue to grow at a strong pace, up 10% from 1996 figures (see figure 133).

A 1996 Newspaper Association of America report showed that newspapers operate at about a 14% profit margin, while the classified department had a margin of nearly six times that figure. William Bass, a senior analyst with Forrester Research (as reported by Albers, 1997) predicted that by 2001, newspapers will lose 40% of existing real-estate

advertising, 30% of help-wanted advertising and 20% of automotive advertising. With the average newspaper's operating margin now at 14%, such a high percentage drop in classified advertising would result in a 50% decline in classified revenue, with overall newspaper operating profits dropping to 3%.

Employment

Outing (1997) explained that in-column classified employment ads represent more than one-third of all print classifieds in the U.S. newspaper industry. The NAA found that in 1995, $4.8 billion was spent on recruitment ads alone, with total U.S. classified business at $13.7 billion. Outing (1997) stated that newspapers will soon begin to see this revenue fall as more and more advertisers shift from the traditional newspaper to the more than 3,500 recruiting Web sites in operation on February 1, 1997. He also noted that as of this date, there are more than 1 million resumes and 1.2 million jobs posted on-line.

In a June 1997 survey, the William Olsten Center for Workforce Strategies (as reported by NUA, 1997) found that one in five companies in North America use the Internet for on-line recruiting. The survey also found that currently more than half the workers hired are done so through print classifieds.

Outing (1997) contends that publishers need to develop electronic recruitment services to avoid an eventual decline in employment ad revenue. The real issue is whether or not newspapers can offer value to corporations in matching job-seekers with employers, and, do it in a way that is much better than their competition. Outing (1997) found that much of the current competition uses such interactive features as automatic resume

matching, e-mail notification of matching candidates or jobs, hyperlinks to employers, allowing job-seekers to send in electronic resumes and necessary documentation. According to Outing (1997), newspapers are well positioned to fight off the cyber-competition because of their entrenched roots into their communities. However, newspapers will have to be creative and offer services equal to, or better than, their competition.

One example of the employment competition being faced by the newspaper industry is Online Career Center (as reported by Anderson et al., 1996), a national, keyword-searchable employment database that claims to be the most frequently accessed on-line recruitment service, with approximately 18,000 job listing, 4,000 employers using the service and 80,000 individual visitors daily. With Fortune 500 corporations such as IBM, Xerox, Motorola, McDonnell-Douglas and Proctor & Gamble using the service, there has been some negative impact on the newspaper print employment ads. Other competitors in the employment area include Career Mosaic, IntelliMatch, The Monster Board, Interactive Search, Virtual Job Fair, Career Central and CareerPath. A list of URLs can be found in appendix C.

Outing (1997) stated, newspapers have no choice but to figure out how to use Internet technology to better serve their existing corporate customer base, and they need to do it before employers find someone else who can do a better job of filling job vacancies. He suggests that one way for newspapers to become more competitive on-line is to stop supplying the content of recruitment ads. In other words, stop doing the data entry involved in soliciting ads, and become a carrier rather than a content provider.

Personals

Match.com, a national U.S. personals ad service, is a stand-alone on-line service for singles, which has been built around the lucrative relationship business. Anderson et al. (1996) explained that while most newspapers' print personal ads today earn money from readers calling a 900-number, Match.com offers a Web alternative that is much less expensive to the consumer. Visitors to the Match.com Web site can browse the ads for free, but to communicate with an advertiser they must become a Match.com member. Match.com has been successful and is claiming upward of 100,000 registered users (Anderson et al., 1996).

There is no doubt that Match.com is taking advertising from local newspapers. However, in order to continue to grow, Match.com has realized that they need the strength of local newspapers to attract new customers. As a result, Match.com has begun partnering with other publishers, such as the New York Daily News. Anderson et al. (1996) reported this as an example of how newspapers should look to other such successful ventures to partner with and to generate new revenue streams.

Automotive

The market for automobile classified ads tends to be more local in nature, and thus the local newspaper is the logical place for consumers to look when car hunting. However, Fitzgerald (1996) stated that auto traders are aggressively going into the on-line world. The on-line medium gives them freedom for content length, especially in the area of

images. Reina (1996) said, "if you think newspapers have a monopoly on classified, you're wrong" (Reina, 1996, p.24).

Anderson et al. (1996) examined an on-line product called Classifieds2000, a start-up company that takes print publishers out of the loop by utilizing interactive technologies to excel at serving the automotive advertiser, without relying on print publishers' existing classified ads database. With the Classifieds2000 service, individual buyers and sellers use the service for free. The company makes its money from working with auto dealers who pay to put their messages and auto inventories in front of a large audience of individual car buyers.

Realtors

Reina (1996) pointed out that realtors have always been strong newspaper classified advertisers, yet newspapers have lost $1 billion in ad revenue in the apartment rental category over the past 7 years. This is because apartment managers have found other places to advertise which cost less and provide more. Likewise, Reina felt that realtors will find the Web more attractive as more and more consumers search the Web for homes.

National franchises offering TV home shows, niche home guides and on-line listing services are now starting to compete with newspapers. Resnick (1997) explained that national and regional groups, such as the National Association of Realtors' Real Estate Information Network (RIN) offer on-line services of their own, cutting on-line newspapers out of the buyer-seller chain. On-line readers can now quickly search for homes on the

basis of price, feature and location. They can also match that with information on how much money a particular community spends per school child and the proximity of shopping facilities, parks or other amenities.

Competition for apartment rentals ads is another threat to newspapers classifieds. Rent Net a Web-based real estate guide, now has listings in all 50 states. And, to bolster the service, Rent Net provides e-mail notification of newly listed apartments, floor plans, color photos and location maps. Anderson et al. (1996) found that Rent Net had nearly 900,000 ads representing properties across the U.S. and Canada, where users can easily search the database by location, price and/or apartment features.

Telecommunications companies

Another threat to newspapers comes from the telecommunications companies, specifically their directory divisions (phone books), which are turning into Internet companies. Anderson et al. (1996) pointed out that the Yellow Pages are basically classified ads, and Yellow Page companies would have little to do to compete against an on-line newspaper. The Yellow Pages already have the sales force, the contacts, and the advertisers to build a strong advertising base on-line. And now, they can be updated daily, not once a year, making it much more attractive for advertisers to place their ads there.

Newspaper publishers are very concerned about these telephone company ventures. As an example, Anderson et al. (1996) pointed out that the Los Angeles Times recently refused to accept an advertisement from Pacific Bell for their on-line guide, AtHand. The newspaper felt that by running the advertisement, it would be promoting a service that is

directly competitive with its own Web site. Likewise, Mann (1997) explained one of the policies at the Philadelphia Inquirer is that they do not accept print advertising with a URL.

Search Engines

Internet directory and search companies such as Yahoo, Lycos, Digital Alta Vista, Excite and others are all threats to newspaper classifieds. Anderson et al. (1996) discussed Yahoo, which is creating a series of regional and metro directory sites for major U.S. cities, while, at the same time, creating their own classified services. Tedesco (1996) also reported Yahoo partnering with TV stations such as San Francisco's CBS affiliate, KPIX-TV. This partnership gives KPIX-TV a presence on Yahoo and enables Yahoo to provide local news and entertainment as well as free communications services. Because Yahoo is one of the busiest sites on the Web, and advertisers will use Yahoo primarily because they want their message to reach as many people as possible, Anderson et al., stated that as more consumers get on-line, there will be a profound effect on newspaper classifieds as a result of this partnership (Anderson, et al., 1996).

Cable Television

Cable television is a major area of concern for newspapers because of cable television's potential as a competitor. Cable companies have the ability to partner with a group of weekly newspapers, an alternative paper, a television station or all of them, positioning the cable company for access to the kind of information they need, to compete with the local newspaper. Easterly (as reported by Criner, 1996) stated that once cable

achieves sufficient penetration (50% or better), they will become a content publisher. And when that happens, the first thing a consumer will see when turning on their TV will be the cable company's home page. Easterly concludes that cable companies are going to go after classified advertising immediately. Elderkin (1996) concurred, stating that the shift to cable television could put a tremendous amount of advertising revenues into the cable stations.

Observers warn that newspaper executives cannot afford to ignore these developments. "Newspapers must understand the changes or be left behind" (Albers, 1997, p.47). Many newspapers have responded well to this challenge. Preliminary findings of an NAA survey of newspaper Web sites shows 75% of respondents offer on-line classified advertising (Albers, 1997).

Anyone can become an electronic publisher, and any successful business represents a threat to the existing newspaper franchise. It presents another competing demand on people's limited time. With a large number of newspaper classifieds already on the Web, the question of the ability to complete is foremost. One broadcasting company, Granite Broadcasting Corporation of New York, has recently announced a new partnership with Classifieds2000, reportedly to increase their competitive edge. This partnership will bring classified ad databases to television Web sites in 11 regional U.S. markets, competing directly against newspaper classifieds. Noack (1997) reported that the Granite classifieds will initially contain listings for automobiles and other vehicles available in each of the station's markets. Eventually, Granite plans other listings, such as computers, real estate, event tickets, personals, and general merchandise.

Newspapers, have, in a way, hurt themselves. Citing an NAA survey, Reina (1996) explained that realtors, automotive advertisers, and recruitment advertisers felt that newspapers set unrealistic rates, offer no special rate packages, are not willing to negotiate, do not offer enough value-added merchandising, and are experiencing a decline in circulation. However, at this time, the newspaper industry does not have any empirical evidence that Web competition is having an impact on print classifieds. Newspaper classifieds continue to grow at a steady pace (NAA, 1997), and Web entrepreneurs are just beginning. As a result, any impact these entrepreneurs may have on newspaper classifieds, is a year or more away. However, Anderson et al. (1996) warn that these Web entrepreneurs will have a significant impact on print classifieds in the years to come, and newspaper companies need to respond now by creating state-of-the-art electronic classifieds of their own.

An increasing number of on-line newspapers are publishing their classifieds on the Internet, primarily as a result of better technological sophistication among some of the larger publishers, and turnkey on-line classified systems, which give publishers a "do it yourself" system. Anderson et al. (1996) state that these publishers are leveraging their existing strengths in their local market and are finding ways to create new revenue from Internet publishing.

The Web complement to newspapers

Liebeskind (1997) stated that the newspaper industry's long-standing dominance of classified advertising is not threatened by the increasing numbers of on-line classified

services, because newspapers have met the on-line challenge by joining it (creating their own Web sites). They have forced much of the potential competition out of business. Liebeskind explained that start-up operations simply do not have the listings, the information, nor the clout in the community to compete against the local newspaper. Kathy Yates, director of new business development at the Knight-Ridder New Media Center in San Jose (as reported by Liebeskind, 1997) stated, newspapers have expanded into a new medium, that done correctly, will generate additional revenue and allow newspapers to become very significant "winners."

Yovovich (1997) also believed that daily newspapers are in a very advantageous position because they already understand the market. Newspapers, in general, have the contacts, the market and the abilities, while the new companies who are just setting up sites, do not have the credibility or name recognition that newspapers have. Philo (1995) stated that existing traditional publishing businesses can stand out in the on-line world by promoting, in print, their on-line efforts, while using an existing print business that can fund on-line activities.

An increasingly interconnected world, where content flows easily, will alter the way consumers and publishers behave. For publishers, Philo (1995) believed this connectivity will breath new life into mature franchises, much like the VCR and CD player breathed new life into the movie and music industries in the 1980's. Connectivity provides unprecedented opportunities for reader involvement, the creation of electronic communities, and electronic commerce. Philo explained that magazine publishers, such as The Washington Post Company's Newsweek, have gone on-line with forums to attract more readers. Likewise, children's book publishers such as Scholastic, have created on-

line communities for access by teachers and students. Increasingly, newspapers are experimenting with various interactive services to "enhance reader engagement with the franchise" (Philo, 1995, p.16). In effect, newspapers can keep user's attention to their Web site by providing more interactive services.

Philo (1995) stated that once local usage becomes 30% or more for the on-line edition, some very interesting newspaper sponsored services become practical, such as polls illuminating local opinion on a given issue. Philo (1995) described a scenario where the newspaper advertises that such a poll will be taken tonight via the on-line service, then it publishes the results in the next day's paper. Or the newspaper could arrange and moderate an on-line "town-meeting" between readers and elected officials, again, with results in the next day's newspaper.

Philo (1995) pointed out that some of the most compelling information is local information, because most households care about what affects their wallets (taxes, real estate values, retailer's sales, children's education, local government, etc.). This puts newspapers in a good position as they virtually own the franchise on local news and information for most communities. Seybold (1996) concurred, and found through surveys that the newspaper's traditional editorial content is not as important in the on-line environment as it is in the printed version. What is important to readers of on-line newspapers, according to Seybold (1996), are more local items like entertainment, community events, services and local sports results. Interestingly, Seybold found that with the exception of major, late breaking news, national news has little value in most on-line newspapers because it is available from many sources.

One unique feature of the newspaper Web site is the ability to publish instantaneously, while not having to wait for subsequent events. As an example, Brooks (1997) cited the Dallas Morning News who chose to publish the alleged confession by Oklahoma City bombing suspect Timothy McVeigh on its Web site (www.dallasnews.com) rather than waiting for Saturday morning's paper. Brooks stated that the Dallas Morning News may have been the first paper to use the Internet in this way, it probably won't be the last. Brooks also felt that in the future, print editors would have a hard time keeping their on-line editors from breaking stories on their Web sites until the printed edition hits the street. Many newspapers, however, have decided not to compete with themselves, choosing instead to make the electronic version available at roughly the same time as the printed version. Cochran (1995) believed that newspapers need to "scoop" themselves regularly, and until they do, there will not be enough of a reason for readers to turn to the on-line product.

Perhaps newspaper publishers are listening. Within minutes of the announcement of Timothy McVeigh's conviction on 11 federal counts related to the Oklahoma bombing, many newspaper Web sites had the verdict on-line. And, although TV and radio also announced it just as quickly, Web sites offered multimedia archives and far more in-depth coverage than radio, TV, or even print could provide (Kramer, 1997).

Not only can newspapers get news on-line within minutes of the event, they can also use the Internet to share their information with affiliates. Seybold (1995) described efforts currently underway to use the Internet as a means of sharing stories among newspapers, which could have the effect of eliminating the need for costly member organizations such as AP, Reuters, AFP and UPI (these are service bureaus that provide

news feeds to the media industry). Virtual Wire, Newshare, and the New Century Network are all examples of these efforts. Virtual Wire, started by the Casper Wyoming Star Tribune offers free membership to organizations, allowing stories to be shared freely. Similarly, Newshare provides feature stores from newspapers, broadcasters, and independent journalists and writers. In exchange for providing their copyrighted content to all Newshare users, publishing members receive negotiated rights to reference and redistribute other Newshare-enabled content to their own users (Seybold 1995).

The New Century Network (NCN) on the other hand is an alliance of eight of the largest U.S. newspaper companies, creating a network of newspapers on-line. The goal of NCN is to set up a cooperative of newspapers that will share information with other member papers. Like Virtual Wire, the NCN effort points to the extinction of wire-service companies as newspapers collaborate with each other for information and transmission via an increasingly accessible Internet.

New revenue opportunities

Presstime magazine (Access as an incentive, 1996) stated that one way to attract subscribers is to offer something they want. It follows that providing Internet access to newspaper subscribers is one sure way to attract and keep subscribers. A number of newspapers around the country are now offering this service, including the Arlington Texas Star-Telegram. Since the program started in June 1996, thousands of upgrades have been accomplished, and hundreds of new subscriptions have been accepted, according to Presstime. In a similar promotion, Journal Newspapers Inc., Fairfax, VA., began offering

Internet access with one-year subscriptions in mid-October, 1996. Today these papers have tens of thousands of paid print subscribers obtaining free Internet access.

Offering Internet access is like offering home delivery, while offering a Web page is like offering single copy, said Presstime (1996). Presstime stated, newspapers that create Web sites and then have people access them through other providers. have given up their claim to those people. "It's important to own the customer," Presstime (1996, p.18). As an example, Presstime discussed the e-mail capability that comes with owning the customer, giving the newspaper everything from database marketing to distributing advertising, coupon's and sending renewal notices.

To make a profit on the Web, many newspapers are doing what they do best -- letting advertisers pay the cost of setting up and maintaining Web sites. This generally means that there are no subscription fees for readers, making it easier to attract a readership. Seybold (1995) cited the Casper Wyoming Star Tribune which is among several newspapers selling Web pages to advertisers for $25 per month. At the same time, the Star Tribune offers a link to the advertiser's own Web site for only $10. The San Jose Mercury News on the other hand offers headlines, article summaries, a feature story, classifieds and access to full news stories for $4.95 per month (only $1 per month for subscribers to the print version). Similarly the Nando Times (Raleigh, North Carolina) was charging $12 per year to access wire-service stories, syndicated items and special features (Seybold, 1995), however they have recently stopped charging, and all access to the site is now free.

Though most newspapers do not currently charge a subscription fee for their on-line product, Peterson (1996) stated that eventually, newspaper-sponsored information on

the Internet will be available only to paying subscribers using access passwords. He believed that once there is a sufficient mass of users, and they get in the habit of getting their information on-line, publishers will then be able to charge. The challenge will be in finding the right balance between a subscriber model and a transaction, or "clicks" model.

Bernstein (1996) found several information providers who currently charge for their services and are apparently doing well. As an example, Bernstein found that the Wall Street Journal has about 32,000 subscriptions to their interactive edition. Of these, about 60% pay the full price of $49 per year, while the rest pay an additional $29 per year on top of their print subscription. Another interesting site pointed out by Bernstein (1996) is Pathfinder (pathfinder.com), which gathers news from well-known publications, combines this with personalized news filtering, creating a personal edition, and they charge $4.95 per month for the service.

Another good source of income, thus far, has been in on-line classifieds. Most newspapers have put their print classifieds on-line, in many cases charging an additional percentage of the print classified ad. Anderson et al. (1996) believed that the revenue potential of Web classifieds is in creating enhanced services, such as premium listings with photos, video and audio clips, buyer feedback links to sellers, on-line buying, realtor and auto dealer inventory listings, banner advertising, targeted display advertising, e-mail notification, and much more.

Anderson et al. (1996) stated that in-column classified ads, as well as classified display ads, are only part of the revenue picture for on-line newspapers. On most Web sites, original, on-line-only banner ads are another lucrative revenue source. Advertisers can place ads in specific sections (i.e. news, sport, features) or, for example, a local

apartment complex might buy a banner ad for the rental section, or a moving company might want an ad in the homes for sale section. The possibilities are really endless, and the prospect of target marketing, where the on-line system can target ads to users of certain demographics, is very promising.

Anderson et al. (1996) also pointed out that a number of on-line classified solutions today include intelligent agents that monitor a database constantly, watching for new ads that match a users preferences. As an example, Outing (1997) described the San Jose Mercury News whose Talent Scout Web site provides a feature that notifies job-seekers and employers when a possible match enters the database. Additionally the site offers a personalized calendar that notifies users of events occurring in their profession, and a service that alerts the user to hot new jobs in his/her field based on their user profile.

Long term revenue streams will be required for electronic publishers to remain on-line. Whether these come from advertisements, selling subscriptions, offering Internet access, or charging for links to advertiser sites, Pogash (1996) believed that for newspapers to flourish in cyberspace, they need to play their historical role on-line. Newspapers need to, once again, become the civic resource and the community glue. In other words, newspapers need to become "less cool and more useful" (Pogash, 1996, 31). As an example, Pogash (1996) said that newspapers on the Web should help customers find a washing machine repairman, reserve theater tickets, reach city services, e-mail their city council members, renew their driver's licenses, and even check test scores for neighborhood schools.

Kline (1996) concurred, stating that newspapers need to play their historic role -- as town square, citizen resource, community forum and civic glue --on-line. Kline contended

that the Internet allows businesses to reach once-distant markets, but more important is the fact that the Internet enables companies to better serve their own, primarily local, markets, where the vast majority of their customers are found. Cochran (1995) also felt that newspapers' strength in the on-line world will be in building the concept of "community journalism" or "public journalism" (Cochran, 1995, p.37). As an example, Cochran examined the Minneapolis Star Tribune's on-line product where he found the paper experimenting with forums for community groups in which the group members, not the newspaper, controlled the content and discussion.

Electronic newspapers

The electronic newspaper today is quite similar to television in the 1940's and 1950's in that it is a medium trying to find itself (Elderkin, 1996). Elderkin stated that newspapers will become electronic in a number of overlapping stages, each stage becoming more powerful and sophisticated than the previous one. He believed the first stage is here, with electronic database newspapers being accessed through the Web. An example of a newspaper Web page is shown in Figure 7.

Though no-one can predict the next stages, Elderkin (1995) and Negroponte (1995) think these may include broadcast newspapers (newspapers broadcast to a receiving device over the airwaves), and virtual newspapers where a user would use a virtual reality headpiece to look at the newspaper.

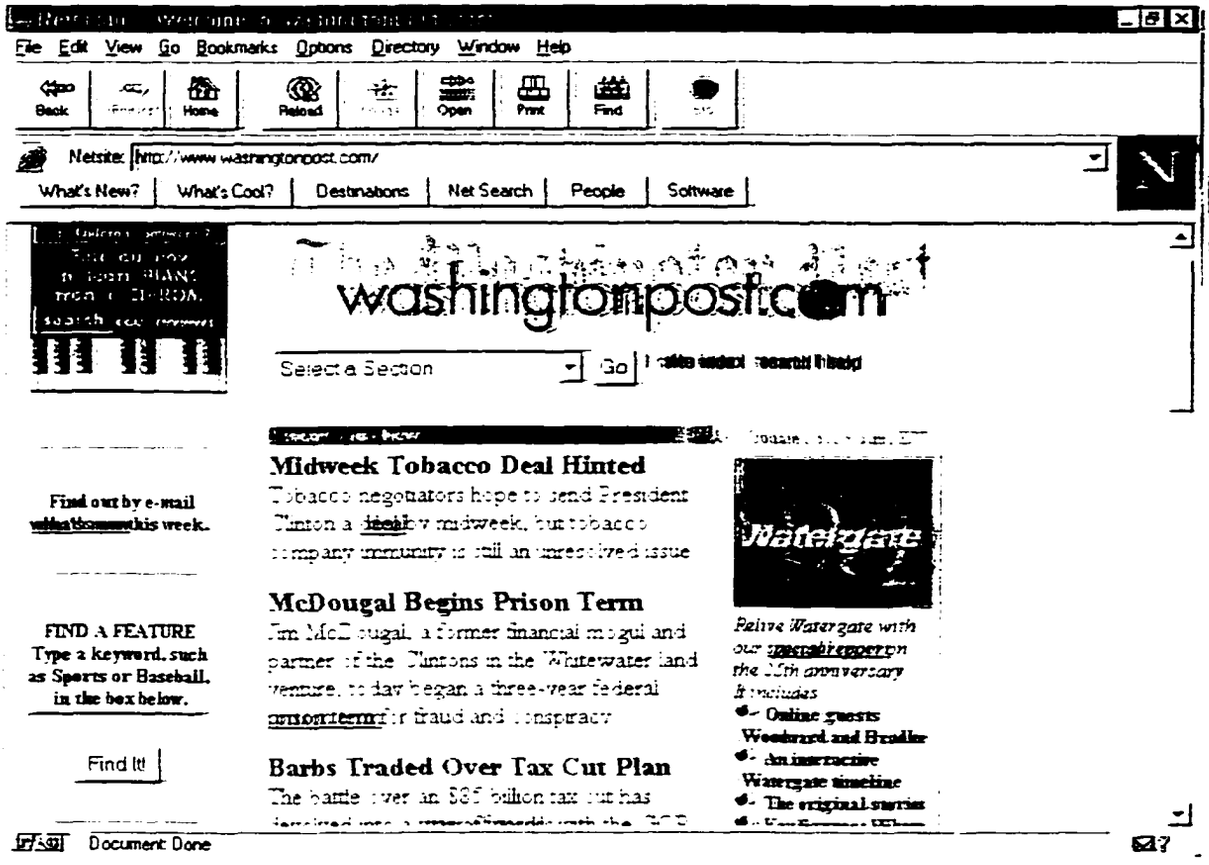

Figure 7. A newspaper Web page from the Washington Post.

Because these stages are many years away, Elderkin contended that in the near future, notepad computers, palmtops and notebook computers will be used increasingly to carry text. These small size units can potentially carry an entire library of information, and Elderkin believed that the print industry will eventually evolve into this format. Though electronic newspapers could eventually take over from print, D'Amico, (1996) stated that they will never truly replace print until they are fully portable, giving the user the ability to carry it on the train, plane, bus, or to the bathroom. If this does in fact happen, newspapers will have to be in a position to provide information in laptop format if they wish to maintain circulation.

There are a number of ways an electronic newspaper could be distributed, including the Web, on-line services, BBS, CD-ROM, direct broadcast, satellite link, cable-TV, cellular communications, or any combination of the above. Most newspapers today appear to be focusing their electronic publishing efforts towards the Web. Stark (1994) described what an electronic newspaper can do:

- Provide a front page with name, logo, main stories and index
- Interchange main stories on a timed delay
- Provide still, or animated advertisements
- Jump to various sections with the click of a mouse
- Hypertext to other relevant articles
- Inclusion of sound and video
- Keyword searching

Of course there are many other things that can be done including customizing news.

D'Amico (1996) found a shift in the focus from mass producing goods and services (i.e. traditional newspapers) to customizing products, such as personalized newspapers. As an example, the Farm Journal, a Philadelphia-based print publication with a subscriber base of 800,000, prints an average of 7,000 to 10,000 different editions each month, with targeted articles and advertisements based on each farmer's personal customer profile.

D'Amico (1996) stated that once customers realize they can get customized goods and services at a price they are willing to pay, the provider (newspapers) will be in the driver's seat. To make this happen, Web newspapers need to be in a learning relationship with the customer, where, over time, the newspaper learns more and more about the consumers' preferences, and gets better at providing for them. Once this happens,

D'Amico (1996) believed it will be virtually impossible for a competitor to lure the customer away.

Rogers (1996) believed that directed news (customized) will compete with local newspapers, but in no way does it mean the imminent demise of newspapers. Rogers stated that even though directed news offers something new, it can never acquire newspapers' strongest asset, their trusted brand name. It is their brand name that newspapers can use to leverage their credibility on the Internet. Credibility is something that has been missing in many community newspapers for a number of years. Newspapers used to be an important part of what bound a community together, a common place for ideas and discussions. But as communities expanded and fragmented along racial and demographic lines, newspapers have become less and less the community "glue" they once were, and as a result have lost credibility.

Hollander (1994) believed a sense of connection is needed, and electronic newspapers offer an opportunity to bring people together in ways similar to talk radio. He cited a 1993 Times Mirror survey that found 70% of those surveyed tuned into talk shows to learn how different people feel about issues. Newspapers can take advantage of talk radio's instant communication and interaction, by offering a similar forum on the Web.

In many ways, the Internet has bound local communities together even as they undergo economic change. And, just because a person moves to a new locale, does not mean he/she will leave behind the news he/she is used to. For example, Somogyi (1995) pointed out that U.S. travelers in Europe are hard-pressed to escape CNN, and with the Web, one can be anywhere in the world and get to their local home-town news. He

warned publishers to be aware of this fact when explaining the value of Web sites to potential advertisers.

Another area that newspaper publishers should be aware of, is in sound and video. Peterson (1996) found that sound and video are becoming big issues for newspapers. As an example, he pointed out that the Associated Press is beginning to supply stories, including audio and video, to their members, and because people would rather watch video than read, television stations are ahead of newspapers in this area. Because of slow access speeds to the Web, however, little video is being presented today. As access speeds increase, it can be expected that video will be used extensively.

If fact, Mann (1997) believed that video will be a big part of the presentation in the future. He felt that there will be news photographers carrying video cameras around for the smaller newspapers, and a full video staff on the larger newspapers. The big challenge for newspapers, said Mann, will be to learn how to translate print stories to video.

The explosive growth of the Web has presented broadcasters and producers of pay-TV channels with a great opportunity to develop low-cost interactive services that will play to their strengths, as well as leverage their extensive video and audio libraries. Fidler (1997) noted that nearly every network pay channel and local television station of significance, has established a presence on the Web since the end of 1995. Like print publishers, broadcasters have the great advantage of being able to easily promote their Web site through their core product.

At this point, broadcaster owned Web sites are simply supplementing their radio and television programs. Kean (1997) found that the major television networks (NBC, ABC, CBS, and Fox) have utilized the Web mostly for promotional space, and the same

scenario is true in the magazine industry. A 1996 study by the Magazine Publishers of America (MPA) found that 75% of magazine publishers are using the Web for promotion of their printed publications, rather than for profit. Less than 20% of the magazines surveyed were realizing financial profit on the Web.

While the public enjoys a wealth of information, news and entertainment on the Internet, most of it free on the Web, publishers are wondering if the revenue steams will ever support Internet publishing. Outing (1996b) found that pundits are predicting a backlash, with publishers killing off Web sites that do not become profitable. Outing believed the crux of the problem is that the emerging business model on the Web requires publisher to give away content in order to attract a sufficient number of viewers who, in turn, attract advertisers.

Newspapers are struggling, selling on-line banner ads, which are generating a small fraction of the revenues of comparable display ads printed on newsprint. Case (1997) explained that there is little industry-wide uniformity regarding rates and sizes of on-line display, or banner ads, a fact that alienates potential advertisers. In addition, the effectiveness of Web advertising is uncertain. Case (1997), citing a 1996 survey by Advertising Age, found that nearly half (44.2%) of on-line users never even look at on-line ads. Furthermore, 50.3% never click on ads for more information.

At present, newspaper circulation is easy to track. By counting the number of copies printed and delivered, minus the returns, these numbers can easily be audited and verified by newspaper auditing firms. Electronic newspapers, however, will require more detailed and sophisticated auditing systems (Elderkin, 1996). Whether it's measured in terms of hits, page views, or click-throughs, Web site traffic is what determines how much

a site can charge for advertising (Resnick, 1997). How can potential advertisers be assured that the advertising sales claims made by the newspaper are accurate, and how can advertisers be assured that their advertising bill is correct? Properly auditing electronic newspapers, thus far, has proven to be difficult, especially since a system to do so has not yet been developed (Elderkin, 1996).

Case (1997) contended that newspapers have a very small piece of the Internet ad market, and despite intensive efforts to get hometown retailers to commit advertising dollars to the on-line newspaper, newspapers are finding that many of these businesses lack the motivation, technological sophistication, and money to be effective Web advertisers. As a result, local newspaper sites are relying more on big national advertisers such as Microsoft, IBM and AT&T to fund their efforts.

So far, the Web has been following a path similar to that of broadcast radio, where only the technology providers made money. In its early development, those who benefited financially from the Web are the technology companies selling essential software, and computer hardware, as well as telecommunication companies providing Internet access for consumers and high-speed lines for information providers. Fidler (1997) stated that, to date, very few individuals or companies publishing on the Web are benefiting financially.

Levins (1997) found that over 90% of the more than 800 Web sites run by U.S. newspaper companies lost money in 1996. With the exception of a few local Web sites, such as Boston.com and the San Jose Mercury Center, local sites are not getting the traffic nor the ads needed to turn a profit. "They're not attracting the national advertisers and they're not picking up significant amounts of local advertisers" (Levins, 1997, p.4i).

Levins (1997) also cited recent polls of on-line editors which indicated that many American newspaper companies are operating on business plans that call for their Web sites to become profitable two years after start up. In many cases this may be an impossible feat. Levins explained that turning a profit on a new publishing product in two years, even in an established medium, is pretty remarkable. As an example, Levins pointed out that in the magazine industry, it normally takes five or six years to become profitable. Levins concluded that local newspapers are heavily dependent on local advertisers, and will continue to be dependent on these same advertisers to fund their Web site. However, the Internet users in those communities do not appear to have reached the point that makes that kind of local Internet advertising practical.

Rowland (1997) concurred, and stated that with the exception of search engines, CD shops and pornographers, few Web sites are making money. "It boils down to this: if you compare it to television or even the movies as a medium of mass entertainment, commercial entertainment, the Net just isn't making it" (Rowland, 1997, p.1). Rowland does think that the Web threatens to become a true mass medium. However, at this point in time, he feels the Web is too expensive (for computer hardware, etc.), too time consuming, and too fragmented for the average consumer to get excited about it.

Finally, Seidman (1997) concluded that small content providers and a few large companies will be able to generate some profits on the Web. He believed, however, that mid-size companies will mostly fail because the cost of producing a site is prohibitive, especially when compared with what companies make from site advertising or subscription fees. And, with Web growth slowing, he went on to say that marketers need to look beyond the curiosity fad that has, so far, characterized on-line's evolution. Seidman

believed that marketers need to identify compelling new reasons for people to log on and new ways of sustaining existing cybercitizen interests.

Partnering

One of the underlying themes in numerous articles and at industry conferences during 1997 was that newspapers need to partner with other industries in order to build a strong alliance in the community, and ultimately make a profit. Eiley (1996) stated that the intense new competition in the on-line environment could prove disastrous for local newspapers. And, with essentially no growth in daily circulation since 1990 (according to the NAA), he believed that newspapers must "partner" with other content providers to be successful in the on-line world. The most obvious potential partners are Microsoft and America Online. Eiley (1996) felt that partnering would be most advantageous to smaller weeklies, whose demographics most closely mirror Internet users. "The right partnership could create a new media powerhouse", said Eiley (1996, 2). As an example, he contended that Microsoft could partner with the New York Observer, as well as local TV and radio stations for content, and with the New York Press for classifieds, creating a product that could challenge The New York Times.

Knight-Ridder of Miami recently partnered with Zip2 Corporation to add real estate, automobile and entertainment modules to 30 of its on-line newspapers. CareerPath is another company partnering with newspapers such as the Chicago Tribune, providing job listings, resume services and job matching. Anderson et al. (1996) described CareerPath.com, which is owned by six of the largest U.S. newspaper chains, as being the

leader in the number of employment ads placed and the number of consumer searches requested.

Instead of partnering with a software company, like Microsoft, some newspapers have decided to partner with their local competitors. Eiley (1996) described efforts by the Boston Globe and the Los Angeles Times, both of which have partnered with smaller competitor newspapers, local TV and radio stations, as well as community organization and arts establishments on-line. Similarly, the New Century Network, a consortium of nine major newspaper companies and 20 affiliates, plans to resell content as well as national advertising for the industry (Eiley, 1996).

Hume (1995) stated that computer, telephone, cable, and other businesses will provide the new media delivery systems. However, the one thing they will be hard pressed to produce is the "brand name" content that large media companies can offer. This is why so many delivery businesses have been seeking partnerships and contract arrangements with existing news and entertainment content providers.

Although partnering could prove to be a good move for most newspapers, there could be problems. Resnick (1997) believed that for newspapers, going on-line means extending the brand name in a new medium. Many newspapers are partnering with other companies, and in doing so, may be losing their brand name, and their brand name is what got newspapers to where they are today. Finally, newspaper publishers need to be aware of who they partner with, and be especially cautious with contract terms. A partner today could become a competitor tomorrow.

In summary, newspapers are in danger of losing their revenue streams. Eiley (1996) believed that newspaper companies willing to cannibalize their own products and

form partnerships (such as Knight-Ridder, Gannett, Fox, Hearst and Tribune) stand the best chance of making a profit. "For newspapers to successfully compete, they will have to forgo their egos and begin to bargain their brand for a share of classified and advertising revenues by making nonexclusive partnerships" (Eiley, 1996, p.3).

Electronic publishers on the Web

A study from AJR Newslink (1997) surveyed 32,803 Web news readers and found that the top news Web site was not a newspaper as one might expect, it was CNN Interactive. The top 12 ranked in order are:

1. CNN Interactive*
2. Washington Post
3. USA Today
4. New York Times
5. NandO Times
6. Wall Street Journal
7. Los Angeles Times
8. San Jose Mercury News
9. Jerusalem Post
10. Washington Times
11. ESPNet Sports Zone*
12. Reuters New Media

*Non newspaper site.

Typically, newspaper Web sites do not look like their printed counterparts, and one of the problems for newspapers on the Web is in how to differentiate the newspaper from other providers of on-line services. The following figures show two Web based newspapers, one (USA Today) which is run by a print newspaper, the other (CNN) which is produced by a television network.

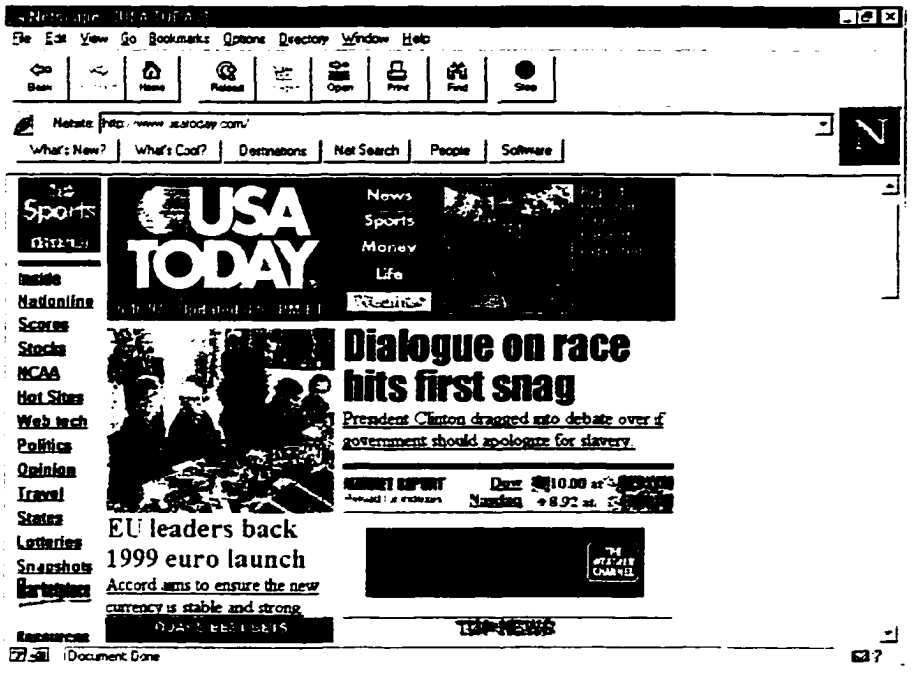

Figure 8. USA Today Web page.

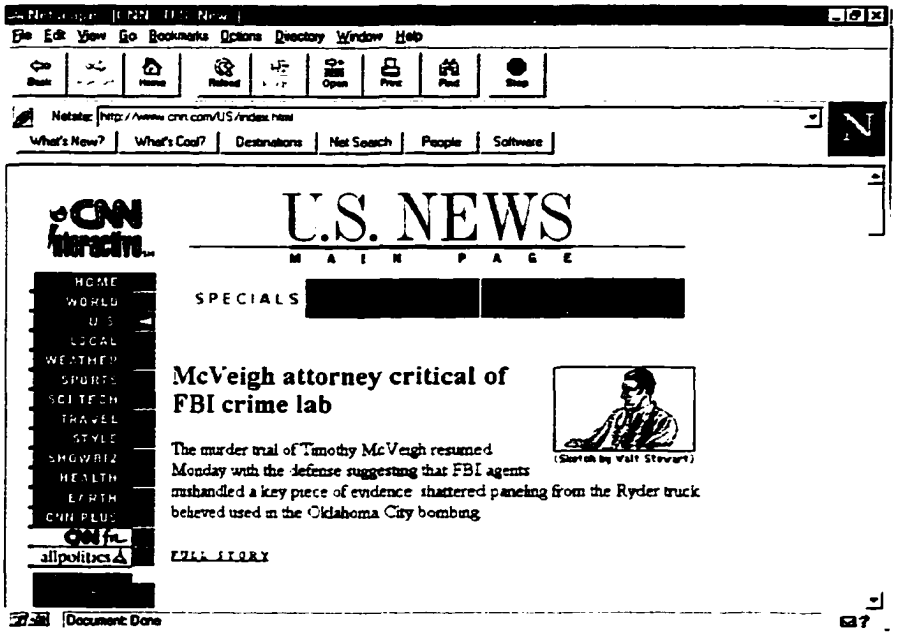

Figure 9. CNN Interactive Web page.

Many electronic newspapers, including these, have an index along the left side of every page which many people refer to as "the rail." The rail generally starts at the top of the page and runs all the way down to the bottom. By clicking the mouse in one of the boxes on the rail, readers are guided to featured stories or specific sections. The idea is that editors do not want users to get lost going from one section to another, and they want to make it easy for the users to get around on the system.

A computer screen contains much less space than a page in the newspaper. As a result, on-line versions tend to look dramatically different than their print counterpart. Harper (1997) found that many sites use a process called "layering", where the first layer or page of a digital story contains a headline, a digital photograph and text designed to make the user continue to the next layer. In a way, this process is similar to "jumping" stories from the front page to inside pages. Harper explained that these pages usually contain about 500 words, with the option for the reader to follow a highlighted path with the click of a mouse.

Future of the Internet

As reported by It's the future (1996), the Internet will have developed into a fully immersed 3D world by the year 2010. This world may be modeled on the real world -- cities, towns, houses, trees, lakes, mountains, etc., or it may have a brand new topography. Either way, there will be a gigantic new world out there in cyberspace. This 3D world will open up a vast array of opportunities, with Virtual Tourism being one of them. Thus,

it is likely that a long-term goal for information providers will be to create communities, attracting consumers by making them feel at home.

McGovern (1997) predicted that Internet-based auto loan transactions will account for 20-30% of the market by 2001. Backing this up, Chrysler corporation announced that it expects 25% of its sales will be from on-line within 4 years. However, the biggest growth area currently appears to be in travel, where Forrester Research reported $126 million in retail travel sales over the Internet during 1996.

Outing (1996c) stated that 1997 will be a pivotal year in the electronic publishing industry. Consumer interest is high, however several barriers to mass use of the Internet still exist, including slow access speeds (lack of bandwidth), and an on-line transactions infrastructure. Outing found industry observers in agreement, in that a number of things will have to happen to make the Internet a mass medium. These include, a method for measuring who is visiting the site (for demographic purposes), a micro-payment scheme for ease in purchasing, nationwide availability of broadband Web access (with reasonable cost) to the home, via cable modem, satellite, and perhaps by telephone, the acceptance of WebTV and much stronger use of it, and most important, the willingness of financial backers to continue to fund Web sites.

Whether the Internet actually develops into a 3D medium or not, the Internet is here to stay, and will most likely grow. Newspapers, which once were the community glue, need to look seriously at creating digital communities. It is doubtful that the Web will replace newspapers anytime soon, but publishers need to realize that they cannot lose if they retain market share on the Web (Outing, 1996c).

Fulton (1996) stated that some of what we hear about the future is hype. For example, two years ago, pundits were busy touting the future of interactive television, claiming that everyone would be ordering movies on demand and enjoying the 500+ channel universe. Today, however, most interactive TV trials have disappeared into technical and balance-sheet quagmires, while hundreds of new "channels" are added to the Web every day. Fulton (1996) believed that the next publicity blitz will be the Internet through your cable television connection, WebTV.

Bill Gates (as reported by Gage, 1996) stated that to really understand the Internet phenomenon, you have to think ahead 10 to 20 years, when a broad set of people will be using the Internet to get information as part of their daily activity. These people will expect that everything they do, whether it's scheduling a doctor's appointment, negotiating a contract, or shopping, will be done using the Internet (Gage, 1996).

WebTV

Lorek (1996) stated, nearly everyone has heard about the Internet, however, many people don't know what it's about. A new device called WebTV, which can turn an ordinary TV set into a World Wide Web surfing machine hopes to change all that. WebTV Networks have created a set top box that allows consumers to hook up to the Web through their TV, providing complete access to the Internet.

Lorek (1996) explaind that with WebTV, consumers can receive electronic mail, lists of Web sites, entertainment, news, city guides, and will have the ability to shop electronically. WebTV works through a television set and a phone line, allowing users to

explore the Internet and Web without computer knowledge and without an expensive personal computer. Lorek believed that the Internet needs to find new users and build relationships that will allow it to flourish. Yankelovich Partners (as reported by Lorek, 1996) felt that WebTV might be the answer. In October 1996, Yankelovich Partners surveyed 1000 adults that, at that time, did not access the Internet. They found that 52% would rather access the Internet through their TV, compared to 31% who would rather access through a PC. Interestingly, about 35% of the U.S. population had a computer at the time of the survey.

WebTV is trying to attract the average person by providing them Internet and Web access through a television set. Hood (1997) explained that even though WebTV is a proprietary network, they take the complexity out of the service by controlling the hardware and the access. Hood believed bringing the Web to TV is the first step in making the virtual community happen.

Crosbie (1996) stated that the bulk of the general consumer population is intimated by technology and its complexities. He found that the general consumer population clearly exhibits different behavior than do the "technosavvies" (Crosbie, 1996, p.8) who currently use the Web, and stated that on average, the general consumer population watch more than 110 hours of TV per month.

Dickinson (1997) stated that Internet commerce and Internet publishing cannot meet their full business potential until the Internet becomes a mass medium, reaching virtually every home in America, and ultimately the world. Dickinson described two barriers to a mass media Internet: cost and performance. These are the same barriers that early TV and radio faced. Dickinson felt that WebTV may eventually help eliminate these

barriers, but for now he is pessimistic, pointing out that WebTV does not currently support Java, Active-X, Shockwave, or anything more interesting than RealAudio.

A number of companies are moving into the WebTV industry, including Gateway, NetTV, Thompson/RCA, Compaq, Netscape, IBM and most notably Microsoft, who in 1996 formed a strategic relationship with WebTV Corporation. Costello (1996) stated that with Microsoft's announcements and collaborations, including the one with WebTV, it is becoming clear that software giants want to be a major force behind the Web, whether displayed on TV or PC screen.

Outing (1996e) stated that WebTV will bring a new audience of novice users to the Internet, increasing the chances for Web publishers to make a profit. WebTV is probably the single item that holds the promise of moving the Internet one step closer to having a mass audience. Outing (1996e) found much skepticism about WebTV, with pundits comparing the Internet on a television set to the failed Videotex experiments in the early 1980's. However, he contended that today, the Internet is far more diverse, with more variety and content to satisfy most consumers than Videotex ever thought of having.

Have and Have Nots

A December 1996 study by Aragon Consulting Group (as reported by Investor's Business Daily, 2/20/1997) found that about 40% of the U.S. households will ultimately have computers with Web connections. Of the remaining 60%, one-half (30%) do not care at all about computers, or the Internet, and never will. The other half are not very eager to enhance the capabilities of their television sets. The study was conducted primarily to see

what the market, if any, is for WebTV products. The resulting outlook for WebTV is dismal because along with the 30% of the households that are outright not interested, the 40% with computers are not interested in WebTV either.

The biggest fear today is that as we build an information-based economy, a large segment of the population will be separated, those who are not computer literate, and those who cannot afford to buy computers. In otherwords, the poor and the uneducated will be pushed even more into the disadvantaged underclass (Rowland, 1996).

Bill Gates (as reported by Gage, 1996) stated that not everyone is going to be able to have Internet and/or Web access at home. Consequently, Gates felt that we should use schools and libraries to provide these services. Fidler (1997) argued, however, that even though schools and public libraries may provide free or low cost access to the Internet, they are not available all the time. Another consideration is that interactively accessing and processing information from electronic databases and on-line services may not appeal to a lot of people.

The Daily Me

Nicholas Negroponte, former Director of the Media Lab at the Massachusetts Institute of Technology has been cited in many articles, especially about his view of the future newspaper that he calls "The Daily Me." The Daily Me is a newspaper assembled by a computer from parts of other electronic newspapers (or just one newspaper), based on the computer's knowledge of the user's interests. If the user wanted to read only about

sports each day, then sports is all the user would get. To paraphrase the New York Times motto, it would be "All The News You Think is Fit to Print" (Potts, 1994, p.20).

Potts (1994) however, felt that the idea of The Daily Me is badly flawed. He explained that news is by definition, what is new. It is not something you already know about. A steady diet of sports might be great in part, but it will not tell you about what is going on in the rest of the world. Think about how many times, you as the consumer, have read a newspaper story with much enthusiasm, just because you happened to see it. Something about the headline, photo, or the subject matter grabbed your attention and made you read it. Potts (1994) contended there is no computer filter in the world that would have given you that story based on your personal interest profile.

What is needed

Saffo, as reported by Fidler (1997) stated that widespread adoption of a new technology will not take place until consumers perceive the new technology to be useful and affordable. What if there were a way for a newspaper to deliver news, weather, sports, and customized electronic coupons to a pocket-sized shopping device small enough to fit inside a purse? Simonds (1994) stated that with not much effort, newspapers could use their existing print production process to drive an array of news, information, advertising and electronic shopping services. If done properly, this would create the critical mass necessary to keep electronic editions going, and could help to legitimize Personal Digital Assistants (PDA) as a new consumer electronics phenomenon. For example, a shopper

would be able to utilize a bar code displayed on the screen of their PDA as a coupon for an instant rebate on a product advertised in the newspaper.

The type of data that would become available through a PDA includes place and time of purchase, and a profile of the consumer. Hume (1995) believed that early in the next century, PDA's will be common place, combining all the features of a cellular phone, computer, television, radio, and fax machine into a unit no larger than a paperback book. In it's simplest form, the unit would be plugged into the consumer's home information center all night, receiving updated versions of customized news. In yet another version, updates might come to the unit all day long via the cellular phone system or by satellite.

Fidler (1997) is convinced that to eliminate printed newspapers, a highly portable, simple to use device capable of displaying hypertext and audio/video clips, while allowing the user interactivity, is needed. He pointed out that some portable devices are available today such as the Apple Newton and Sharp Zaurus, but he contends that they are not suitable for reading digital editions of mainstream publications and books. Fidler did, however, consider these devices adequate for reading small amounts of text, and cited Japan's third largest national newspaper which is currently using a number of these devices.

Fidler (1997) explained that in early 1996, the Mainichi Shimbun newspaper became the world's first publisher to begin distributing daily editions specifically designed for reading on a portable electronic display. With updates twice daily, five days a week (more frequently for breaking news) the handheld Zaurus can store up to 18 stories for offline reading, and has the capability to receive and display photos and graphics. Fidler found that the newspaper expects to reach its goal of 50,000 paying subscribers in 1997.

On the other hand, the solution that Fidler proposes is what he calls a portable tablet, which at about the size of a thin notebook can be carried just about anywhere.

Fidler's (1997) proposed tablet does not use the traditional LCD panels for display, which are usually hard to read, especially in bright light. Instead, he is working with Kent State University in developing a new technology called cholesteric liquid crystals. There are many unique features to these crystals but the most interesting is that they display like a newspaper, black type on a white background.

With the use of personal computer memory cards, (similar to the concept of a phone card) Fidler (1997) believed that consumers will be able to read comfortably on a train, plane, bus, at a coffee shop or in the comfort of their homes. By using memory cards, subscribers to the tablet edition could get information anywhere, anytime, through a global network of electronic newsstands similar to automated teller machines. Fidler (1997) believed that by the year 2010, electronic newsstands may be routinely found in airports, train stations, hotels, shopping malls, and bookstores, as well as in homes and offices.

Fidler (1997) contended that although the Web provides publishers with an opportunity to develop an electronic outlet for their content, the Web is not likely to emerge as the digital successor to mechanical printing presses. His reasoning is that the Web, like early Videotex services, lacks several important attributes which are traits of the document domain; portability, portrait-oriented pages, and the ability to be easily browsed. The tablet, as proposed by Fidler (1997), has the greatest potential to fulfill these traits.

Users of the tablet, for instance, will not have to leave their homes nor hotel rooms to locate a newsstand or wait for delivery. Newspapers will not pile up on doorsteps and

magazines will not fill up mailboxes when subscribers are out of town. Instead, credit-card-size memory cards containing 600 megabytes of information (as much or more than a typical CD-ROM) will give subscribers the ability to conveniently read the news whenever and wherever they want. Imagine frequent travelers, for example, will have the ability to pack several newspapers, magazines, and books, as well as personal papers, reports and speeches into just one memory card. "Ultimately, digital print media will likely give travelers access to their regional newspapers as will their other favorite publications, from nearly any hotel or airport in the world" (Fidler, 1997, p.262).

Others have discussed the use of portable computers to read the newspaper as well. Elderkin (1996) for example, described an ultra light, ultra thin tablet (similar to Fidler's) with 2 viewing screens connected by a hinge. This system would display color pages as well as full motion video. Elderkin contended that these should be sold in drug stores for around $10-$20. Certainly, if this came to pass, a great many people would use the electronic newspaper, but pricing that low is not foreseeable in the near future. However, there is no doubt, when a portable computer starts to be used by a large number of people, the newspaper industry will be radically changed (Elderkin, 1996).

For most Americans, the fascination with new inventions and technological innovations has been with the opportunities and benefits they might yield, as opposed to the details of how these devices work. Fidler (1997) pointed out that with the announcement of nearly every major discovery or breakthrough during the past two centuries, a deluge of wild speculation proclaiming the birth of a new era has resulted. The Web breakthrough is no exception.

Although digital technologies will give individuals greater control over the content and scheduling of mainstream newspapers, magazines, television, and radio, they are unlikely to bring about the end of mass media. As Fidler (1997) pointed out, mass media have evolved and become an essential part of our societies because they fulfill human needs for shared information and entertainment. In essence, mass media provides the cultural glue that bonds large communities of diverse people with common social, political, and economic interests.

And, because the process of gathering, sorting, selecting, evaluating, and validating information will require more time, effort, and expense than most people will be willing to devote, Fidler (1997) contended that in general, most people will continue to rely on professional journalists, information managers, and producers for the majority of their information and entertainment. Based on this assumption, there is little doubt that people will continue to prefer publications, books, and other documents that they can read anywhere, anytime. (Fidler, 1997, p.258).

Summary

Fidler (1997) foresaw a day when Computer-Mediated Communication (CMC) networks would become as intimate as one's self. He also suggested that the boundaries between the real world and virtual world would dissolve, so that advanced forms of interpersonal cyber media would become an integral part of many people's daily lives. The process of building virtual communities through CMC networks has been going on for nearly two decades, but it has only recently included people who are non-technical and live

their lives outside of the world of academia and scientific research. Although an abundance of information is readily accessible today, without the need for Computer-Mediated Communication technologies, Fidler (1997) contended that, in the future, cyber media will routinely employ personal intelligent agents to gather, sort, and filter information and entertainment to match individual requirements and tastes. Filtering of information will certainly be necessary because of the vast amounts of information that will be new and available on a daily basis.

On the Web, with flashy graphics, Shockwave and Java animations, RealAudio, digital video and a host of others, the competition for newspapers is not with other newspapers, but with television. Brueckner (1996) believed this was happening because most people think about the Web in terms of a medium they already understand, and the medium they understand best is television. He went on to say that traditional advertising, TV, radio, and print, have always operated on the broadcast model. That is, the ads piggyback on programming or editorial content. Because the consumer is used to seeing ads, they generally tolerate them. However, Brueckner found that much of the Web community takes an active dislike to advertising when they recognize it, and the broadcast model of a Web ad is designed to look just like what the community recognizes, an ad.

In an interactive site, marketers presume that content is what the consumer is looking for, taking the attitude that "you found your way to my site, so you must be interested in my products" (Brueckner, 1996, p.60). The problem with this model, explains Brueckner (1996), is in the assumption that people will be interested in your Web site and your products. In other words, if you build it, they will not necessarily come, not until they have a pressing interest to do so. Brueckner (1996) felt that too much of the

Web's appeal is novelty, and marketers are spending too much time trying to mimic television. He stated that the Web simply does not have the bandwidth to compete as a broadcast medium, so when the novelty wears off, and it inevitably will, where will the value reside?

The bottom line of any publication is the bottom line. How will on-line sites make money? Although increasing readers, listeners, or viewers is an important goal for all mass media companies, it really is only a part of their overall marketing strategy. An essential part of that strategy is the ability to attract advertisers. However, to attract advertisers, Web sites must demonstrate their ability to attract and hold customers that advertisers are looking for. Without the continued support of advertisers, mainstream media companies could not survive (Fidler, 1997).

Meyer (1997) stated that despite the rapid growth in on-line publishing, profitability of on-line newspapers remains problematic. Local advertisers continue to express hesitancy about advertising on-line. Meyer (1997) claimed that the Internet has been hyped beyond most people's reason, and is used by no more than 4% of the audience. This is regarded by many as grossly insufficient to make a general-interest local publication profitable. Moreover, non-newspapers continue staking claims to increasingly large portions of the on-line advertising dollar. As an example, Meyer (1997) pointed out that the top on-line "newspaper" in both 1995 and 1996, was not a newspaper at all. It was Cable News Network's, CNN On-line, and, the number two spot was held by another cable operator, C/Net Central, from USA Networks.

Meanwhile, agencies representing major advertisers have begun placing their ads only on sites that can deliver millions of advertising views (or "impressions") each month.

Meyer (1997) pointed out that it is simply impossible for smaller on-line newspapers to compete with search engines, meta-indexes and other non-originating services which can provide large audiences within their global reach. The poor response from local advertisers and the tremendous competition from large national sites has, in one way or another, caused the downsizing of some newspaper on-line sites.

Meyer (1997) pointed out that at least one on-line publisher has withdrawn to inactive status, and many have trimmed staffing by two-thirds or more. He believed that there is only a small niche of information-seeking people in the general public, and projecting much growth from this small group is inviting a tragic repeat of the 1980's Videotex failure.

New media designers at the MIT media lab and elsewhere, predict that the day-to-day mass audience will divide into further niches because of the enormous amount of information and sites that will be available on the Web. Addressing a "public" rather than an "audience" may be essential to the future of news. However, a more strategic approach will have to be taken in the future, to meet the niche market demands of the consumer (Hume, 1997).

Fidler (1997) believed that all media companies now see themselves struggling, not just against each other, but also against a changing economic order, new competitors, social, economic, and racial diversity, a struggling educational system and declining literacy, and a public that, in general, has a distrust and disregard for mass media. With the current level of audience and advertising fragmentation, even without the threat of the Web, Fidler (1997) contended that fragmentation is nearly an insurmountable obstacle to future growth for all existing mass media companies. He stated that a number of experts

have concluded that the growth of cyber media will ultimately fragment audiences and advertising to a point where mass media will no longer exist. Whether or not this will happen remains to be seen, however there is no doubt that media companies will face even stiffer competition as a new generation of entrepreneurs embrace digital media.

Today, newspaper publishers are building electronic initiatives around their traditional print product. Philo (1995) pointed out that some newspaper companies are going beyond that by acquiring businesses solely for their promise as beneficiaries of electronic interactivity (e.g., Tribune Company's purchase of Compton's NewMedia). For most newspaper publishers, it makes little sense to view the World Wide Web as a main electronic publishing outlet. This is because the Web is exactly what its name says -- world wide -- and the essence of a newspaper is its local focus. It may, for example, be interesting to visit a Web site in Europe, but the novelty soon wears off. If you live in Atlanta, you will probably stay interested in the Atlanta area weather forecast, this weekend's garage sales and how your favorite high-school basketball team is doing. Seybold (1995) contended that even though the war in Bosnia is a concern, people are more likely to spend money keeping an eye on the local school board, the city council or the state legislature.

Seybold (1995) felt that the goal of newspaper publishers is two-fold: "to get print readers to see you as their primary source of local on-line information and to get maximum mileage from the local information that you are already gathering" (Seybold, 1995, p.10). In other words, newspapers should use the Web to attract subscribers to the information services that newspapers can provide. In addition, Seybold contends that newspapers should set up their own newsgroups for discussion of local issues.

Of course a newspaper's Web site is available to anyone with a browser, but with 50+ million pages on the Web, the chances of anyone surfing over to the local newspaper's site will be slim. Crosbie (1996) described the Web newspaper business model which hopes that consumers will markedly change their daily habits and commit their increasingly rare, free time, to the burden of getting on the Web and surfing the newspaper Web sites, to retrieve information that previously had been automatically delivered to them in the form a newspaper. He reported historical trends showing the average consumer's disposable time shrinking to less than four hours of free time per day.

Despite this trend, the Web newspaper business model assumes that with the technological ability to deliver more information, more frequently, this will motivate people to expend more of their increasingly rare free time surfing the newspaper's Web site. The hope that Web newspaper circulation can be built and maintained by attracting advertisers and possibly paying subscribers, based on the previously mentioned assumptions, will see Web newspapers failing (Crosbie, 1996).

The threat to newspaper classified revenue in general has been discussed in numerous articles and trade shows during the past year. Much of it has been doom and gloom with estimates of classified declines reaching into the 60% range (Liebeskind, 1997). Liebeskind, however, believed that newspapers are well positioned to take advantage of the Internet. Many newspapers today have interactive capabilities and offer products to their advertisers that are worthwhile and profitable. Liebeskind stated that services started by companies, not already in the classified business, cannot compete with newspapers because they cannot get enough listings to achieve "critical mass."

Philo (1995) believed that over the next several years, publishers will defend their market area without necessarily any meaningful financial gain, and, if these incumbents are successful, new competition will be contained. Despite their advantage as incumbents, traditional publishers must consider pre-empting new competition by setting up Web services first.

The contribution this study will make to the field

Since the formation of the Web, the newspaper business has been in turmoil (Paterno, 1996). Millions of dollars have been spent by newspaper publishers to create Web sites, in hopes of fighting off any competition that may, in the future, come about. While there have been research studies performed on the Internet, the Web, and some on Web publishing in general, there has not been a comprehensive study of the effects the World Wide Web is having, and will have on newspaper publishers.

The survey included as part of this dissertation, surveyed not only newspaper Web publishers, but also magazine, radio, and television Web publishers. This then is the first survey of its kind, including publishers from the four major media industries.

While large newspaper publishers and chain newspapers are mostly aware of the Web, their market, and how to combat Web competition, many smaller organizations need help in making critical decisions as to what to do on the Web. The analysis of the literature, the survey results, and a look at what other Web publishers are doing, will provide the newspaper industry with insight into future directions they should take.

Chapter III

Methodology

Approach

This dissertation involved five major steps.

1. Provide an historical overview, with a summary of previous works and a review of current literature.
2. Develop and implement a survey.
3. Present an analysis of the results from the survey.
4. Analyze and discuss current Web offerings of various newspapers, comparing these to other Web competition such as television, radio, magazines and cable television.
5. Draw conclusions, make recommendations and present implications.

1.) In step one of this dissertation, the researcher reviewed and summarized the "birth of electronic publishing" (Neustadt 1982). It is important to review past events, and to understand how newspapers have evolved into electronic publishers. Criner (1996) explained that Videotex experiments during the early 1980s made the Los Angeles Times and Washington Post early adopters of electronic information dissemination. She believed that these newspapers (and others) would not be providing the quality on-line services they are today, without those early investments. Much has been written about the Internet, the

World Wide Web, cable television, and their relationships to a host of other interactive services. Reviewing this literature provided an insight into current trends in electronic publishing, and yielded additional questions for the survey.

2.) A survey of electronic publishers constituted the second step of this dissertation. Because few scholarly pieces have been written about the newspaper industry and the problems they currently face, a survey of electronic publishers including newspapers, magazines, radio and television stations that are operating Web sites was designed and implemented.

Survey Validity

In an effort to create a valid and worthwhile survey, four associates of the researcher, including the advisor of this dissertation and three people with on-line newspaper backgrounds, participated in the initial validation of the instrument. Through a number of iterations, several questions were found to be irrelevant, and were eliminated. Additionally, several questions were added. Next, thirteen experts (webmasters and/or executives) in the on-line publishing field were asked to participate in the survey and provide feedback about the survey questions and their validity. Of the thirteen participants, ten responded, which included representatives from six newspapers, one magazine, one radio, and two from the television industry. Their feedback brought several additional questions, the elimination of several others, and the re-wording (for better clarification) of others. Overall, the participants felt that the survey was "excellent" and

should yield very good results. It should also be noted that the survey was offered on-line, a first in the electronic publishing industry.

A Web site was established during the month of July 1997, making the survey available in electronic form. A database was created to collect the survey response data. The Web survey instrument had over 3,000 lines of code to ensure proper validation of entered data. For example, there were checks for numbers in numeric fields, and required fields had to be filled in. The survey instrument can be found in Appendix A.

In an effort to maximize responses, a collaborative effort was made between this researcher and the research department of Editor & Publisher Magazine. In this way, survey recipients were more likely to recognize the well known industry name of Editor & Publisher, and be more inclined to complete the survey. Another advantage in working with Editor & Publisher is through the knowledge and experience they have gained in implementing their past eight surveys in the area of electronic publishing. The letter that was sent as e-mail to the potential respondents can be found in Appendix B, and the survey instrument can be found in Appendix A. The survey instrument was submitted to the Nova Southeastern University institutional review board in July 1997, and approved.

Survey implementation

A list of potential survey participants was obtained from the research department of Editor & Publisher magazine. This list was the result of several years of effort by the

research department to determine key people within the four (newspaper, magazine, television, radio) media groups. Survey participants (2,965 Web publishers) were solicited via e-mail and asked to take part in the survey. Though other forms of electronic publishing exist, such as bulletin board systems, Lexis-Nexis, Dialcom and CD-ROM publishers, they are not perceived by the newspaper industry to be any real threat to newspaper publishers. Accordingly, no attempt was made to include other forms of electronic publishing outside of the Web. Note, at this time, cable television is only a potential threat and is not considered in this study.

The objectives of the survey were:

a. to gain a better understanding of the driving force behind Web publishing activities.

b. to measure the level of interest in the Internet among the four media groups, newspapers, magazines, radio, and television.

c. to understand who survey participants consider to be their major competitors.

d. to report how survey participants measure consumer activity within their Web site.

e. to understand if Web products are helping or competing against core products.

f. to report the staffing sizes of various media, and to identify any trends with regard to staffing size.

g. to ascertain if Web publishing is profitable.

h. to provide a comprehensive analysis of the survey data.

The methodology behind this survey is a large scale sampling of a finite group, consisting of participants from the newspaper, magazine, radio, and television industries who currently operate a Web site. Each element had an equal chance of being chosen to become part of the sample. It is important to note that self-selection occurs in nearly all surveys of people (GVU survey, 1997). In the case of this survey, self-selection occurred because entities in the sample were given a choice to participate.

The survey consisted of 61 questions, many with multiple fields, resulting in a total of 197 database fields, most of which were measurable in some form. In taking a close look at these variables, questions were answered, such as: How many full time employees work on the Web edition for those media with less than 50,000 page views per week, 50,000 - 250,000 page views per week, 250,000 – 1 million page views per week, and greater than 1 million page views per week. Are there consistencies (i.e. does the Web staff size go up in size with an increase in page views?). Other questions such as allowing their core product to be "scooped" by their Web product, providing archival information, offering classified advertising, promotional budgets, as well as sales and profitability were addressed by the survey.

3.) Step three of this dissertation consisted of an analysis of the survey data, which was performed by implementing the following procedures:

a. Ran all descriptive statistics (Frequency distributions and percentage tables), and cross tabulations.

b. Ran covariances on all variables to one another to determine which ones have significant statistical correlations. Determined which ones tend to move together and which ones are causal to others. (See Assumptions, Limitations, Delimitations for more details.)

c. Ran scatterplots on those high variance variables to determine if regressions can be developed.

d. Developed specifications for models to see if linear relationships exist. For example, by specifying a pricing model within all four industries, they can be approached separately with an econometric model. If price of banner (TV) equals function of (separate budget, promotion dollars, niche product of community affairs), and, if these three variables all are significant, it can be said with some certainty that there is a relative impact on the price of banner ads.

e. Looked at variables and determine what, if any, inferences can be drawn based on the relationships that exist. As mentioned above, there are many variables that can be compared across the four industries.

4.) In step four of this dissertation, the researcher compared the various practices of electronic information competitors. Based on survey results, as well as findings from the research, newspapers, magazine, radio and television Web sites were examined by looking at ways in which they disseminate the news, advertising and other forms of information

through their Web site. For example, how many on-line articles are available on a television station Web site as compared to a 250,000+ circulation newspaper Web site?

5.) From the results of the first four steps above, conclusions were drawn, recommendations made and implications (what may or may not happen to the Web publishing industry) presented.

Assumptions

The first assumption of this research is that a study of the World Wide Web and its relationship to electronic publishing of newspapers is a worthwhile subject of scholarly attention. With the Web in its infancy, just a few years young, few scholarly pieces have been written, and, with the billions of dollars being spent each year by Web publishers, there was clearly a need for a study of this caliber.

The second assumption is that the Web is a fast growing medium, and may have a long-term impact, not only on the newspaper industry, but also the magazine, radio and television industries. The relationship of the Web among these four industries is unknown, however, it was intended that the survey, which was implemented as a part of this research, will clear up many unanswered questions and assumptions that were found in doing the literature review.

Limitations

This survey was limited to a select group of Web publishers, those in the newspaper, magazine, radio and television industry. The survey instrument was created in electronic format and published on a server accessible through the Web. Potential participants (2,965 from a list supplied by the Editor & Publisher research department) were solicited via e-mail and asked to participate by going to the survey Web site. Leedy (1997) described sample sizes required to adequately represent different population sizes, stating that a population of 3,000 should have 341 respondents.

The ideal response (roughly 341 out of the 2,695 population) was thought to be a possible limitation to this study, as there is no-way to control the number of responses. Ultimately, this was not seen as a problem, as there was great interest by the population in this type of data. Additionally, the survey was accessible via the Web, making it (in most cases) more convenient to respond to. Finally, because the Internet was used for the initial participant contact, and, subsequent reminders (for those who had not yet completed the survey), a high response rate (387) was obtained.

Another limitation was in the accuracy of the participant e-mail addresses that were supplied by the Editor & Publisher research department. This department has been collecting the e-mail addresses of Web site publishers for the past several years, however the accuracy of these addresses was questionable. In the end, it was found that of the 2,965 e-mail address supplied by Editor & Publisher, 572 were invalid, leaving 2,393 potential respondents. See the results section of this dissertation for further comments on the respondents.

Other limitations include slowness of the Web (causing users to not complete the survey), accuracy and/or truthfulness of the answers, and the newness of the Web to some users, which could potential cause incomplete or unknown answers.

Delimitations

Several choices were available for conducting this survey, including U.S. postal mail, e-mail, phone interviews, or allowing the participant to fill out an electronic form on the Web. The latter was chosen for ease of use, reduced cost (in the case of postal mail), reduced time (in the case of phone interviews), and accuracy in writing data to a database. The use of e-mail, however, caused a problem in that a number of recipients considered the e-mail "spamming", or unsolicited e-mail. A number of recipients subsequently responded and asked to be taken off of the mailing list. Several others were apparently more upset, and contacted computer systems managers at Nova Southeastern University, threatening to reject any e-mail from the University that tried to pass through their servers. Needless to say, this caused much grief for the researcher, as well as Nova Southeastern University. Future researchers planning to use e-mail for solicitation should be aware of the potential spamming problem.

Although the survey instrument is somewhat long (61 questions), all questions were deemed necessary and were actually the end result of an initial set of more than 90 questions. Because of the great interest by the industry as a whole, it was felt that participants would not be adverse to the length of the survey. During survey validation, it was determined that the survey should take about 15-20 minutes, however some

participants commented that it took much longer because they had to research answers to some of the questions.

Projected outcomes

While it is difficult to predict the future, certain assumptions were made based on previous research. For example, The Philadelphia Inquirer (Mann, 1997) has 16-17 (Mann, 1997) full time people on staff, but is this the norm? For their archive, which include all editorial stories from the last 16 years, Mann stated that the Inquirer charges $6.95 per month, no matter how many stories are downloaded. Based on size, market, competition and other variables, it is valuable to see how newspapers compare to one another for such things as staffing and pricing.

From the 1996 Interactive Survey done by Editor & Publisher (Stoltman, 1997), it was found that 65% of newspapers have Web sites. Of the 35% who do not, 91% said they would have one within 6 months. For this new survey, it was estimated that 85-90% will now have Web sites. Other important factors include content, advertising, promotion, and most importantly, profitability.

It was expected that with the exception of a few electronic publishers, most newspaper Web sites are not making money. It was also expected that few newspaper Web sites are charging subscriptions, few are using push technologies, and some will be downsizing or ceasing Web operations. The most interesting variable was felt to be in the comparison of newspaper's Web sites to magazine, radio and television Web sites. Other projected outcomes include, but are not limited to the following:

1. Most U.S. newspapers, certainly those of medium to large size, are on the Web.
2. Newspaper Web sites are far ahead of their competitors (magazines, radio, television) in terms of archives, page views, staffing, content, and profitability.
3. Those Web sites with less content have a smaller audience (less page views), and thus lower pricing of banner ads, and, less profitability.
4. Few companies in the media industry provide Internet services. Those that do will have a larger technical staff, and should have more revenue.
5. A large percentage have had their Web site on-line less than 2 years.
6. Many Web sites operate their own server and require a larger technical staff to support the in-house technology.
7. The size of banner ads is standardizing as the industry moves forward.
8. The use of "Push Technologies" by the media industry as a whole is minimal. However, those that do use this technology are seeing a high rate of page views.
9. The Web product is having no effect on the core product.
10. Few Web sites are doing "shovelware" (putting their core product content on-line) and are instead opting to produce original content.
11. Web sites with large archives available are getting the most page views, are spending more to provide archives, and are making more money in the process.

12. Newspapers have more content than magazines, radio and television.
13. Very little, if any, outside measurement data is being provided to advertisers by these Web publishers.
14. Few Web sites offer on-line classifieds. Those that do have more expenses and should have higher revenue.
15. Outside of their core product, most Web sites do little promotion and have relatively small promotional budgets.
16. Newspapers have a larger overall staff size as compared to magazine, radio, and television, and the size will stay about the same in 1998.
17. Few Web sites charge for access or to retrieve archival information. Those that do charge will have lower page views resulting in lower banner rates.
18. Few sites require registration, yet many sites are in some way capturing user demographics, and will sell this information to third parties.
19. The average Web site will spend $50,000 - $100,000 per year for equipment and services (not including salaries).
20. Overall, there is little, if any, profit among the four groups.
21. Competition on the Web (newspaper versus television for example) will be similar to the competition they normally have outside the Web, which may be true due to a high rate of local users.
22. Few Web sites give the user an ability to customize their content.

Summary

This dissertation involved five major steps, which were met. This included a literature review (Chapter I), the implementation of a survey (Appendix A), a detailed analysis of the survey data (Chapter IV), an analysis of current Web offerings of various electronic publishers (Chapter IV), and finally recommendations and implications based on these findings (Chapter V).

While the survey was limited to a select group of Web publishers, 387 people responded. Based on Leedy's (1997) requirements (341 expected respondents) for this population (2965), it can be said that this survey yielded excellent results. One area of concern came from accusations of spamming through the use of e-mail. Future researchers planning to use e-mail for solicitation should be aware of the potential of having their solicitation viewed as a spamming issue.

Finally, twenty-two projected outcomes were identified. The results of these can be found in Chapter V.

Chapter IV

Results

Survey

A Web site was established during the month of July, 1997 for the purpose of displaying an electronic survey form, and to subsequently capture participant results electronically. These results were stored in an MS-Access database for future query analysis. As previously mentioned, the survey was conducted as part of the Editor & Publisher annual survey of media companies.

From a list of 2,965 e-mail addresses obtained from the database of Editor & Publisher, 572 were invalid, leaving 2,393 potential respondents. The survey was conducted from 8/6/97 through 9/25/97 and generated 387 responses, or a 16.2% rate. This is far above the 10% suggested response rate of Leedy (1997). Of the 387 respondents, 243 (62.8%) newspapers, 72 (18.6%) magazines, 19 (4.9%) radio and 51 (13.2%) television stations responded. Two respondents fell into the "other" category as they did not indicate their type of business. It is not known how many of the 2,393 were newspapers, magazines, radio or television.

The survey ended in late September, 1997, and respondent data was analyzed at that time using a statistical software program (SPSS), as well as through various crosstab queries in MS-Access. The data was then analyzed for descriptive statistics, inferences, correlations, and trends. Special attention was given to the peculiarities among the different media companies to determine the existence, stages, and levels of competition.

The critical issue is how the four different media groups are approaching and dealing with the web phenomenon.

The survey was divided into nine major sections. Within each area, a number of questions were asked in order to develop a profile of the Web site, and to obtain raw data for analysis. Questions from the nine areas are summarized as follows:

1. General: The type of business, circulation level (if a newspaper), distribution of customer base (local, national etc.), and length of time on the Web was determined.
2. Technology: The purpose of this section was to find out who operates their own server as opposed to outsourcing, who provides Web services to outside companies, the type of authoring tools used, and if any type of "push" technology is being used.
3. Editorial/Content: A number of items were considered here, including referencing the Web site from the core product, ability to correct archival information, use of the Internet by the editorial staff, integration of the newsroom staff with the Web staff, types of content, scooping the core product, providing archival information, number of on-line articles available, and alliances with other companies.
4. Advertising: Questions from this section provided and insight into which Web sites have paid advertising and/or sponsors, standardization of banner ads, average cost of a banner ad, outside measurement, page views per week, and whether or not they offer Web classified ads.

5. Promotion: Important issues here were the types of promotion vehicles used by the four media groups, cross promotion, the size of the promotion budget, and Internet tactics used to bring in traffic.

6. Staffing: Questions from this section asked how many staff members, full and part-time, are being used for each Web site. This information is subsequently used to determine a variety of things such as profitability, staff size by page views, staff size of Internet providers versus non-providers, and average staff sizes of the four media groups. Also asked was the anticipated change in staff size for 1998.

7. Subscriptions/Transactions: The main focus of this section was to find who, if any, are charging for access to their Web site. For those that are charging, respondents were asked how much they charge and how (i.e. daily, monthly, yearly, per search per article) they charge. Additional questions included charging for archival information, charging in the future, and Web site registration.

8. Sales and Profitability: Questions in this section included Web site expenses (less salaries), gross sales for banner and classified advertising, as well as subscription and transaction sales. An important question here was how do the four media groups rank their competition?

9. Other: Although this section included a variety of questions, the most important was to determine who, if any, are capturing user's names and addresses, and how they plan to use this information (promotions, selling lists to outside companies, etc.)

Data Analysis

As mentioned previously, the survey instrument was validated by ten representatives from the media industry. Because of their knowledge and experience in the industry, their input led to categorizing numerous questions. For example, news features referencing a Web site were categorized into daily, weekly, bi-weekly and monthly. Likewise, promotion budgets were categorized into less than $10,000, between $10,000 and $50,000, between $50,000 and $100,000, and over $100,000.

Survey data was analyzed by two software programs, SPSS and MS-Access. Based on the raw data, SPSS determined other categories in which to group by. For example, core product replication fell into four categories, 0-24%, 25-49%, 50-74% and 75-100%. Because of the high response in the lower (0-24%) and upper (75-100%) categories, these were further analyzed for banner standardization, banner pricing, promotional budgets, staffing, and spending. Other categorizing throughout the survey was done as a result of the input from the ten representatives mentioned above, or from the recommendation of the SPSS program.

The following results are industry segmented (Newspaper, Magazine, Radio, Television) responses. When appropriate, further interpretation has been introduced to explain the disparities. Particular attention has been given to cost cutting activities, investment, measurement, content and their relative impacts on revenue. Figure 10 graphically shows the number of respondents by media category. Of the 243 newspapers that responded, 171 were daily newspapers while the remaining 72 were weekly newspapers. Of the 171 daily newspapers, 84 (49.1%) have circulations under 50,000, 30 (17.5%)

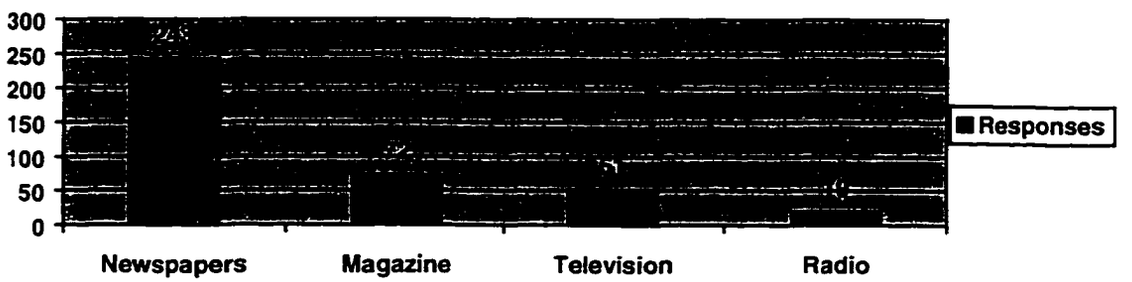

Figure 10. Number of respondents by media category.

have circulation greater than 50,000 and less than 100,000. 47 (27.5%) have circulation between 100,000 and 500,000, while 10 (5.9%) have circulations of 500,000 or more (Figure 11).

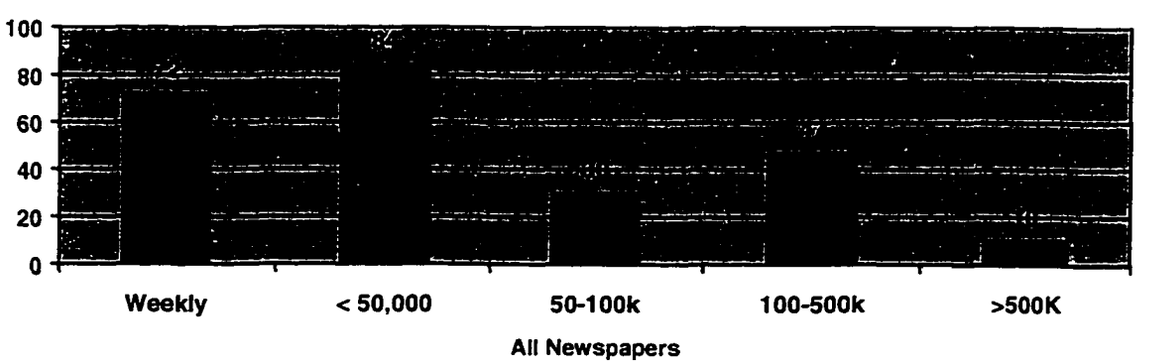

Figure 11. Respondents by newspaper circulation.

Figure 12 shows the median length of time, in months, by media group, that their Web site has been on-line. Although magazine companies have had their web sites on-line longer, the variance between the longest and shortest duration is only five months.

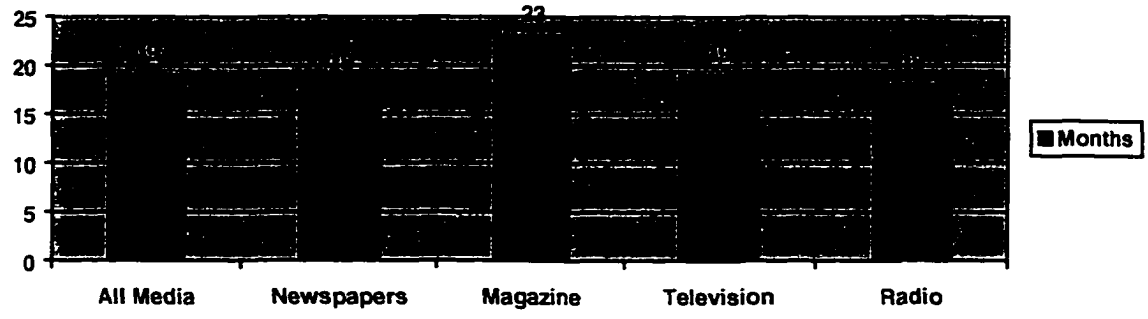

Figure 12. Median of months that Web site has been in existence.

The average time on-line across all media groups is 19 months. A review of all media groups, reveals that 18.5% of the respondents have been on-line less than one year (Figure 13). More than 80% of the respondents having been on-line at least one year, matching the prediction established by this researcher, as well as researchers at Editor & Publisher magazine.

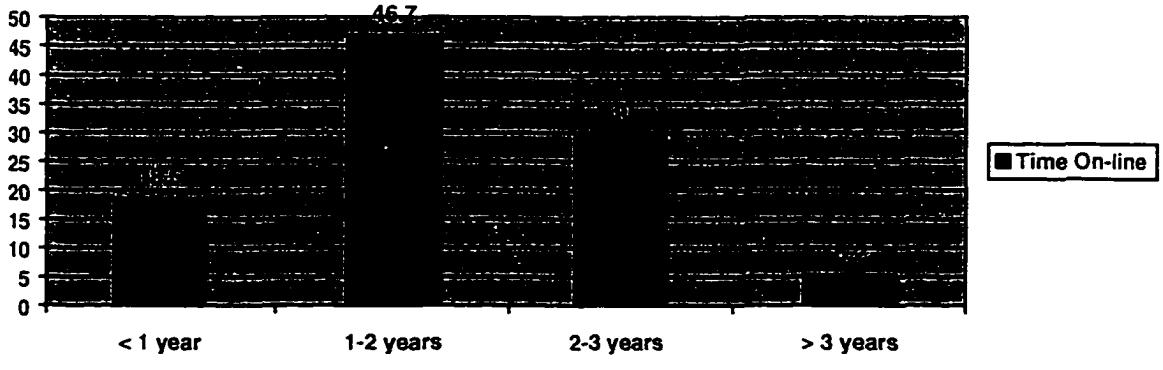

Figure 13. Percent of respondents - time on-line.

With the exception of magazines, it can be seen in Figure 14 that for their core product, media companies rely heavily on the local market, with national business making up roughly 18% of their overall business (Note: numbers do not always total to 100% due to rounding, as well as some invalid responses).

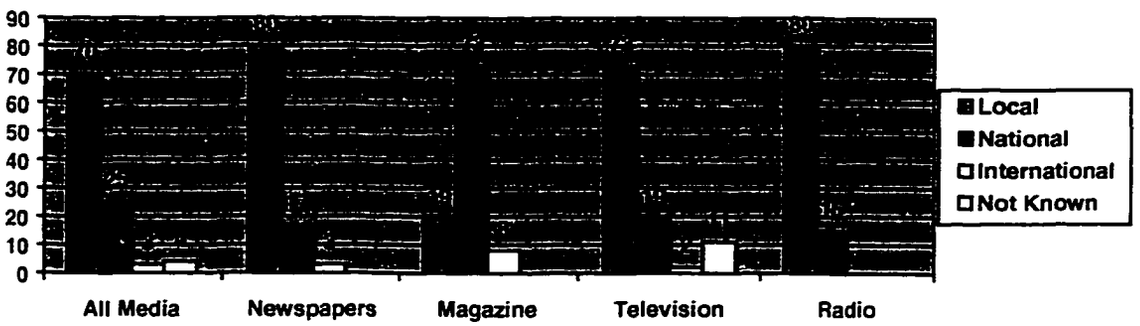

Figure 14. Percent distribution of core business.

These numbers change slightly for the Web product, with less emphasis on the local customer base, and more on national and international customer base (Figure 15).

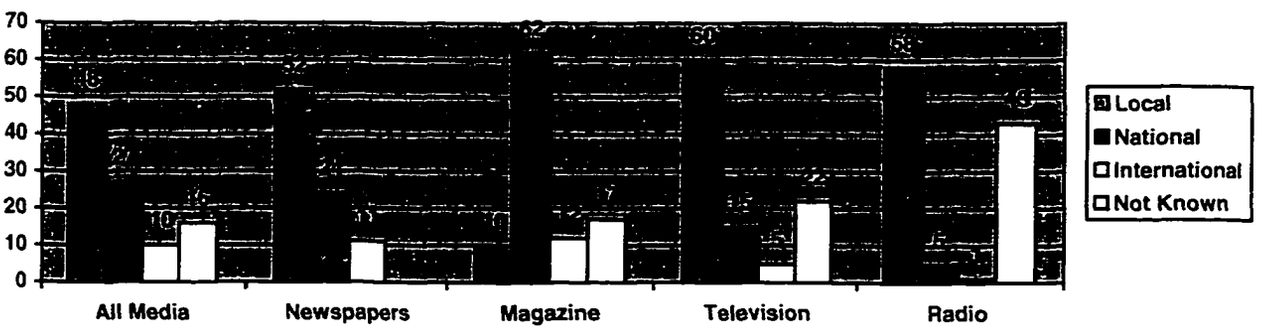

Figure 15. Percent distribution of Web business.

As seen in Figures 14 and 15, the composition of newspapers, television, and radio customers is similar in both the core and on-line products. Magazine companies show an inverse relationship with local and national customers. Magazines indicated that both their core and on-line customers are much more national than local. The newspaper industry appears to know who their customers are, while magazine (17%), television (22%) and radio (43%) indicated they don't know.

Technology

The use of various Web technologies among the media groups is wide spread. Figure 16 clearly shows the mix, with Frontpage-97 being used most frequently, especially by the television industry.

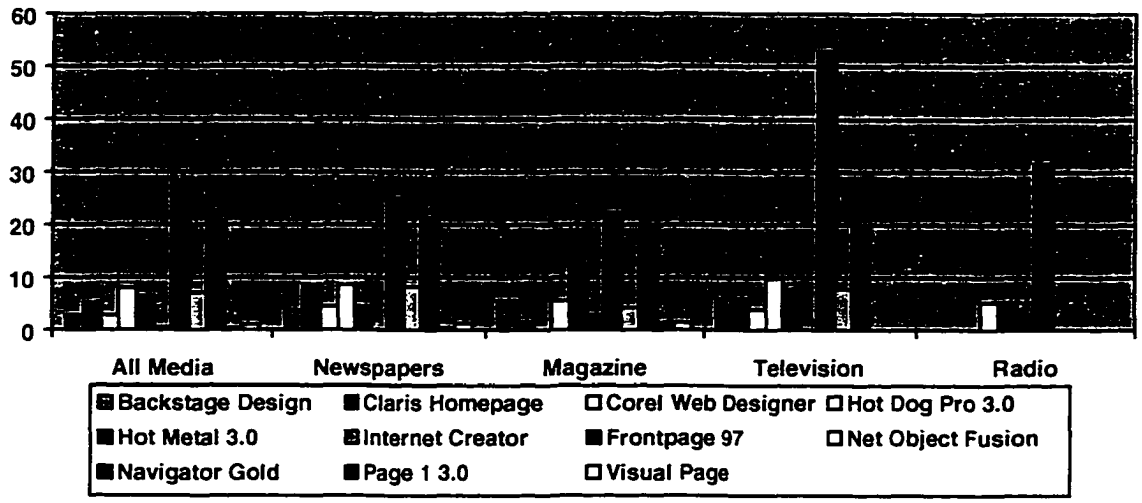

Figure 16. Percent usage of various Web technologies.

Not surprisingly, television leads the way in the use of video, audio, and animations on their Web sites. While all media groups make use of animations, newspapers, magazines and radio are far behind in the use of video (Figure 17).

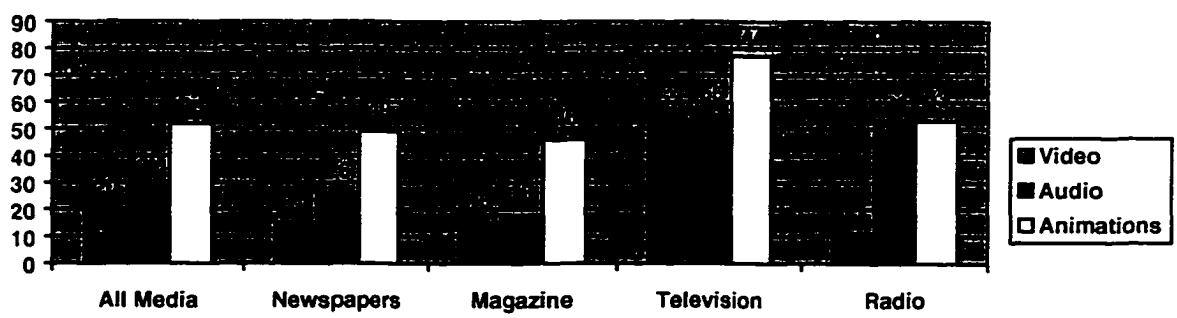

Figure 17. Percent usage of video, audio, and animations.

Elderkin (1996) pointed out that newspapers would have to restrict themselves on how far they carry multimedia, because of multimedia's complexity and the expense to produce it. Elderkin felt that newspapers would have to find the point where they can use multimedia to maximize their audience while maximizing their advertising potential.

With newspapers, magazines, and radio falling relative to one another (Figure 17), it may be that these industries recognize Elderkin's findings, and, realize that it will be difficult to compete with television in this area.About one-half of the Web sites surveyed archive their own HTML page structures for each edition, and roughly 70% have established HTML standards or other structural guidelines (Figures 18 and 19). These two questions were posed in the survey for informative purposes and are merely presented here for that purpose.

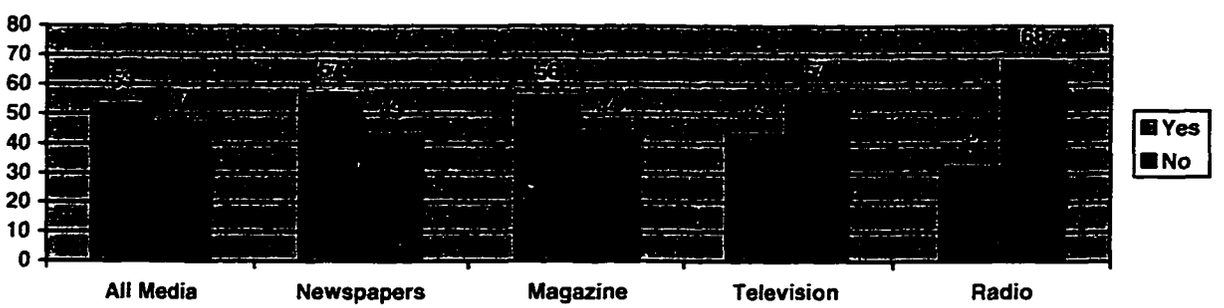

Figure 18. Percent of media companies who archive HTML page structures.

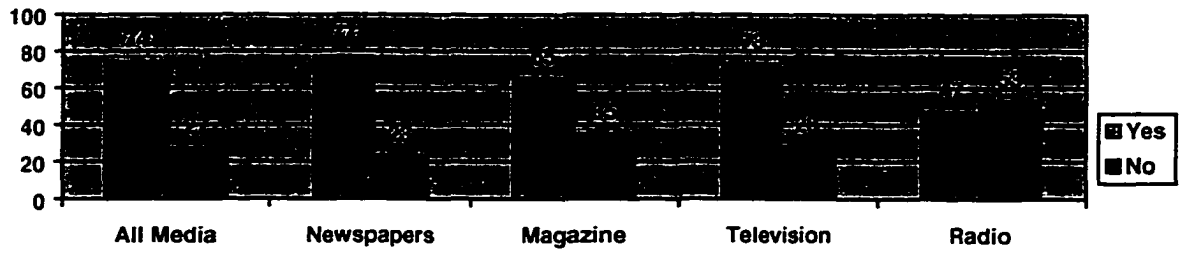

Figure 19. Percent of media companies that have established HTML standards or other structural guidelines.

As discussed previously in the research section of this dissertation, "push" technology is an excellent way for companies to get their product to the end consumer. In fact, pundits recognize this technology as being the future for all media, although presently, few media companies are employing this technology. Figure 20 depicts the lack of use of push technology across the four media groups.

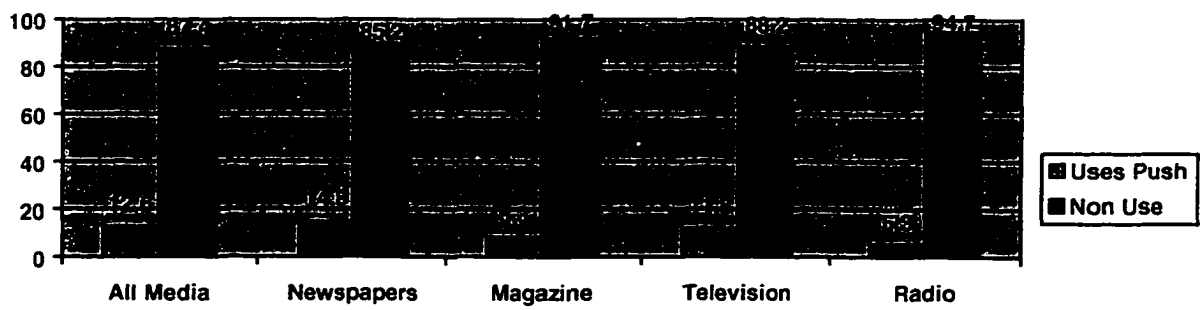

Figure 20. Percent of companies using push technology to deliver Web information.

Of those that do use the technology, 4.9% indicated they use PointCast as a delivery medium, while 9.8% indicated they use some other form of push technology.

In general, media companies rely on outside sources to operate their Web site (Figure 21). Although newspapers have the highest incidence at 38.5%, the media industry in general has not invested in their own software, hardware, or staff to maintain their site.

As a result, it can be assumed that to date, media companies are not sure where this new medium (the Web) is going, and they are keeping investments at a minimum.

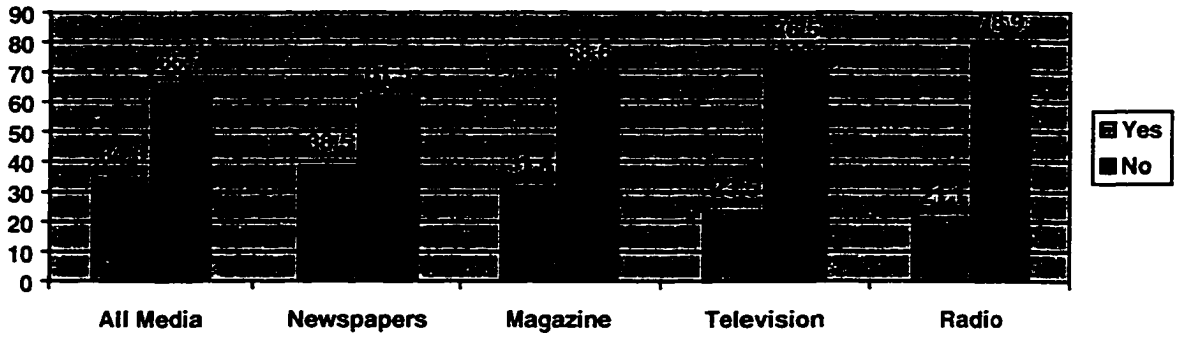

Figure 21. Percent of media companies that operate their own server.

Of those Media Companies that do not operate their own server, Figure 22 depicts where their sites operate. As shown, more than 50% use sources outside of the media industry.

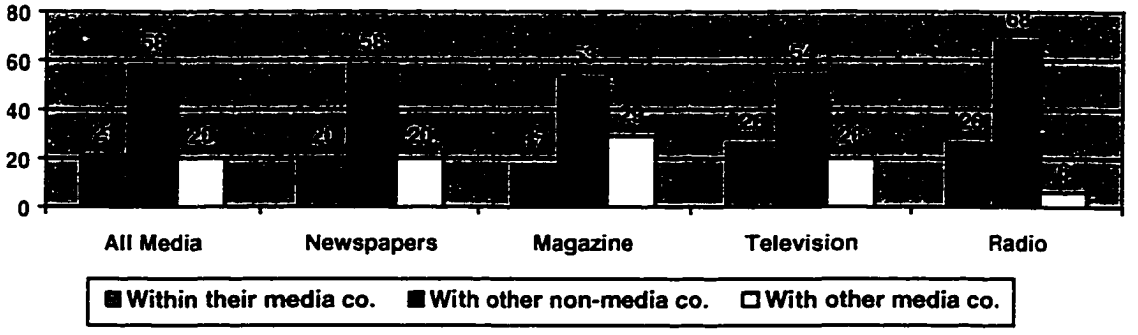

Figure 22. Percent of media companies that operate their Web sites with other non-media companies.

Although media companies generally do not operate their own server, many provide their customer's Internet services such as Web site design, construction and consulting to their customers. Figure 22 indicates that newspapers lead the way in providing Internet

services to other companies. In fact, 51.6% indicate that they engage in this cost defraying practice to some degree. The differences between those newspapers that offer Internet services to other companies is quite simply a function of the "richness" of their own site. These companies have a greater amount of authoring tools, animation, audio, video and content mix.

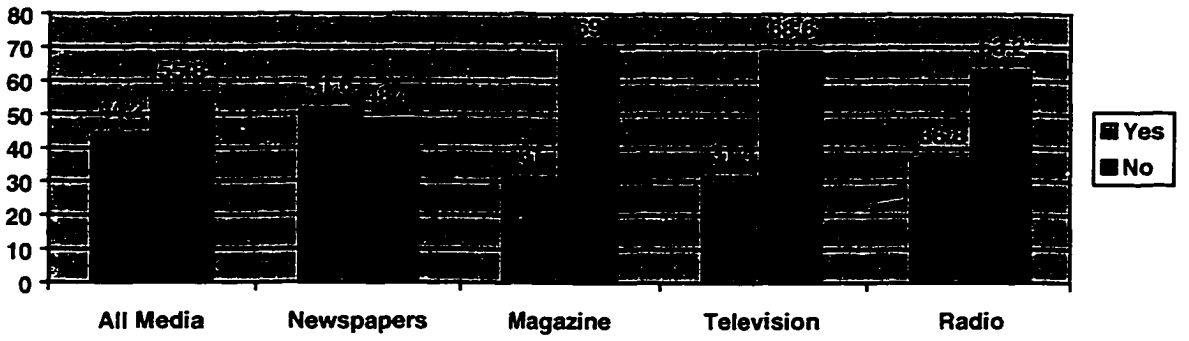

Figure 23. Percent of media companies that provide Internet services for other companies.

Newspapers in aggregate show a mix in the various technologies they use to produce their web sites. For example, the percentage of newspapers with these particular technologies is shown in Figure 24 (respondents were allowed to choose more than one).

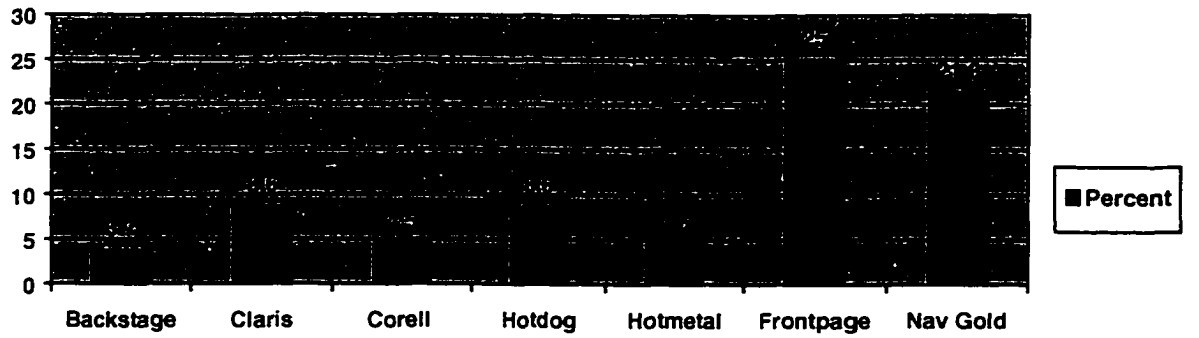

Figure 24. Percent of various technologies used by newspaper Web sites.

As shown in Figure 24, there is no monopoly held by any particular software package for newspapers. The most common response to the type of software used was in the "other' category (not shown). Looking closely at the "other" category, it can be seen that there are no consistent similar responses. In short, newspapers use a wide variety of Internet software to product their site.

The disparity between those newspapers that offer Internet services and "all other newspapers" lies in the "higher end" technological capabilities. Specifically, video, audio, and animations are more often found within newspapers that offer Internet services (Figure 25).

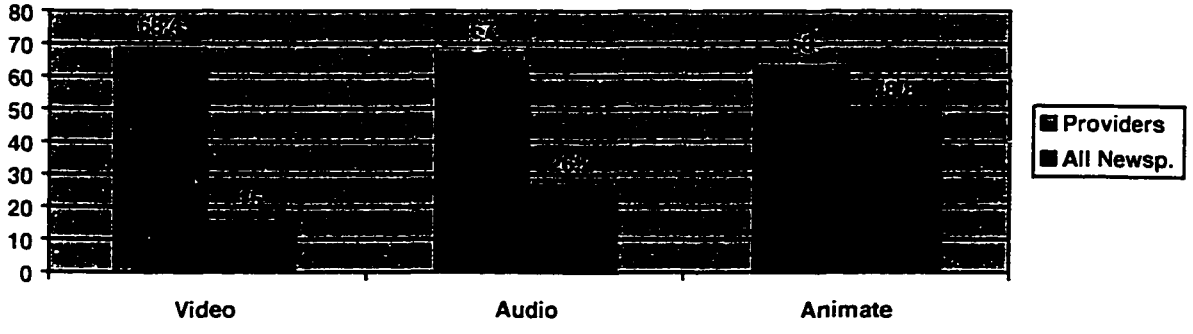

Figure 25. Technological capabilities of Internet service providers (percent usage).

Beyond the technological differences, there exists a greater incidence of content mix. For instance, newspapers that offer Internet services are more likely to have community information, entertainment, non-news, real estate, special events, and tourism. Newspapers in the aggregate have content as indicated in Figure 26.

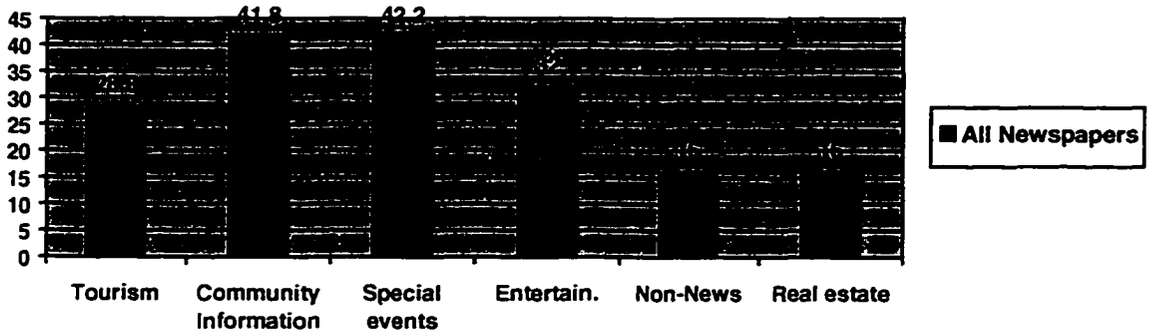

Figure 26. Percent of newspapers with various content.

Newspapers that provide Internet services are more likely to have a higher frequency of multiple content categories than not. The percentage of newspapers that provide Internet services, and whether they have a specific content are shown in Figure 27.

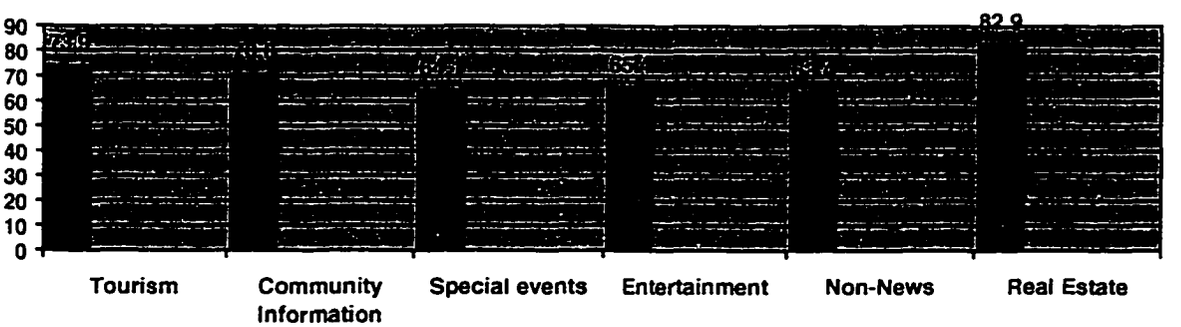

Figure 27. Percent of specific content of newspapers that provide Internet services.

Results of the survey (not graphed) found that in 1997, newspapers in an aggregate with zero banner revenue were 23.2% of the total. Fifty Six percent of this 23.2% belong to newspapers that provide Internet services. This is a higher proportion than the overall 51% that provide Internet services, but not by much. Looking at the banner advertising revenue in the "less than $50K" range, it can be seen that 57.1% of all newspapers

experienced this level. Newspapers that provide Internet services were more likely to fall in the "less than $50K" range than those which did not. The next sales increment ($50-$100K) which is 7% of the total, shows a true departure between these two groups of newspapers. In fact, newspapers that are providers of Internet service to other companies are four times more likely to be in the $50-$100K group than those who are not.

Examining the investment patterns of newspapers, 58.7% of all newspapers spend less than $50K yearly on equipment and other investments. The composition of that 58.7% also reflects that proportion of newspapers that are "providers." To be exact, 46% of the newspapers that invest less than $50K, are Internet providers. Taking a further look into the next investment increment (between $50K to $100K) there is a departure in spending patterns between the two newspaper groups. The total percentage of newspapers that spend between $50-$100K is 13%. Within that percentage, 61% of it belongs to newspapers that provide Internet services.

Newspapers that provide Internet services to other companies appear to be a part of sites that have a greater depth within their own site, both technologically and content. Whatever revenues are generated by these ancillary services cannot be determined at this time. It can be said that although newspapers that provide these services do have a higher incidence of greater revenue (as defined by banner advertising), they account for only a fraction of the total newspapers. Whatever the incremental increases in revenue, be it in banner advertising, transactions, or classified, the investment that has been made by those participating newspapers is nominal. No marked increase in investment spending can be linked to the activity of providing Internet services.

Editorial/Content

Many companies in the four media groups reference their Web site within news features of their core product. The results of this are shown in Figure 28.

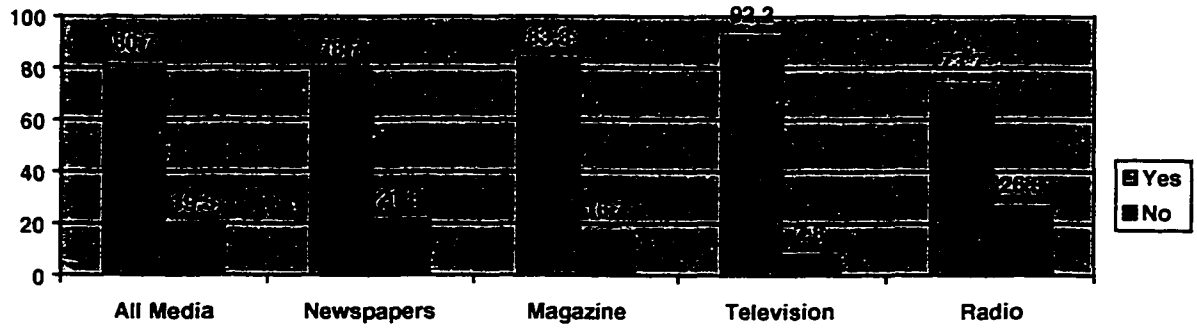

Figure 28. News features in/on the core product that reference the Web site (percent of respondents).

The frequency in which these references are made is shown in Figure 29. Television and radio make use of their core product, regularly, to reference their Web site. For newspapers, the daily percentage is somewhat skewed by the 72 weekly newspapers who participated in the survey. Removing these 72 newspapers from the aggregate, the daily percentage for newspapers rises to 56.8%, still clearly behind television. Magazines show a heavy (63.9%) use of monthly references, however it should be noted that most magazines are produced monthly. As a result, Figure 29 is presented for informational purposes and does not correlate to any other variables. The point to be made in Figure 28 and Figure 29, is that while newspapers reference their Web sites (78.7%), they lag behind magazines and television.

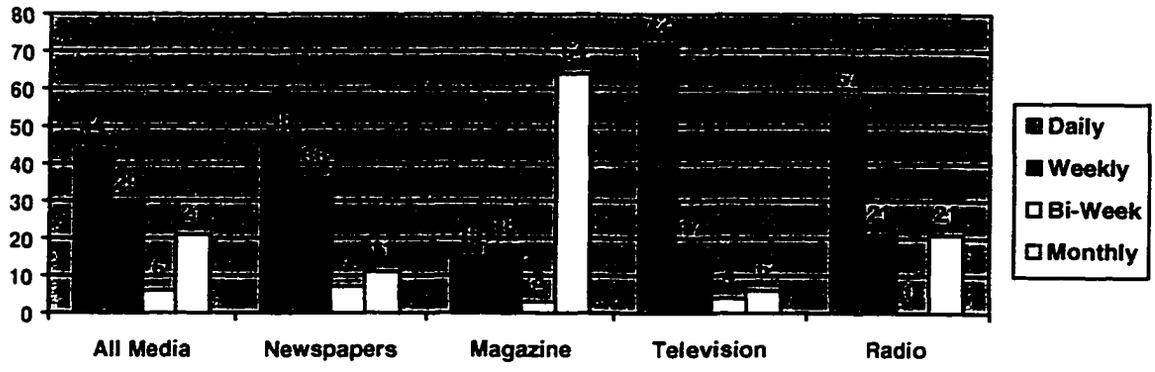

Figure 29. Frequency that the news features in the core product reference the Web site (percent).

The majority of media companies do not have a procedure in which corrections are edited in their archive. Once a Web article goes to archive, needed corrections are not done. For the end-user, this represents a flaw that potentially makes these Web sites unreliable (Figure 30).

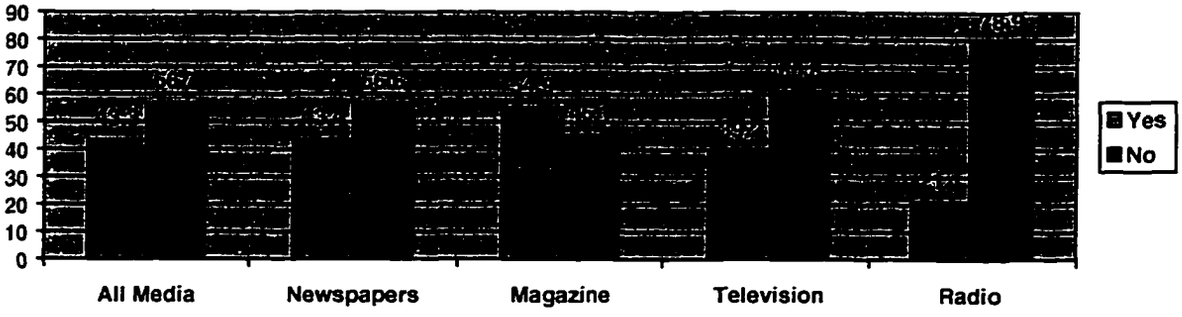

Figure 30. Percent of media that correct their archived text.

Media companies now use the Internet quite often to gather information. In fact, an average, 93.3% of the media groups use the Internet in some fashion (Figure 31).

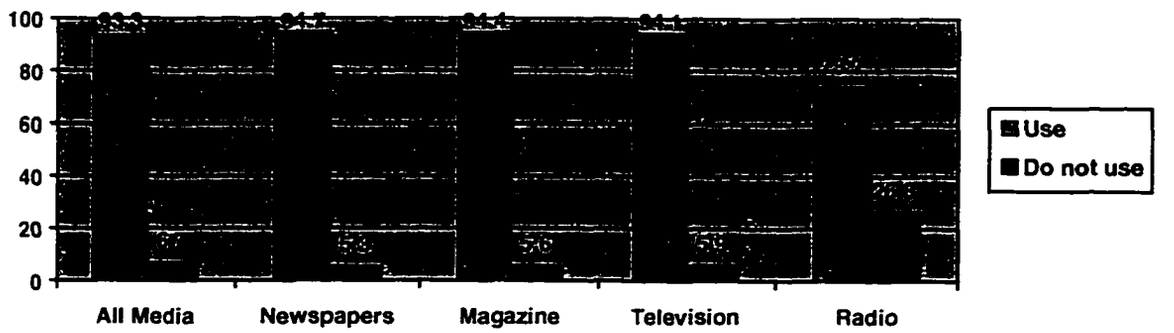

Figure 31. Percent of editorial staff using the Internet to gather information.

The Internet is frequently used to research stories and obtain feedback from Web users. A seen in Figure 32, less than half of these media groups use the Internet to track their competitors. For example, 94% of newspapers use the Internet to research stories, 72% use the Internet to obtain feedback from Web users, and 43% use the Internet to track competitors.

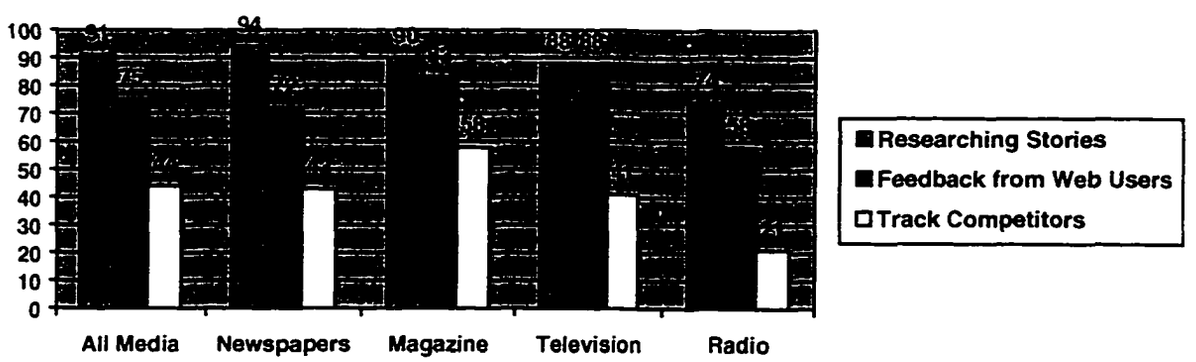

Figure 32. How the Editorial staffs indicate they use the Internet (percent).

Generally the Web newsroom staff is integrated with the newsroom of the core product. Those that function as a separate entity account for only 24%, with the exception of radio which claims better than 42% separation. As seen in Figure 33, these media groups do not appear willing to invest heavily in separate editorial staff and tend to use their existing staff to produce their Web product.

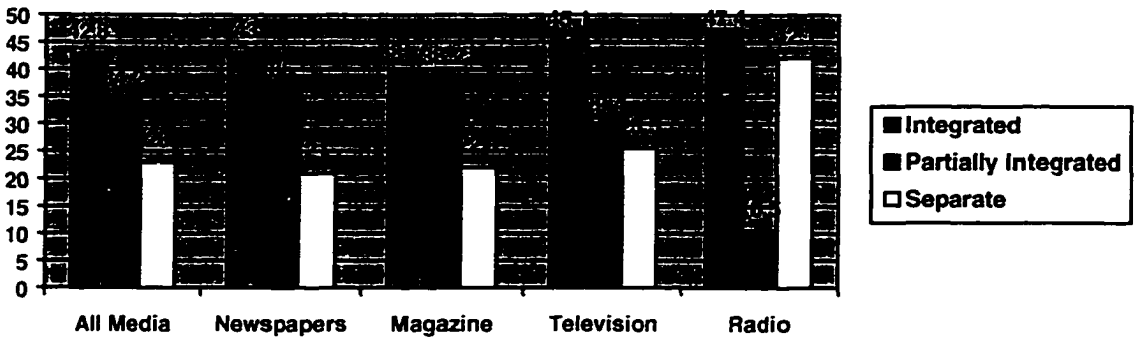

Figure 33. Integration of Newsroom Staff (percent of responses).

Most media have developed editorial content for their Web sites, however newspapers trail all other media (Figure 34). It is important to note this because content is often why customers come to a particular site.

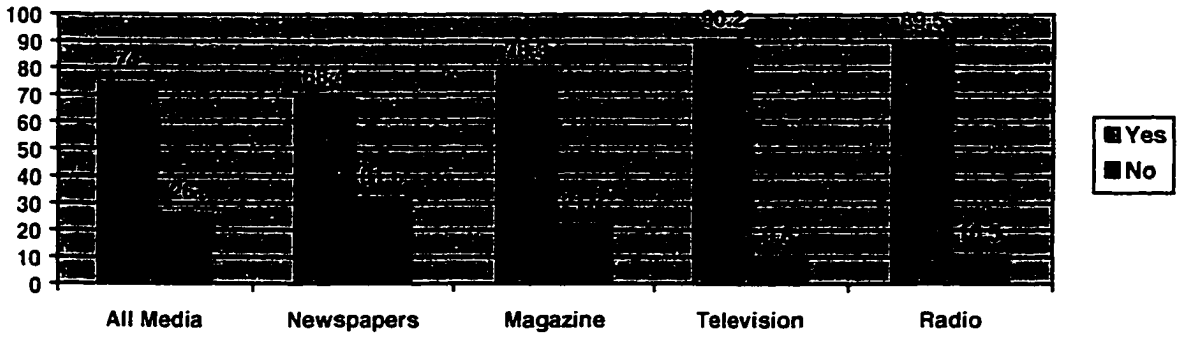

Figure 34. Percent that have developed editorial content for Web site.

Figure 35 shows the areas in which this editorial content is generally developed. Community information, special events, and entertainment rank among the highest in all media categories.

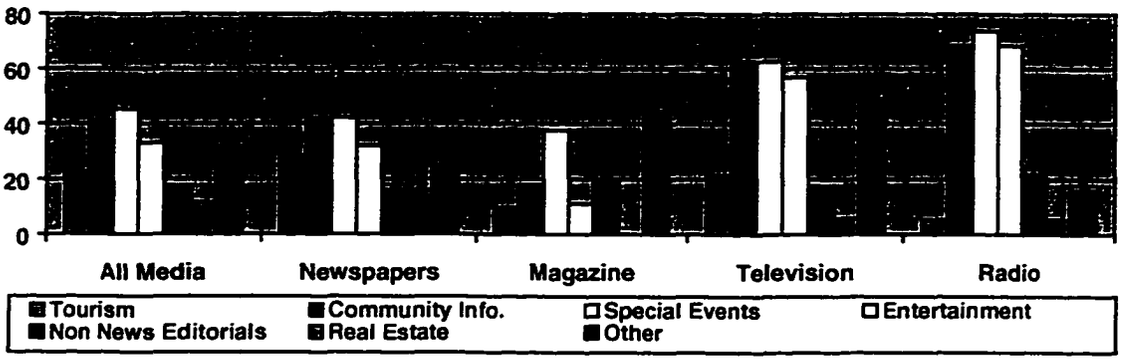

Figure 35. Types of editorial content developed for Web site (percent).

The content mix between the four industries reflects that newspapers offer more tourism information than the others (Figure 35). A higher percentage of radio and television offer community information, special events, and entertainment. Newspapers only surpass magazines in these two areas. Radio and television indicated they have a greater incidence of entertainment and non-news events than newspapers.

Scooping the core product means putting the information on the Web site before it is available in the core product. Cochran (1995) believed that newspapers need to "scoop" themselves regularly, and until they do, there will not be enough of a reason for readers to turn to the on-line product. Newspapers and magazines "scoop" themselves about 50% of the time, while television and radio lag far behind (Figure 36). This lag may be due to the nature of the medium, because television and radio have the capability to deliver their information almost instantaneously with their core product.

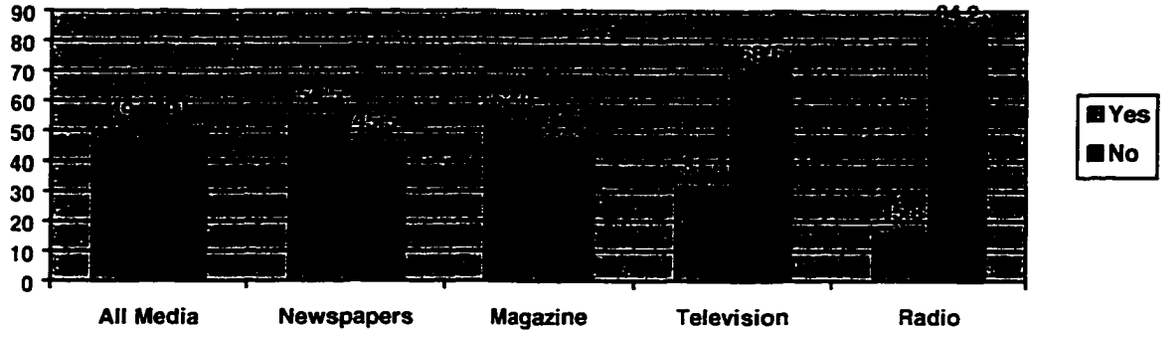

Figure 36. Percent who "scoop" the core product.

Few sites originate content specifically for the Web. Figure 37 shows a 10% median across all four media groups combined, with a low of 5% for newspapers and a high of 20% for television. These low numbers indicate that media companies are not willing to invest time and effort into the production of Web information.

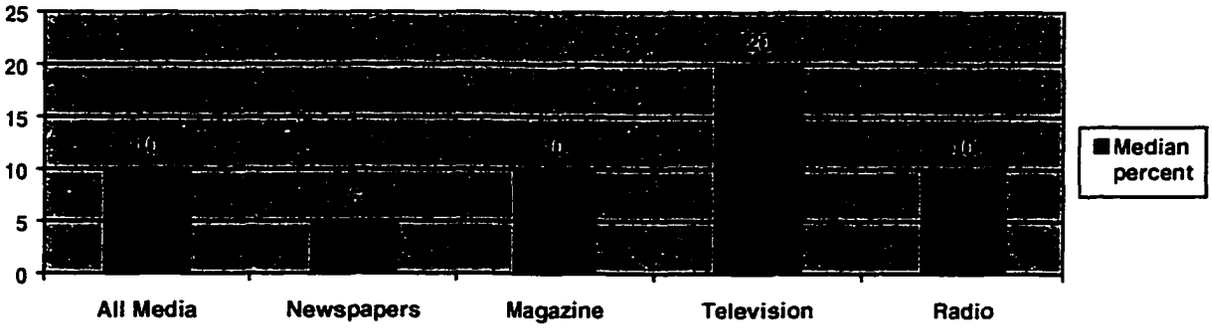

Figure 37. Percent of content originated for Web.

Respondents across all four media groups indicated that some portion of their core product is replicated for their Web product (Figure 38). In fact, newspapers and magazines replicate 50% of their core product to the Web. Although Kline (1996) felt that hundreds of newspapers were making a mistake by focusing on putting their content on-line (shovelware), many are doing just that.

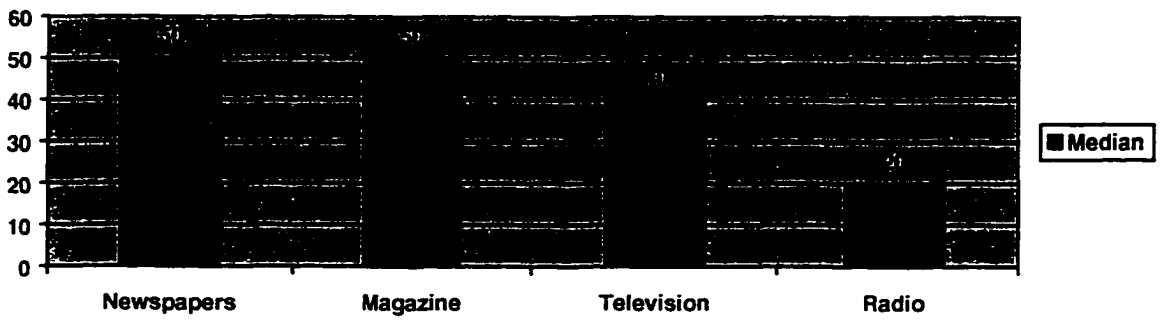

Figure 38. Percent of core product replication.

Focusing on newspapers only, and to obtain a more precise distribution for core product replication, responses were broken down into four even categories of 25% each. These categories are shown in Figure 39. Survey results found 28.4% of the respondents indicated that 0-24% of their core product is replicated on-line, while 15.2% indicated that 25-49% is replicated on-line, 16.9% indicated that 50-74% is of their core product is replicated, and 39.5% said that 75-100% of their core product is replicated on-line (Figure 39).

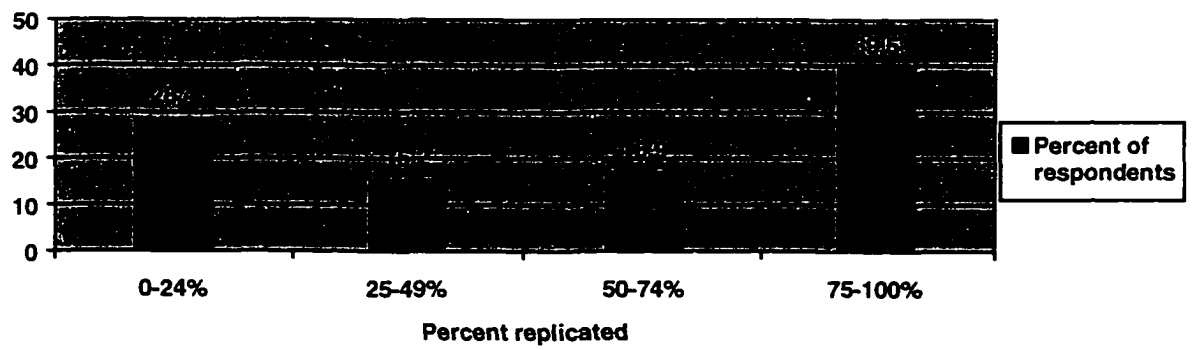

Figure 39. Percent of newspapers core product that is replicated on-line.

Although newspapers indicated that 50% (mean) of the core product is replicated on-line, the most common increment is between 75-100%, with 39.5% (Figure 39).

Looking further into the two increments of 0-24% and 75-100%, the following can be seen:

1) The lower increment (0-24%) and higher increment (75-100%) are similar to each other in regards to circulation size, core customer distribution, and web user distribution. It does not appear, however, that these three characteristics play any part in whether a newspaper replicated their core product on-line.

2) Those newspapers that also have content from outside sources did not indicate any strong correlation. Both upper and lower increments reflect a percentage of outside sources to all other newspapers.

3) Those newspapers that indicated they have a standardized banner size also indicated that they replicate more of their core product content on-line. (Figure 40).

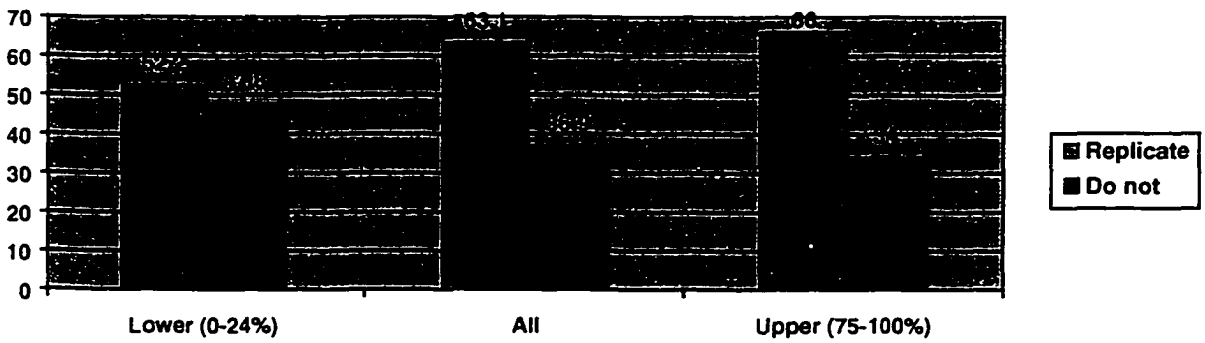

Figure 40. Percent of newspapers with standardized banners that replicate core content.

4) Consistent with standardized banner sizes is the charge for a month of advertising. Figure 41 indicates that those newspapers who replicate a higher percentage of their core product on-line also charge a higher percentage for their banner ads than others. (lower $463, all $1,332, and upper $2,343).

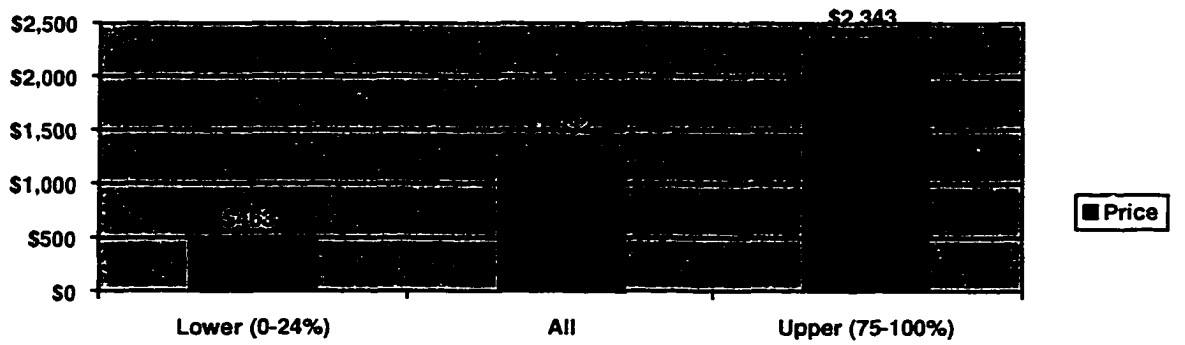

Figure 41. Banner pricing for the lower and upper groups (in dollars).

5) The number of page views per week seem to increase as the percentage of replication increases. It can be seen that newspapers with lower content replication generally receive 5.000 page views weekly, all newspapers 10.000 weekly and those with greater than 75% replication receive 23.500 page views weekly (Figure 42).

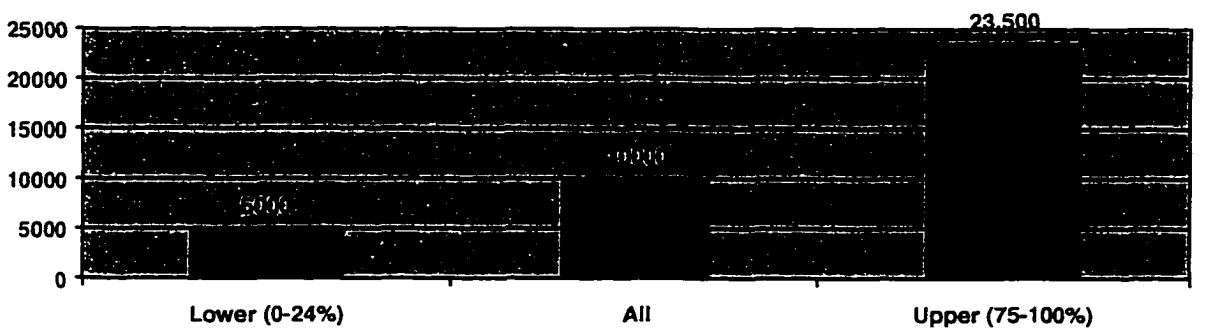

Figure 42. The number of page views per week (for content replicators).

6) Those that have a higher replication are more likely to provide advertisers with some measurement data. The lower content replication has 36% providing measurement, all other 51%, and the upper content replication show 61% providing data (Figure 43).

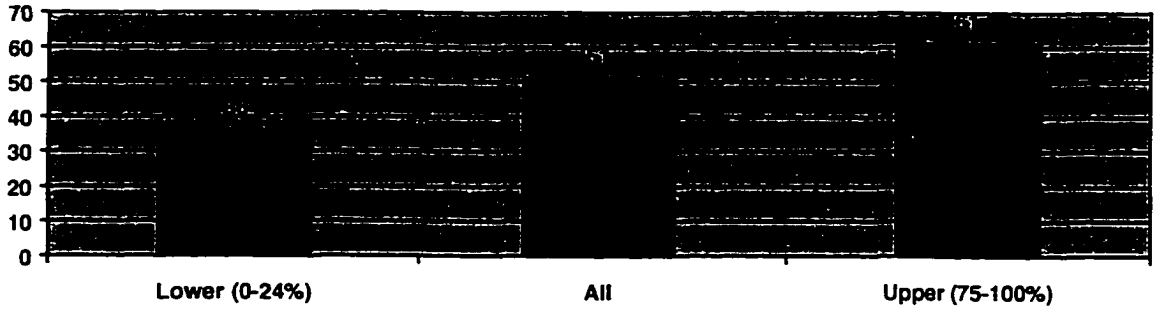

Figure 43. Percent of content replicators that provide advertising measurement.

7) Looking closely at the promotion budgets, there are higher amounts for those newspapers with high content replication, however the difference between the lower and upper range is minimal and show similar patterns, as can be seen in Figure 44 with the 4 major promotion budget increments:

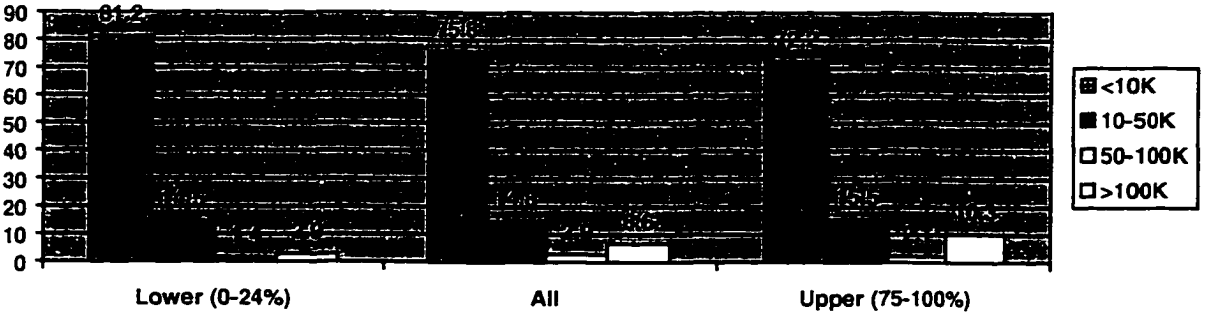

Figure 44. Promotion budget of content replicators (percent of those who replicate).

8) Although not substantially different than all newspapers, it can be shown that staffing for the higher replication incidence is higher than the low replication. When there is mid to high replication, there will be more staffing, but the difference is seen only in the editorial department (Figure 45).

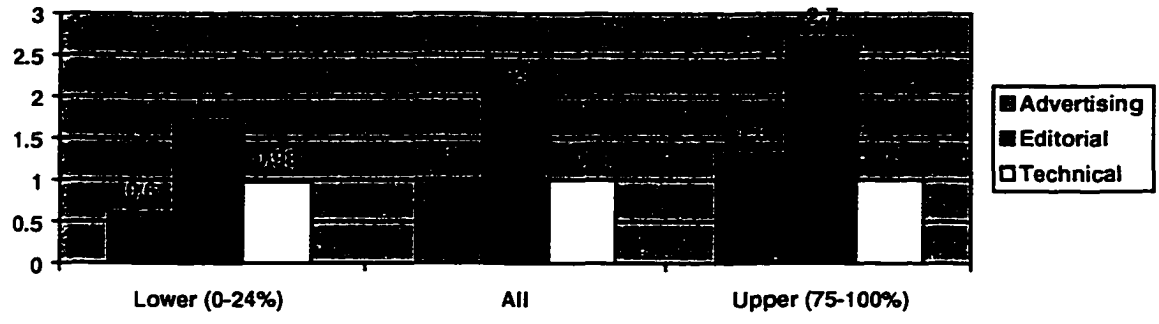

Figure 45. Staffing levels of content replicators (number of people).

9) Spending for equipment and services (Figure 46) is also relatively higher for those who replicate content, however there is not a big difference between the three categories.

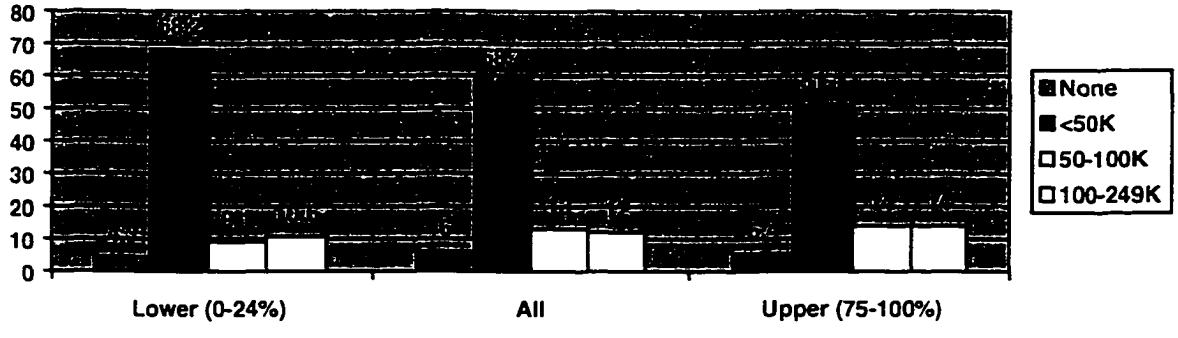

Figure 46. Investment spending of content replicators (percent).

From the nine points above, it is notable that the move to replicate the traditional product to the on-line product generally creates a correlation in which the Web site receives twice as many page views.

Circulation sizes indicate that content replication is not limited to large, or small sized newspapers. Revenue streams do not show any marked improvement from those newspapers with little to no on-line replication. Tom Dahlin, Director of Forecasting for

Editor & Publisher stated, "Like other newspaper web sites with a high percentage of outside sources of content, the users recognize the overall attractiveness of the web site, but quality has not yet translated into advertising dollars" (Dahlin, 1998).

Few replicate the Web product to the core product. As shown in Figure 44, radio replicates the most with 12.5%. This seems to indicate that content is first developed for the core product and subsequently used by the Web product. This could also be an indication that content produced by the Web product is not taken seriously enough by the core product editors.

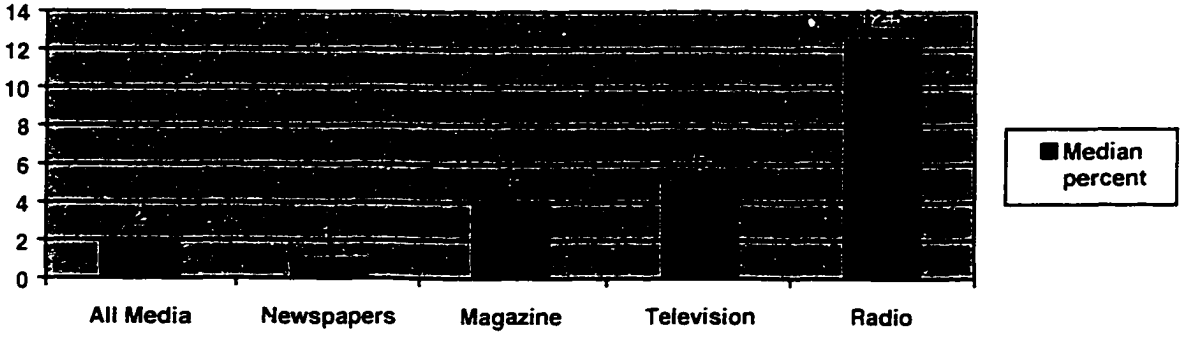

Figure 47. Percent of content from Web product used in core product.

To some degree, most newspapers use outside sources to produce content for their Web site. In fact, the median percentage of outside content is 5%. Although, this percentage of content is low, 12% of all newspapers indicated that at least 30% or more of their content did come from outside sources. The newspapers that have this "30% or more content" were specifically looked at to see if they behave differently, and what lessons might be learned (Figure 48).

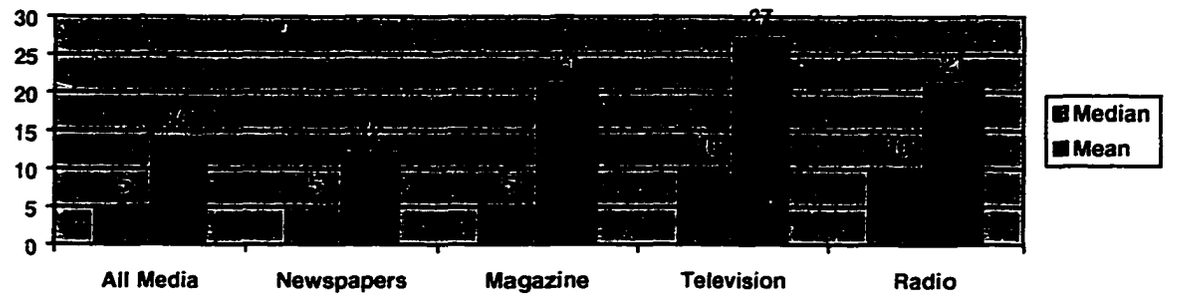

Figure 48. Percent that use outside content.

The areas that were examined for the "30% content" are measurement, promotion, page views, staffing, investment spending, and sales revenue.

1) Measurement - newspapers that provide measurement data to advertisers is 51.8% (Figure 62). Newspapers that have "30% content" and provide data to advertisers is 70.8%

2) Weekly page views – on average newspapers have 10,000 per week (median) as shown in Figure 49.

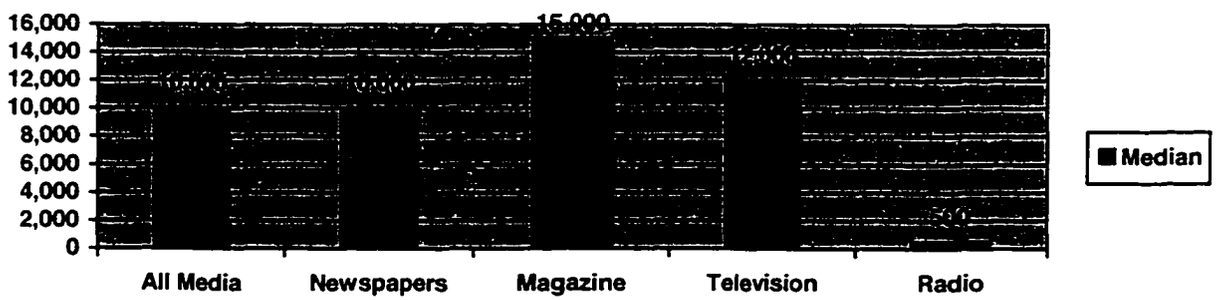

Figure 49. Page views per week.

Interestingly, newspapers with "30% content" have more than double the weekly page views at 22,500 median.

3) Promotion dollars spent by the "30% content" group parallels the incidence of outside content behavior as shown in Figure 50.

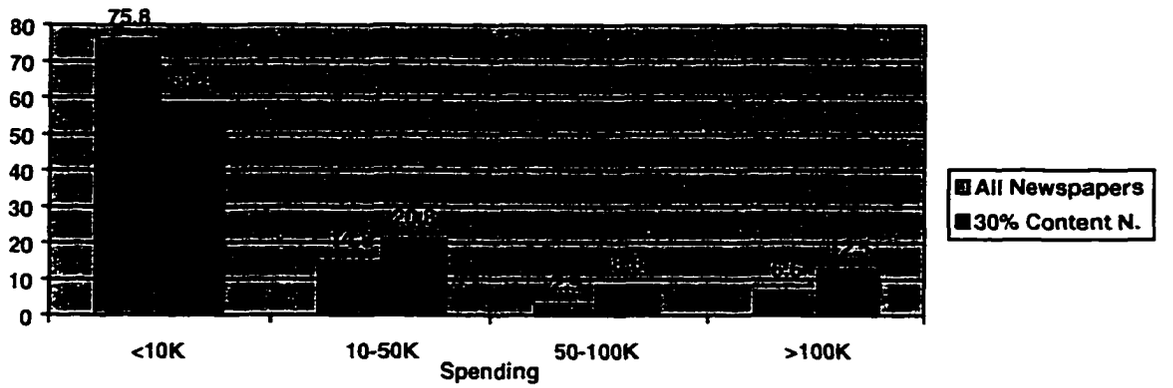

Figure 50. Promotion spending: Newspapers with high percent of outside content versus all newspapers.

4) Staffing - newspapers with a high percent of outside content have more full-time staffing (Figure 51). In fact, newspapers overall, employ one advertising, two editorial, and one technical person. The "30% content" content group staffing numbers are much higher, employing on average, two advertising, three and one-half editorial, and 3 technical personnel (all median).

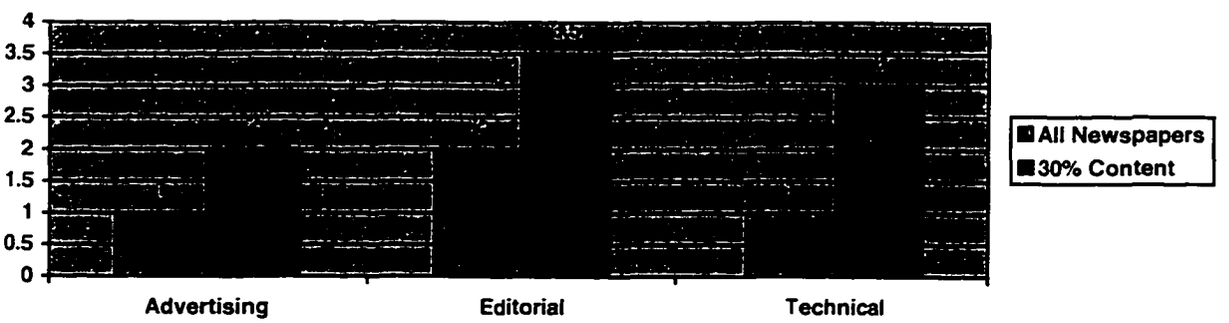

Figure 51. Newspaper staff sizes.

5) Investment spending - newspapers that have a higher outside content also spend more money on investments for equipment and software (Figure 52).

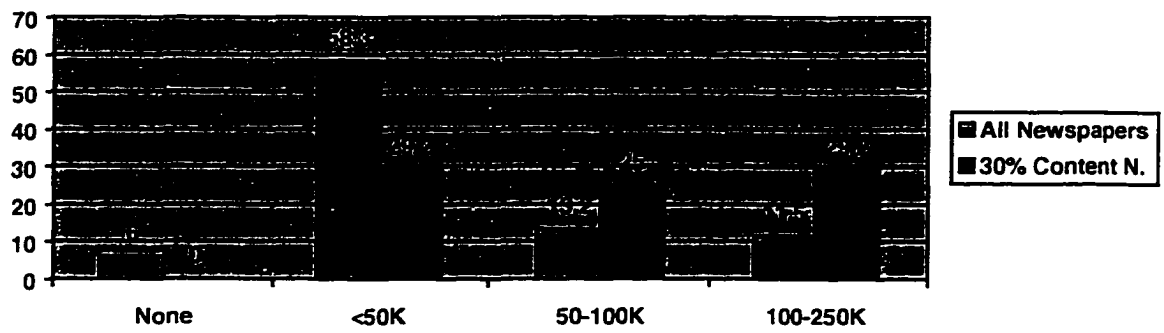

Figure 52. Investment of high content providers versus non providers.

The number of newspapers with "30% content" expect that same increment to rise from 25% to 33.3%. In essence, those newspapers that are more involved with outside sources for content are planning to spend more than all other newspapers.

6) Sales revenue - banner advertising between all newspapers and those newspapers that fall into the "30% content" group, show differences as well (Figure 53).

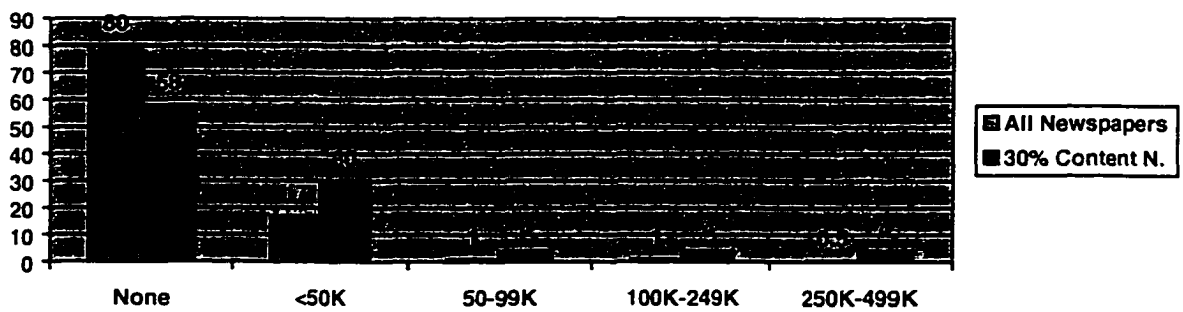

Figure 53. Banner revenue for high content providers versus non providers.

With respect to classified advertising, however, those newspapers that fall into the "30% content" group show no marked increase of revenue over all other newspapers.

It can be concluded that those newspapers indicating they have at least a 30% level of their content from outside sources have more staffing, more investment in equipment

and software, more promotion dollars, more page views per week, more measurement, and they experience more banner revenue than their counterparts. Although their pricing of banners is twice as high as the typical newspaper, their page views warrant higher pricing.

An analysis of the survey data found that newspapers with at least 30% content from outside sources claim to have more tourism, community info, special events, entertainment, non-news, and real-estate than other newspapers. However, none exceed more than 10% of the norm. There is also a higher incidence of original editorial content with these newspapers (80.6% versus 68.4%).

Although this group (30% content) of newspapers is in-line with banner pricing and site development, the revenues have not followed. It may be that the approach to web site development and investment must be consistent with high revenue generators. In this particular group the one item that deviated considerably, not only with other newspapers but especially with the high revenue generators, is site measurement (Web sites that provide advertising measurement to their advertisers). Although this group experiences a greater level of measurement to advertisers than the norm (70.8% to 51%), it has considerably less for "outside" measurement (9% to the industry's 16%). This is exceptionally low if compared to the high revenue generating newspapers which provide 46.7% of their measurement from outside sources.

Turning to archival information, all four media groups provide archives to some degree, with the magazine industry on top at 72.5% (Figure 54).

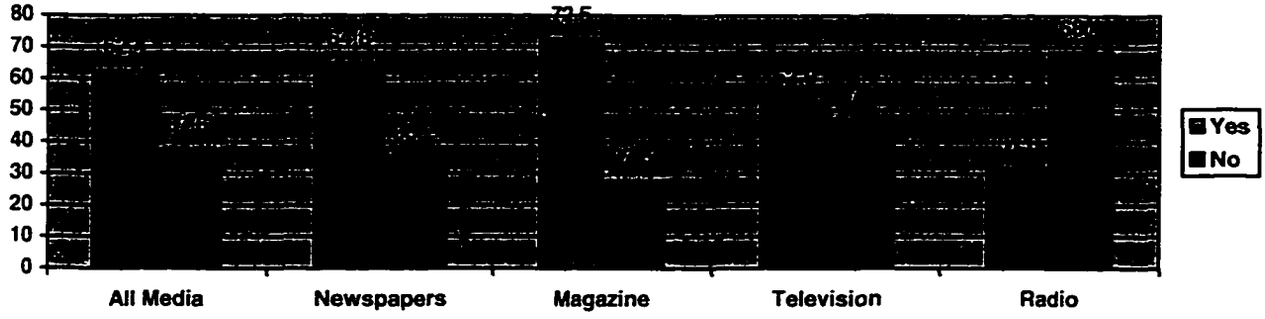

Figure 54. Providing archival information (percent).

The amount of time articles stay in the Web edition before going to archival or deletion is shown in Figure 55. The only significance here is that some sites charge for articles once they are stored as archival information, so the sooner an article is moved to archive, the sooner they can start charging for it.

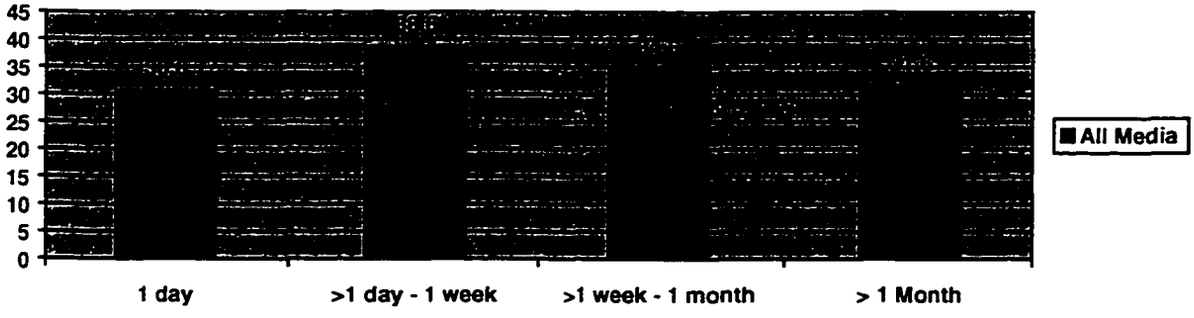

Figure 55. Time articles stay in Web edition before going to archival or deletion (percent of respondents).

Along with cross promotion, alliances with other media companies are another avenue to reduce promotion spending. Most top revenue generating newspapers are in fact in alliances. However, the percentage of newspapers (in the aggregate) that have alliances has actually decreased from 1996 to 1997 (source Editor & Publisher, 1997).

Within the radio industry, which has a tradition of "trade" practices, commensurate alliance levels as newspapers is seen (Figure 56).

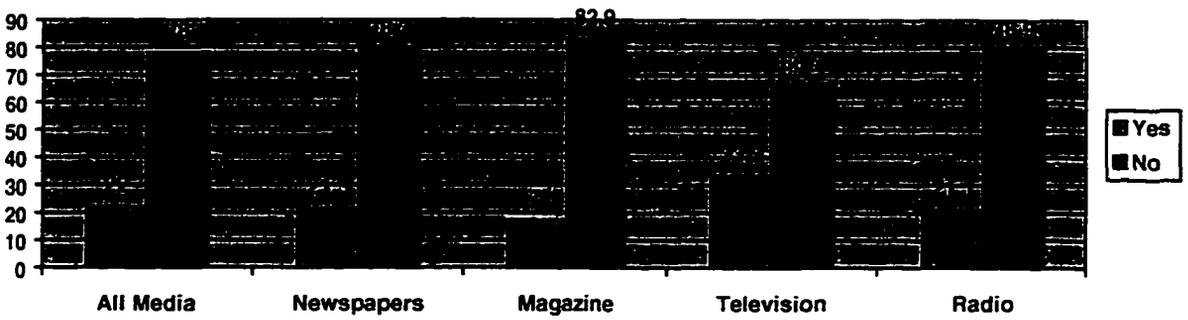

Figure 56. Alliances with other communications companies (percent).

One of the underlying themes in numerous articles and at industry conferences during 1997 has been that newspapers need to partner with other industries in order to build a strong alliance in the community, and ultimately make a profit. Figure 56 indicates that media companies are not partnering with other communication companies.

Advertising

With respect to advertising, about 75% of the newspapers and magazines reported that they have paid advertising on their site. On the other hand, television and radio were around the 50% range as shown in Figure 57.

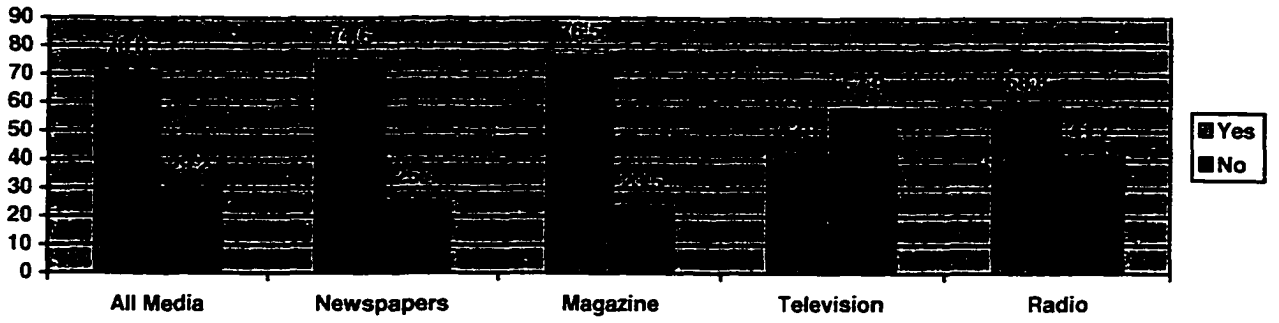

Figure 57. Web sites with paid advertising (percent).

A number of sites also have sponsors as depicted in Figure 58. Although there is a larger percentage of Web sites with no sponsors, a surprise finding was in the high percentage of sponsors, which averaged 42.8% overall.

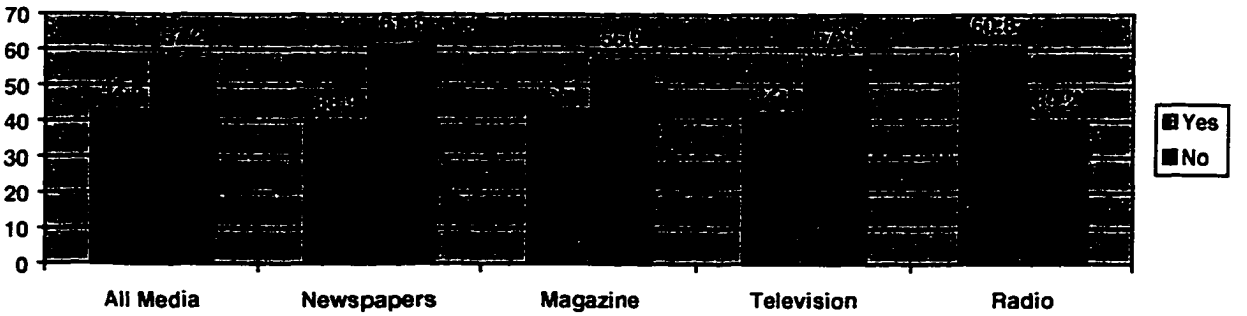

Figure 58. Web sites with sponsors (percent).

Banner standardization has been an approach to homogenize a product throughout the industry. Although there are still many different sizes that newspapers use, there is a conscientious move to become more uniform. In 1996, 44% of all newspapers indicated that they had a standard banner size, according to Editor & Publisher 1996 statistics. It was found in this study that the percentage jumped to 63.1% (Figure 59).

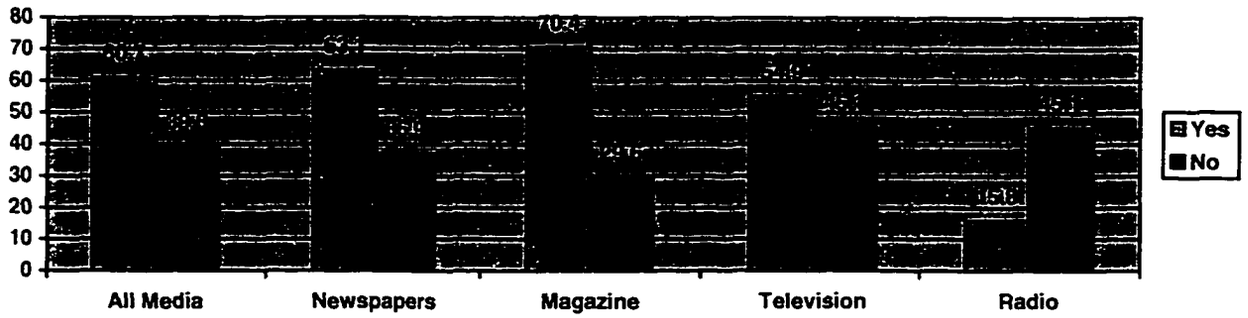

Figure 59. Percent that indicated they have a standardized banner size.

A move to define a standard unit of measurement (in this case a standard banner size) is a move to offer advertisers a more price competitive product. This offer enables advertisers to shop for the best banner buy, while at the same time enables newspapers an opportunity to cut costs through efficiency. The key issue is to convince advertisers on the performance of the web site and the profile of the typical user.

Even though respondents say they have standard banner sizes, they do not. Although there was a high indication of standardized banner sizes by the survey respondents (as shown in Figure 59), the most common size was 468x60 pixels, which is used by only 15.5% of the respondents. Other common sizes were not easily distinguishable. This is an important area for the industry to improve on, and one that should not be overlooked in future surveys.

Newspapers were asked what they charged for their typical banners, the results reflected the greatest difference of any variable in the entire study. This is largely due to the underlying factors that impact banner rates. For example, the responses ranged from $5 to $30,000 monthly. The median price was $125 and the mean was $1,563.

Looking closer at this pricing, the range of banner prices was delineated into four ranges. They are each evaluated for correlations with each other and the causation which drives the banner revenue. Consider the following four ranges:

$0-$48 - the bottom 24% price range (**Lower**)

$49-$120 - the bottom 25%-49% price range (**Mid-Lower**)

$121-$440 - the middle 50% - 74% price range (**Mid-Upper**)

$441 and above - the upper 75%-100% price range (**Upper**)

Considering the price of banners to be a function of page views per week, a positive correlation should be seen between these two variables. In other words, as page views per week increase, the price of banners should increase as well.

The page views across all newspapers has a median value of 10,000 weekly; charging $125 (median value). This represents a price of approximately $0.01 per page view. The page views across the **Lower** range has a median value of 4,800 page views per week. Those charging in the **Lower** range (0-$48) are receiving $0.00-$0.01 per page view. The page views across the **Mid-Lower** range has a median value of 5,730 page views per week. Those charging in the **Mid-Lower** range ($49-$120) are receiving $0.008-$0.02 per page view. The page views across the **Mid-Upper** range has a median value of 24,500 page views per week. Those charging in the **Mid-Upper** range ($121-$440) are receiving $0.0049-$0.017 per page view. The page views across the **Upper** range has a median value of 127,500 page views per week. Those charging in the **Upper** range ($441-up) are receiving $0.003 and up per page view (Figure 60).

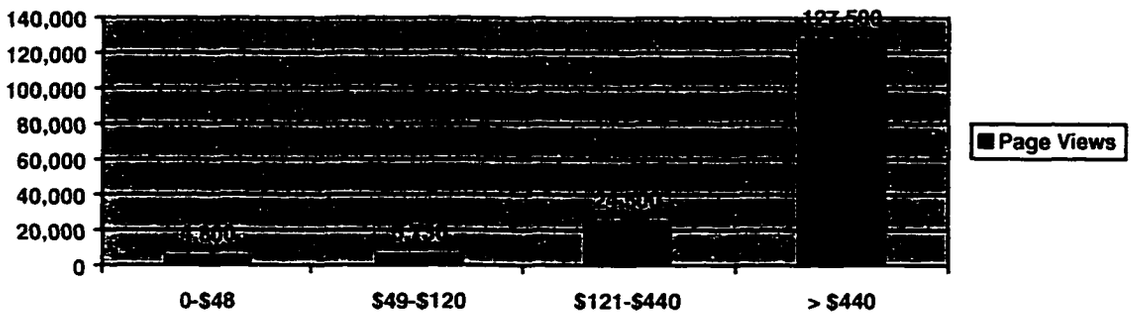

Figure 60. Page views of the four banner ad pricing ranges.

From these results it can be seen that as page views increase, the overall price for banners increases as well. However, the marginal increase in page views does not proportionately increase with unit prices. Instead, there exists a decreasing marginal price system. Newspapers that have a higher number of page views also have a lower value for the advertising banners. For example, in the $49-$120 category, the average price per page view is 0.01 cents compared to 0.003 cents per page view in the >$440 category.

This behavior can be explained by two factors. First, only 16% of all newspapers provide advertisers with outside measurement data. This data enables advertisers the freedom to examine the best alternatives among newspaper web sites. In the absence of this measurement data, advertisers must rely on the newspaper's own internal measurement data, which presents a conflict of interest, or advertisers must make some non-quantifiable determination with some web site's presence. Another explanation for decreasing unit prices is the cost structure in which web sites operate. Unlike most operations, the cost of additional cyberspace output is nebulous at best. Once a site is put on-line, there are virtually no variable costs, so there are no additional costs if the site receives 5,000 page views or 50,000 page views.

Looking at the total revenues from each of the four pricing categories, Figure 61 indicates that revenue is skewed more towards the upper pricing range. As can be seen,

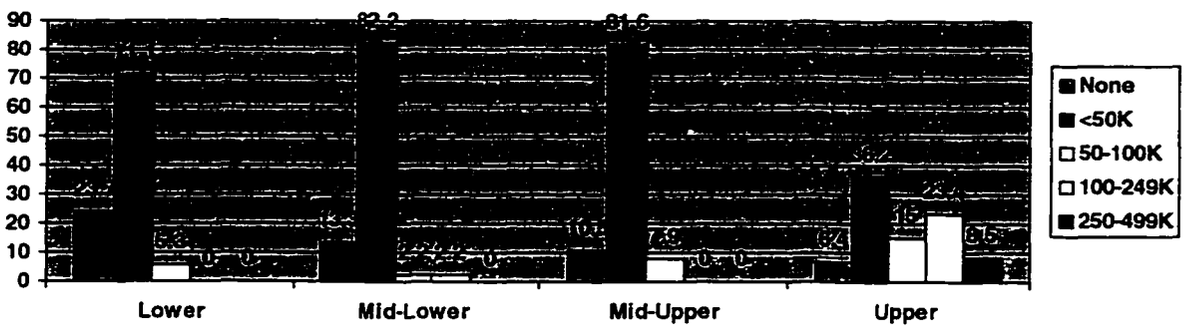

Figure 61. Pricing and revenue streams (percent).

of the newspapers in the **Upper** range, 15% indicated revenues in the $50-$100K range, 23.4% indicated revenues in the $100-$249K range, and 0.5 indicated revenues in the $250-$500K range. Combining these three ranges ($50-$499K), it can be seen that 37% of the respondents indicated revenues above $50,000, far above the other three pricing ranges.

By aggregating the total revenues for each category, it can be seen more clearly that there is a polar distribution of the total banner revenue. Both the lower range and upper range of prices reap 75% of the total revenue, as shown in Figure 62. Clearly, the majority of revenue is captured by the upper end of the pricing category with 54%.

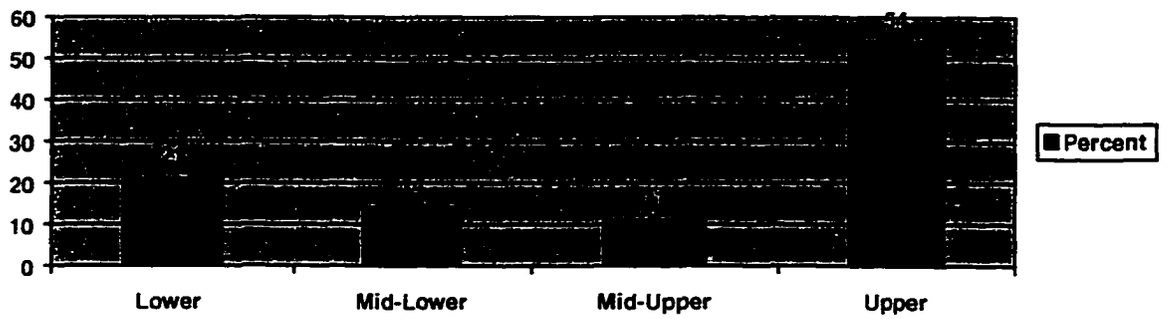

Figure 62. Pricing levels and percent of total revenue.

Even with the lowest price per unit (.003 cents per page view), the upper range of pricing still receives the majority of revenue. It is important to note that revenue in the upper category is represented by 20% of the total number of newspaper web sites, while the lower category (price per unit of 0.01 cents per page view) is represented by only 16% of the industry. The remaining 64% of other newspapers charge between .0049 to .02 cents (per page view), crossing between the lower levels and higher levels. When the pricing is double that of the total industry (.02 cents compared to .01 cent), the mid pricing is partially preventing them from capturing their share due to pricing which is too high.

Another reason why this mid range is not capturing a share, lies in the issue of measurement. Of these respective price categories, measurement for advertisers plays differing roles. As seen in Figure 63, the lower price category has a lower incidence of measurement compared to the upper levels. This lends itself to conclude that at lower price levels, measurement is less critical in determining overall banner revenues. However at higher price levels, measurement practices are more than twice as common (than the lower price level) and should be deemed an important factor in banner revenues.

This measurement would seem to justify their higher banner rates that are proportionately higher with respect to the users. (Twice as many users equal twice the banner rates).

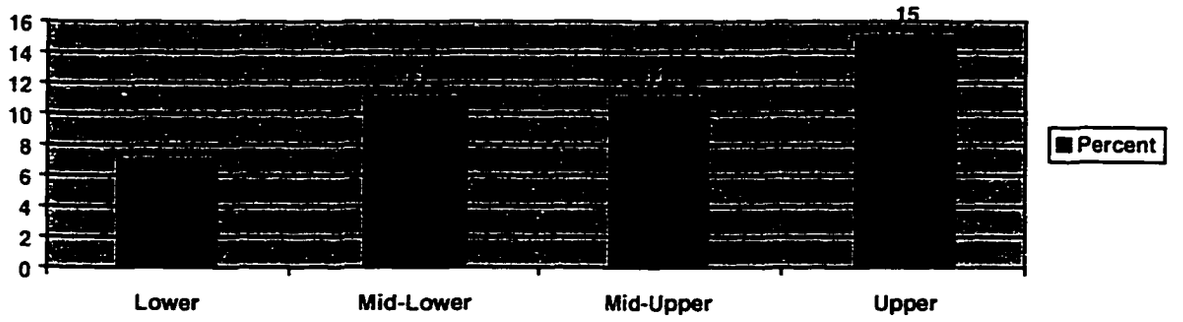

Figure 63. Percent of newspapers that use measurement by price category.

Looking strictly at the price of a banner ad per month, by industry, Figure 64 shows that the median for all media, newspapers and television is $100, while magazines average five times that amount at $500 per month. Note that these rates were for their particular "standardized" banner, which varied greatly.

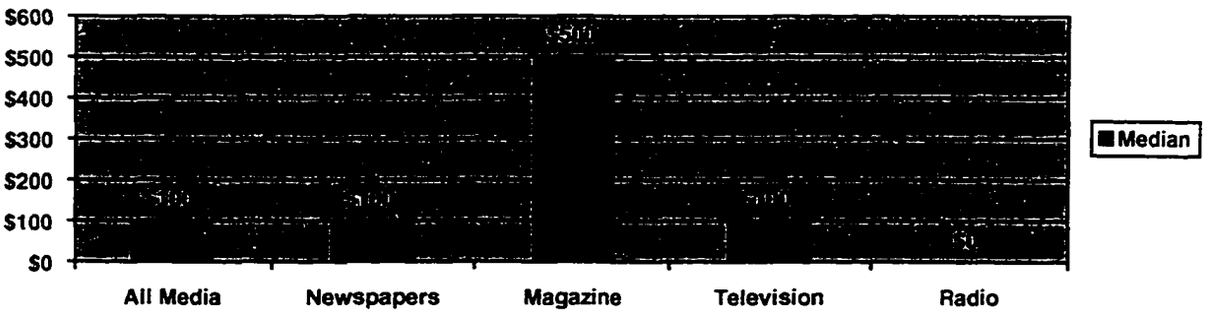

Figure 64. Price of banner ad running 1 month.

Overall, approximately 50% of the media indicated that they have standardized ad sizes. While they were not asked to report these sizes, it may well be that they vary greatly, much like the findings with banner ads. Figure 65 shows the responses by media group.

Note that newspapers and magazines are comparable, while television and radio are far behind. The significance is in the increase of standardization from 1996 (15%) to 1997 (54%) for newspapers, based on 1996 Editor & Publisher statistics.

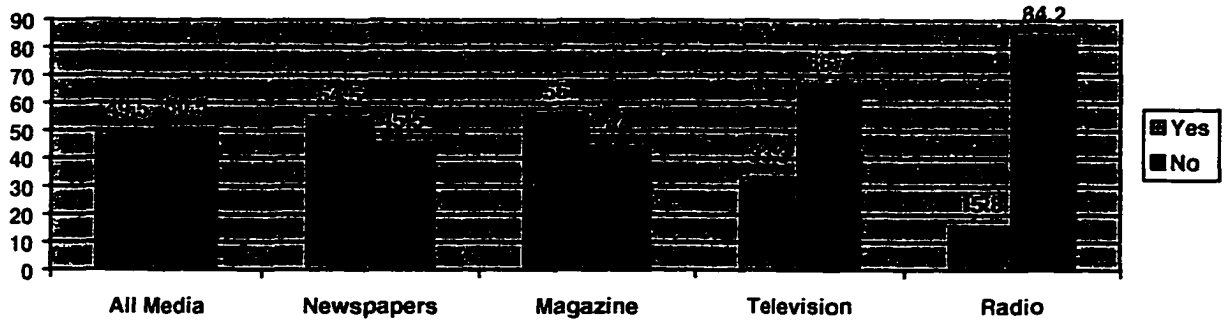

Figure 65. Percent that indicated they have standardized ad sizes.

Few media companies are participating in network advertising. Newspapers lead in participation (Figure 66), however there is little difference between the four media groups. Seybold (1995) pointed out that the potential of this kind of participation is in sharing resources and ultimately reducing costs. It appears that, in general, media companies are unwilling to participate, or, they do not have the technical savvy and/or resources to do so.

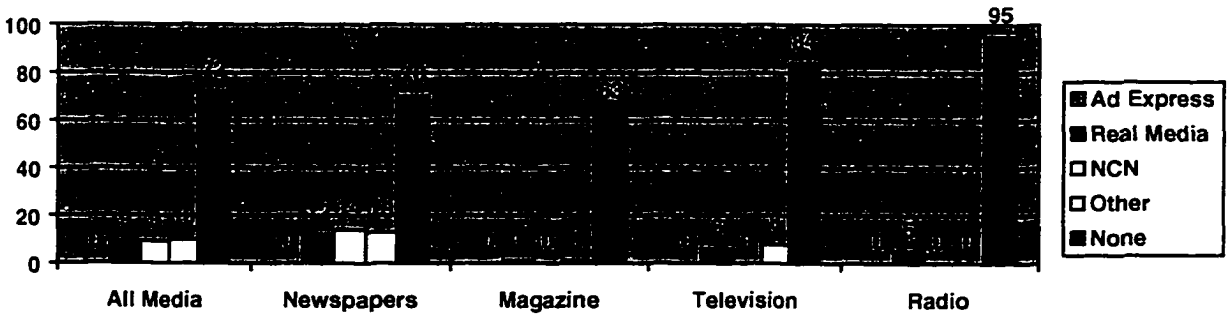

Figure 66. Percent participation in network advertising.

One of the areas of concern that was discussed earlier, is in providing advertising measurement data to advertisers. While more than 50% of all media (Figure 67) indicated

they provide advertising measurement data, much of this comes from their own internal sources (Figure 68).

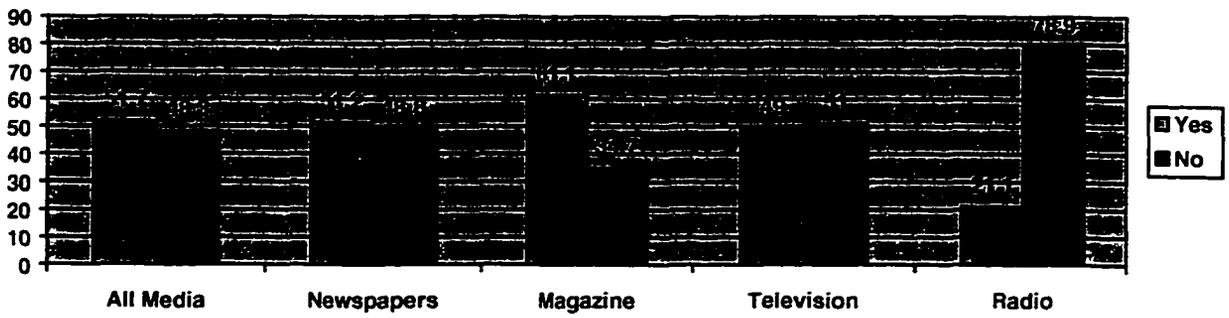

Figure 67. Percent that provide advertising measurement data.

Those that provide outside measurement average only about 15% of the aggregate (Figure 68). This is an important fact to note as those media that provide outside measurement generally attract more viewers and higher banner rates.

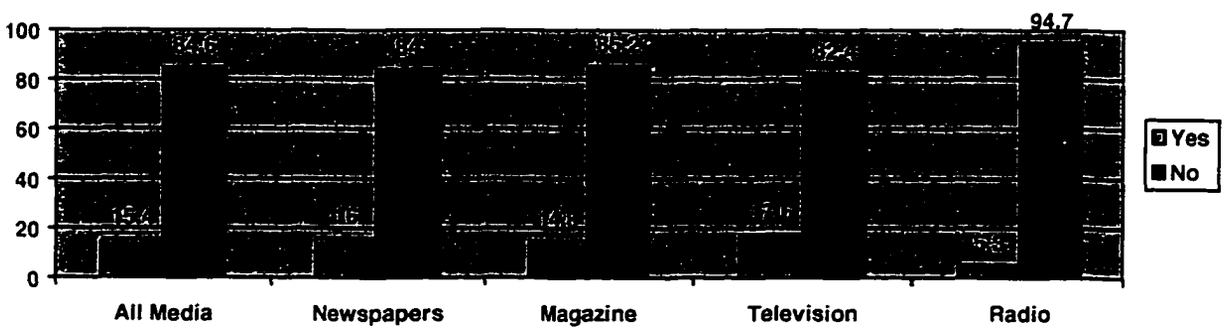

Figure 68. Percent that provide outside advertising measurement.

Television and radio offer little in the way of Web classifieds. Figure 69 indicates that a large percentage (71.3%) of newspapers offer Web classifieds, with an impressive 41.2% (of the 71.3%) being keyword searchable.

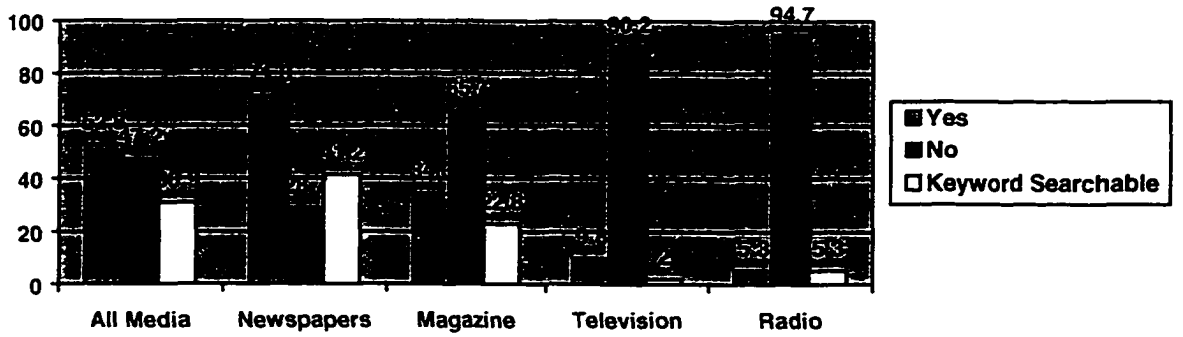

Figure 69. Percent that offer Web classifieds.

Focusing on newspapers, 55% indicated that their Web classified advertising is sold in conjunction with their core product. Only 14% indicated that their classified ads are sold as a separate entity from the core product. Of the 55% above, 75% of their classified advertising on the Web site is also in their core product.

Web classified ads seem to be an important function of many sites. Figure 70 shows the average page views generated for those who have classifieds on-line, and those who do not.

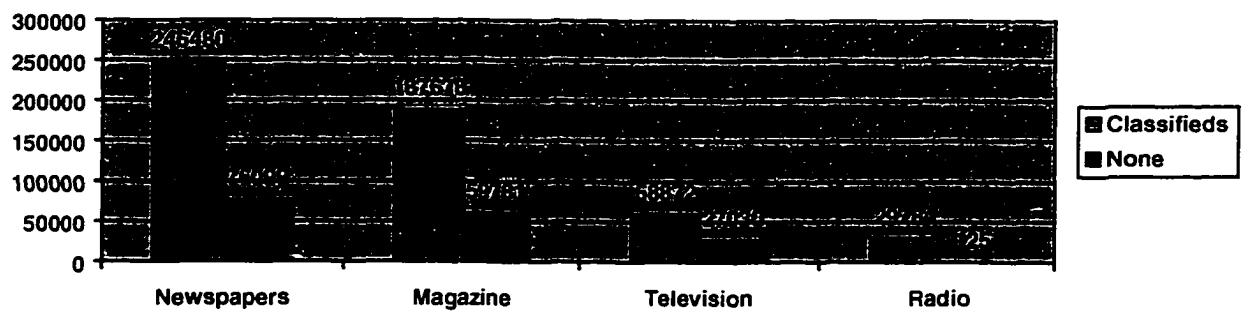

Figure 70. Page views of Web sites offering classified ads.

Dynamic advertising that is query specific gives the user the ability to search classified ads for very specific things. For example, cars may be searched for a particular

price range, make model, miles, color etc. The flexibility is endless and tends to attract more users. Figure 71 indicates that roughly 20% of the media companies surveyed provide this service. This may be an area in which expansion should be considered.

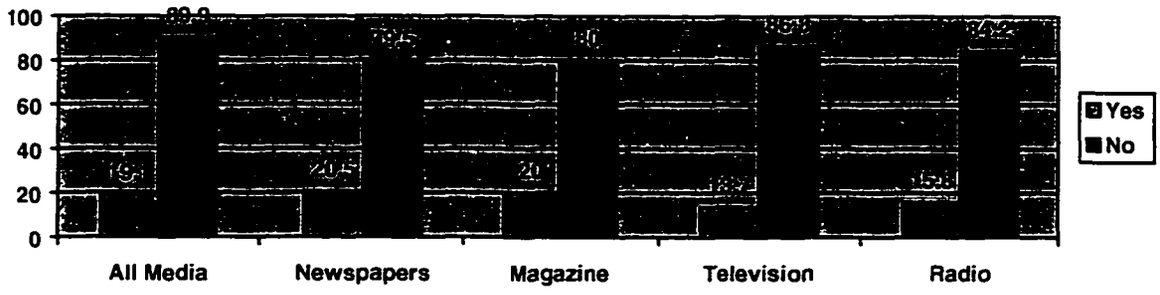

Figure 71. Percent that provide dynamic query advertising.

Figure 72 shows that sites providing dynamic query experience much greater page view counts than those who do not.

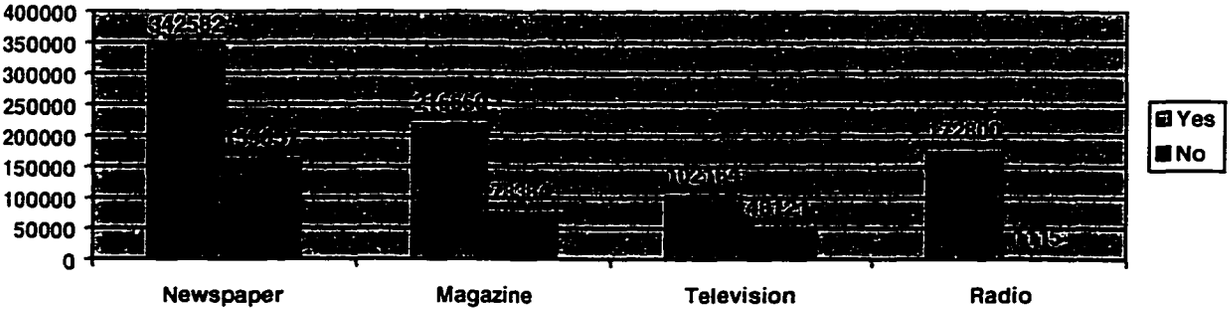

Figure 72. Page views of those companies who do and do not provide dynamic query advertising.

Coupons are found in newspapers daily, and many newspapers are purchased by consumers solely for the coupons. Web coupons have been a topic of discussion within the industry for some time. Figure 73 shows that the industry, as a whole, has not taken advantage of this technology. This could be due to a variety of reasons including lack of standards, non interest, development costs, or quite possibly, sites do not want to offer

coupons because the results (low consumer response) to advertisers may be low, therefore creating a negative effect.

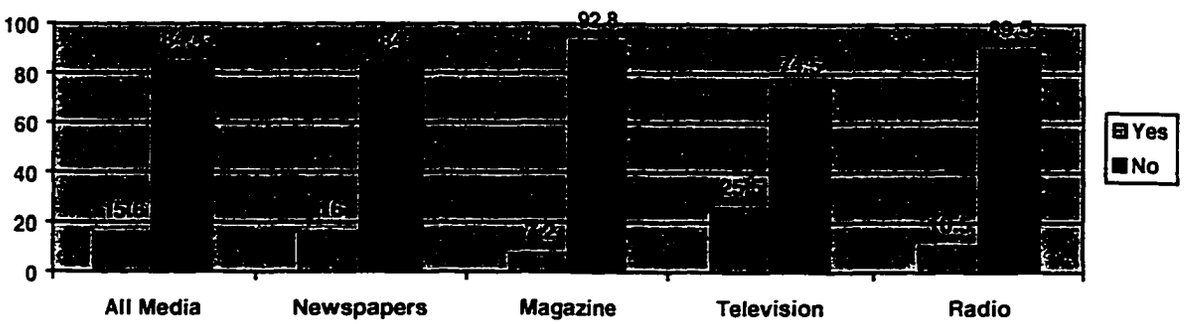

Figure 73. Percent that offer Web coupons.

Promotion

Media companies use a variety of methods to promote their Web sites as shown in Figure 74. It can be seen that promotion tends to stay within the industry. That is, newspapers promote in other newspapers, magazines in other magazines, television in other television, and radio in other radio stations. Direct mail has a strong use as well, with a 25% across the board usage.

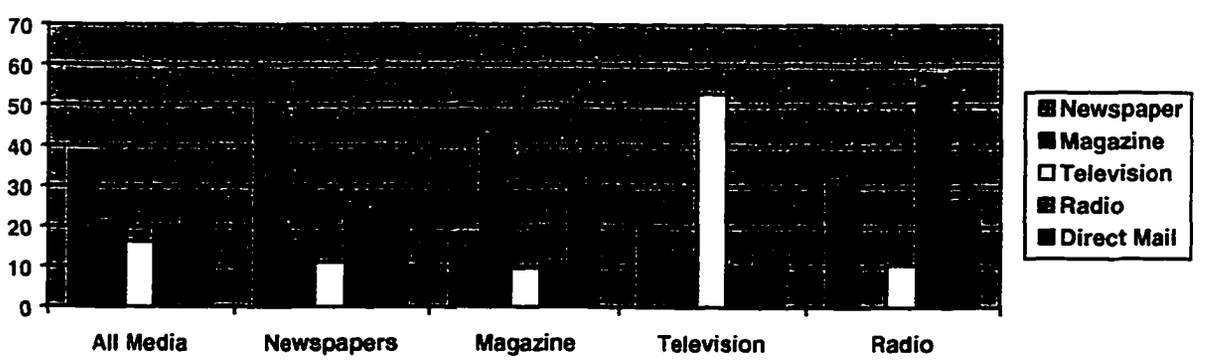

Figure 74. Promotion vehicles used by Web sites.

Figure 74 also reflects the lack of partnering within the four media groups. As discussed previously, few Web sites are in alliance with other media companies. This can present a number of problems, the most obvious being the higher cost to promote a Web site. By taking advantage of partnering, cross promotion can take place with little or no cost to the partners. On the other hand, media companies are cross promoting with other Web sites. The cross promotion of products with other web sites is an opportunity to defray

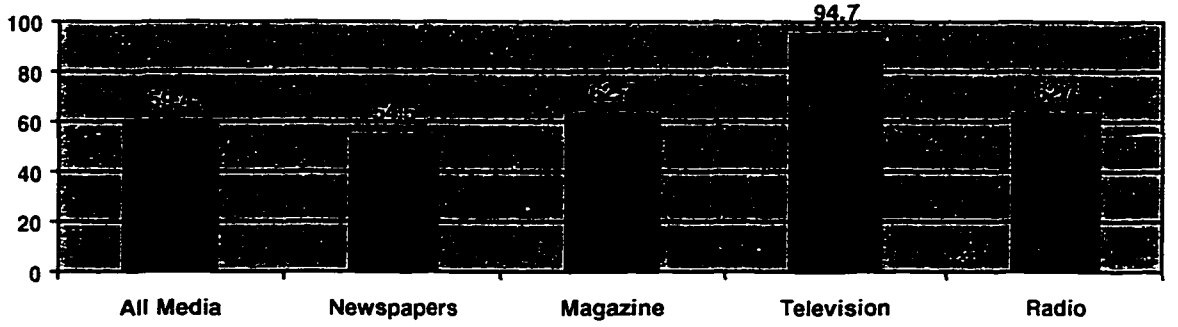

Figure 75. Cross promotion with other Web sites (percent).

the costs of promotion. Newspapers have a lower incidence rate than magazines, television and radio (Figure 75). With newspaper promotion budgets decreasing, the lack of promotion and alliances seems counterintuitive, or the possibilities for this activity are minimal.

Promotion budgets increase the ability of a company to generate greater interest in their Web site. The trend however, has been a reduction in the overall on-line budget. In 1996, Editor & Publisher found that newspapers were budgeting an average (mean score) of $44,000 per year for Web site promotion. This survey asked the same question as the 1996 Editor & Publisher survey, and found 1997 promotion budgets drastically reduced to an average of $19,950. Considering most Web site promotion budgets are under $10,000

(Figure 76), media companies need to work together, creating alliances and promoting their efforts.

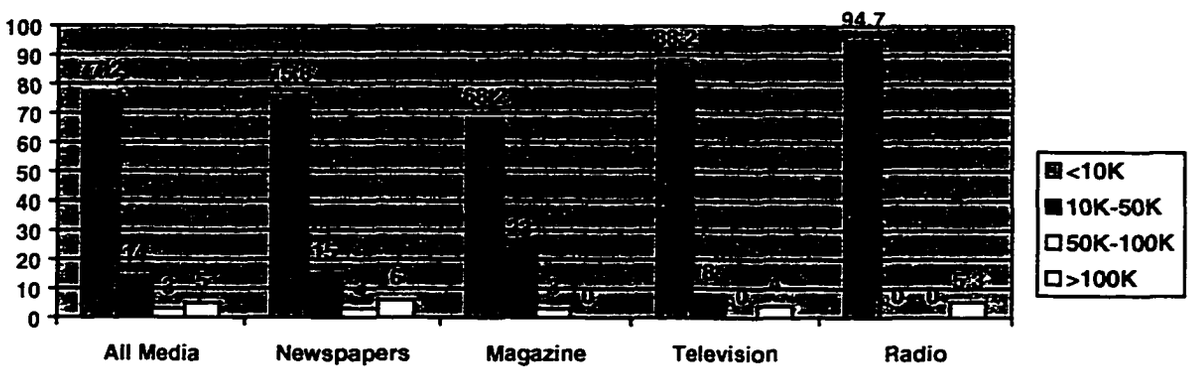

Figure 76. Size of promotion budget (percent of respondents).

Internet marketing tactics used to bring traffic to the Web site are shown in Figure 77. Multiple responses were offered among the media groups, with listing URL on search engines, updating content, and building community interest ranking among the highest. Coming in last was push technology.

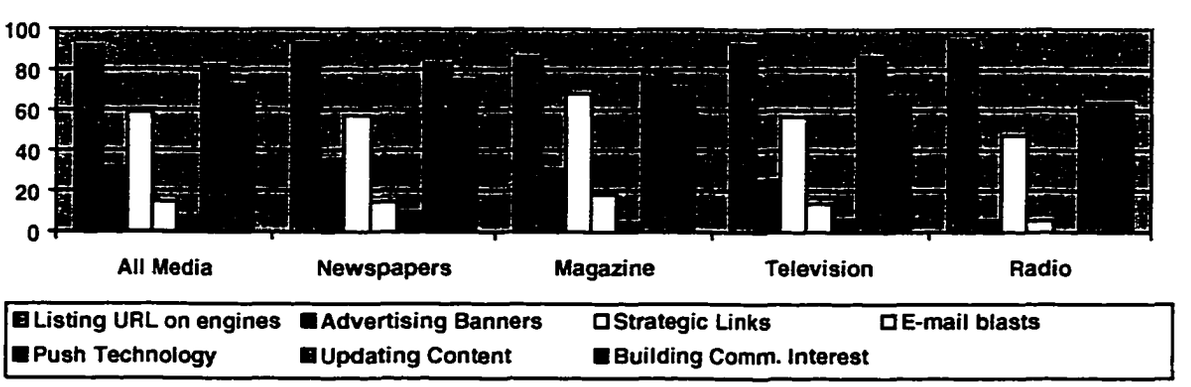

Figure 77. Internet marketing tactics used.

Staffing

As discussed previously, the editorial Web staff generally functions as a part of the core product editorial staff. Only 23% indicated their editorial Web staff functions as a separate entity. Looking now at the other Web staff (advertising and technology), Figure 78 indicates that about 41.7% of the media Web sites have separate advertising and technology staffs.

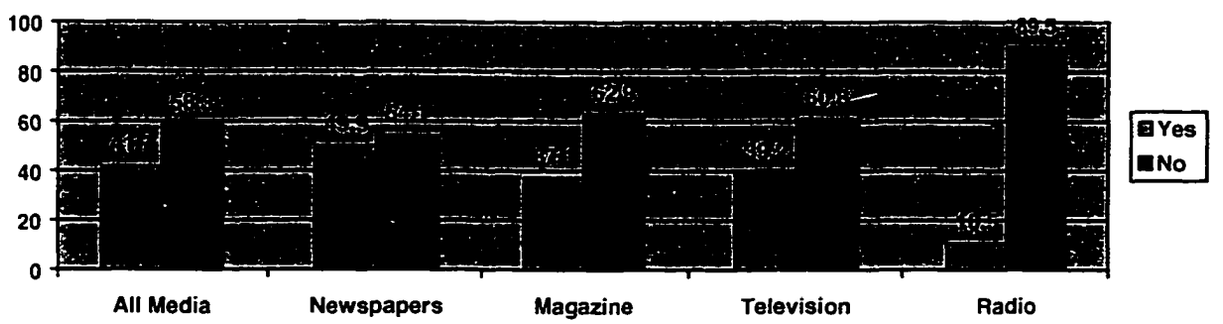

Figure 78. Advertising and technology Web staff as a separate entity from the core product (percent).

Overall, the number of employees working on the typical media Web site are shown in Figure 79 (median). This table represents the overall aggregate of the industry. As a result it does not show specific areas of interest, such as staffing by the amount of page views a site receives each week. Figure 80 shows these figures in four different page view increments, less than 50,000 page views, 50-250,000 page views, 250-1 million page views, and greater than 1 million page views. Note that part time employees were counted as working four hours per day, or .5 persons per week.

	All Media	Newspapers	Magazine	Television	Radio
Advertising (Full Time)	0.6	1.0	0.6	0.4	0.5
Editorial (Full Time)	1.3	2.0	1.5	0.5	1.2
Technology (Full Time)	1.0	1.0	1.3	1.0	0.6
Advertising (Part Time)	1.0	0.7	2.0	0.4	0.8
Editorial (Part Time)	1.0	1.4	1.0	0.8	0.9
Technology (Part Time)	0.9	0.7	1.5	0.8	0.5

Figure 79. Staffing of advertising, editorial, and technology.

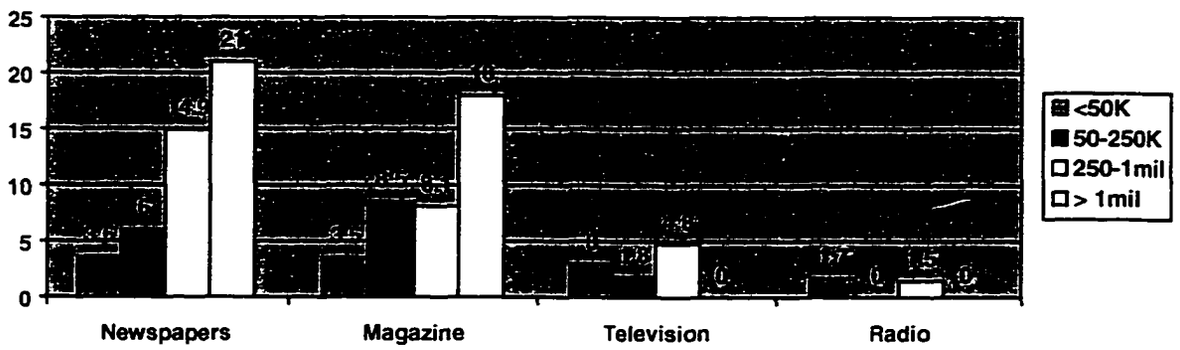

Figure 80. Staff sizes by amount of page views per week.

It can also be seen (Figure 81), that for those who provide Internet services there is a higher incidence in staffing.

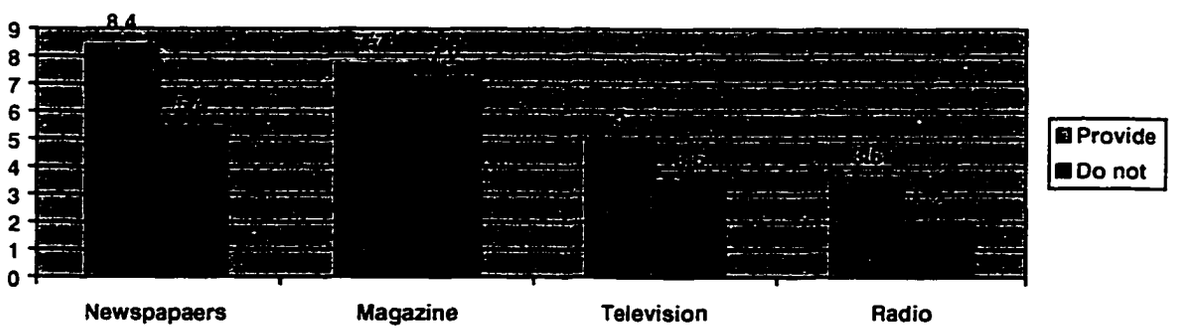

Figure 81. Average staffing size of those who provide and do not provide Internet services.

For those weekly newspapers interested specifically in the staffing of weekly newspapers, Figure 82 shows the breakdown of the six major categories. Overall, weekly newspapers average 1.9 full time employees and 1.9 part time working on their Web site.

Advertising (Full Time)	0.4
Editorial (Full Time)	0.8
Technology (Full Time)	0.7
Advertising (Part Time)	0.4
Editorial (Part Time)	0.9
Technology (Part Time)	0.6

Figure 82. Average staff size of weekly newspapers.

One of the big questions for 1998 is how will staffing change. In essence, do Web publishers expect an increase, decrease, or do they think that staffing sizes will remain the same in 1998. Although 45.9% of the respondents indicated there would be no change in staffing for 1998, 54.1% indicated there would be an increase in staffing. From the 54.1% that indicated an increase, respondents from newspapers and magazines anticipate almost a 50% increase in staff, while television and radio are preparing to greatly expand, somewhere in the range of 80%. Specifically, these changes are shown in Figure 83.

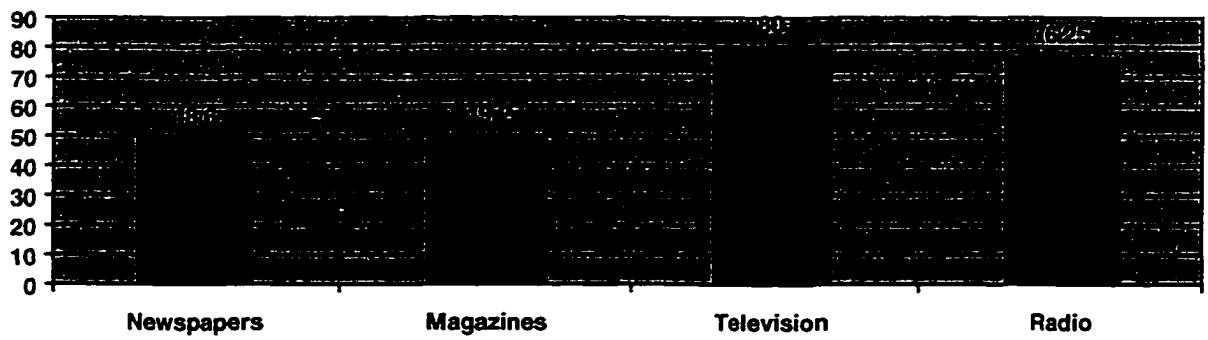

Figure 83. Percent increase in staff size expected in 1998.

In concluding this section on staffing, less than 40% of all media indicated that they have a full time editorial director. Figure 84 shows newspapers with the highest incidence, and radio trailing far behind. The indication here is that Web sites are not willing to invest heavily in staffing. This trend was also seen in Figure 33.

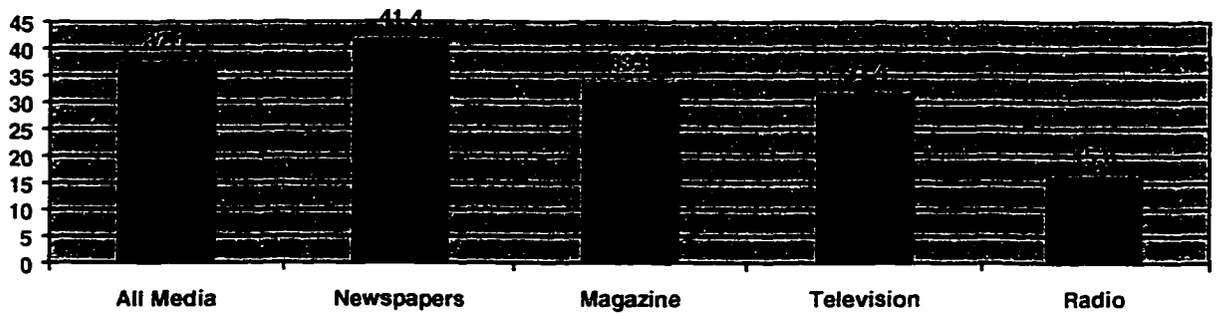

Figure 84. Web sites with full time editorial director (percent).

Subscriptions /Transactions

Few companies charge for access to their Web site. Figure 85 indicates that neither the television, nor the radio industries are currently charging. Those who do charge make up only about 10% of the aggregate. McKinnon (1996) stated that on the Internet, people generally expect most everything to be free. When they cannot find free news at one site, with so many others to choose from, consumers will simply go to another site that does offer the news free.

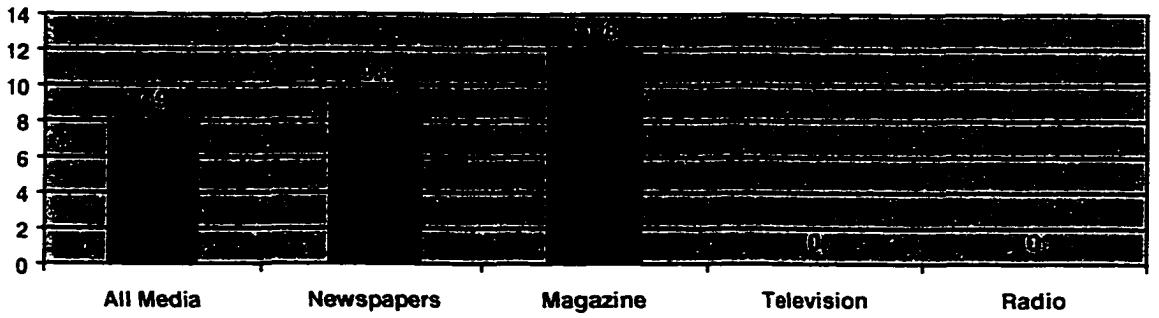

Figure 85. Percent of media that charge for access to their Web site.

Generally, media companies that are charging subscriptions, are able to do so because they offer a niche product, such as the Wall Street Journal. Of those who do charge for Web site access (Figure 85), Figure 86 shows what these sites charge.

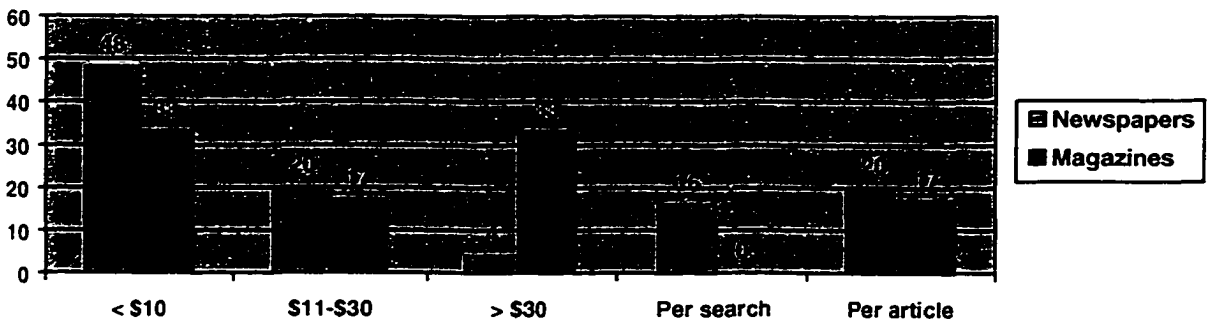

Figure 86. Monthly charge for Web site access (percent of those who charge).

Though most newspapers do not currently charge a subscription fee for their on-line product, Peterson (1996) stated that eventually, newspaper-sponsored information on the Internet will be available only to paying subscribers using access passwords. He believed that once there is a sufficient mass of users, and they get in the habit of getting their information on-line, publishers will then be able to charge. Figure 87 shows that newspapers and magazines plan to charge for access to their product in the future. That

may prove difficult if television and radio can produce a similar product. For the 40% or so who plan to charge, there are 60% who do not plan to charge. This 60% who do not charge will be competition to the 40% that intend to start charging. This will be hard to overcome as competition not charging for their product will become another obstacle to those who want to charge.

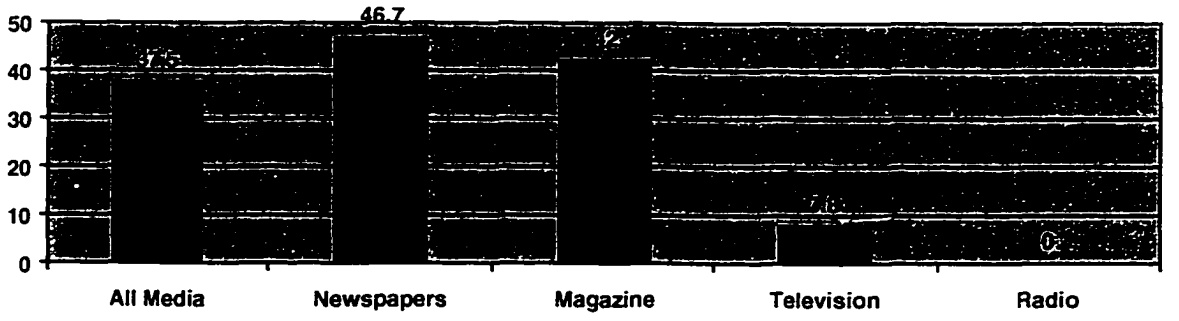

Figure 87. Web sites that intend to charge for their product in the future (percent).

When it comes to archival information, few media companies charge for access to their archive. Of the 224 companies that indicated they offer archival information, only three charge per minute, at an average rate of 93 cents per minute, and 12 sites charge an average of $1.10 per article. One site indicated they charge a $50 per year access fee ($12.50 quarterly). With 93.3% of all media archives available for free, it may be difficult for these media companies to begin charging for archival information in the future.

In giving access to their Web site and archive, media companies should require registration to enable them to learn more about their consumers. Clearly, this is not happening, as shown in Figure 88.

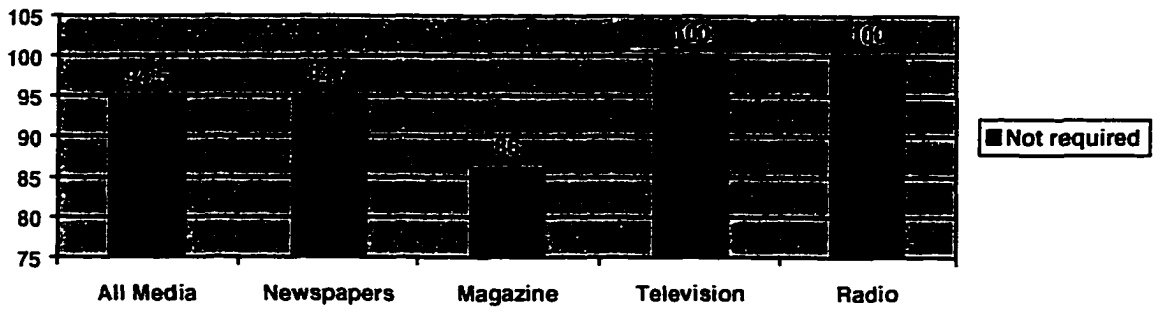

Figure 88. Web sites not requiring registration (percent).

With registration. Web sites would have a better understanding of their customer base. the demographics of these customers. and would be able to give their advertisers better measurement data. Another advantage of requiring registration is in the direct marketing of these consumers. This seems to be an area that media companies need to work on.

Another area of concern is dealing with secure electronic financial transactions. Most sites (Figure 89) do not currently provide this type of security. This limits the ability of the site to market products. charge for subscriptions. or collect for classified advertising.

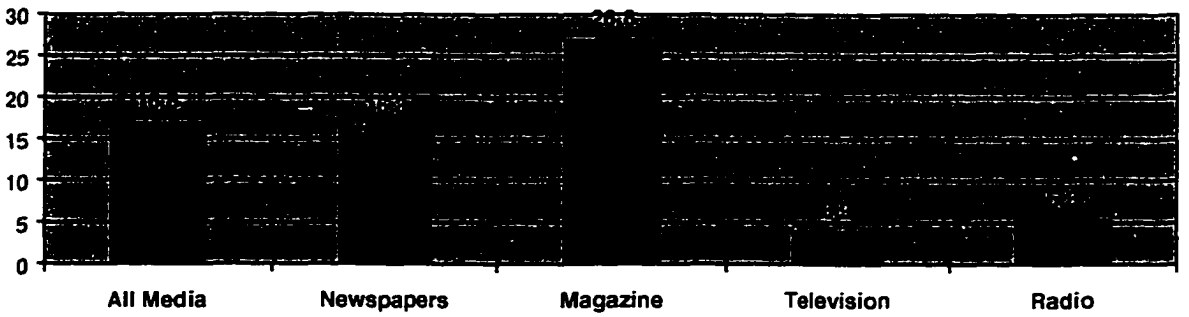

Figure 89. Web sites that provide secure electronic transactions (percent).

However, media companies recognize this potential problem. Figure 90 shows that more than 60% of the media companies intend to offer secure financial transactions in the future.

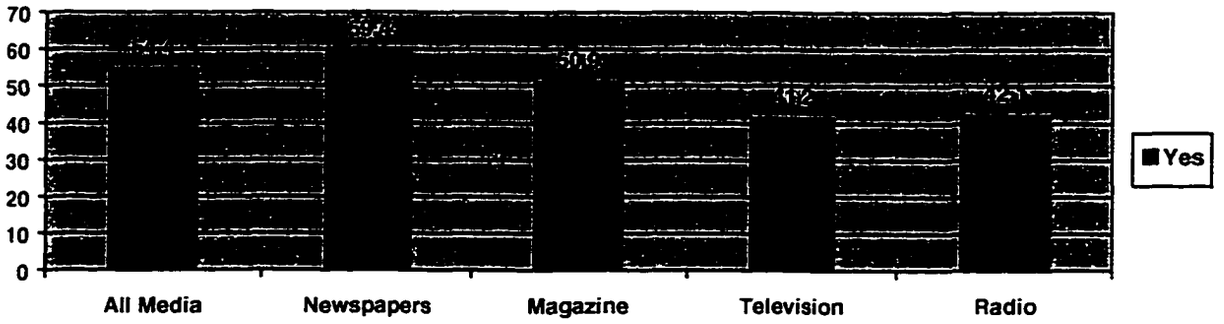

Figure 90. Plan to offer secure financial transactions in the future (percent).

Sales and profitability

Pogash (1996) stated that millions of dollars have been spent, and, millions more will be spent to start Web site operations and to continue their existence. This survey examined the years 1995, 1996, 1997, and 1998 for spending and potential spending of the four media groups. The following figures show this spending, which is for equipment and services, and does not include salaries.

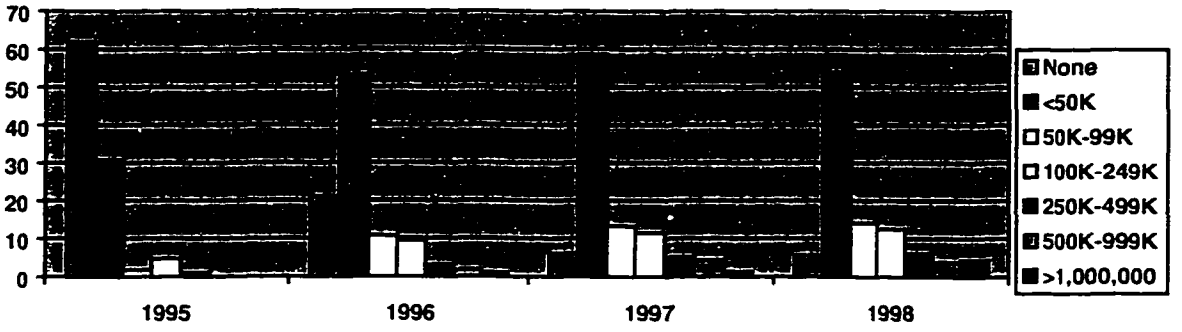

Figure 91. Newspaper investment (in dollars).

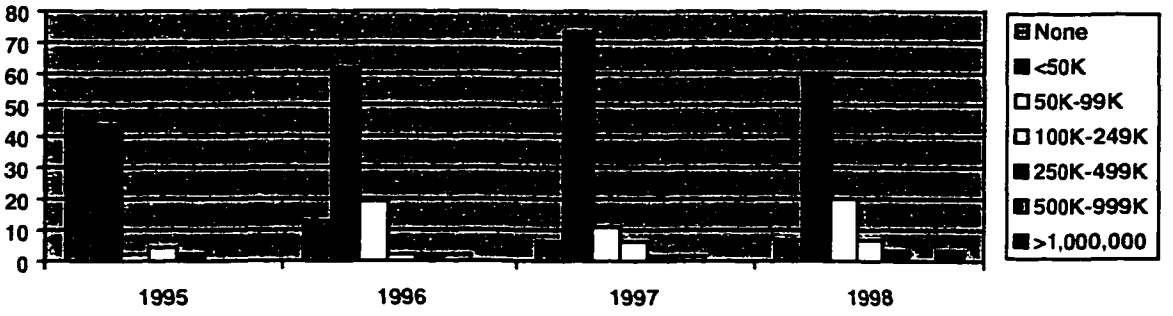

Figure 92. Magazine investment (in dollars).

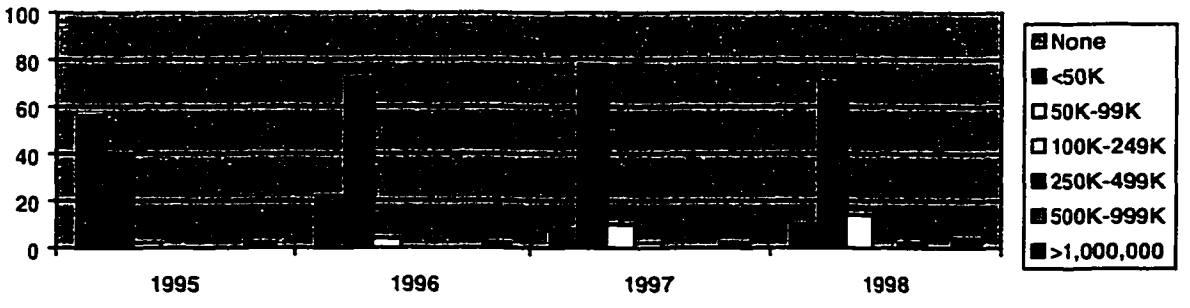

Figure 93. Television investment (in dollars).

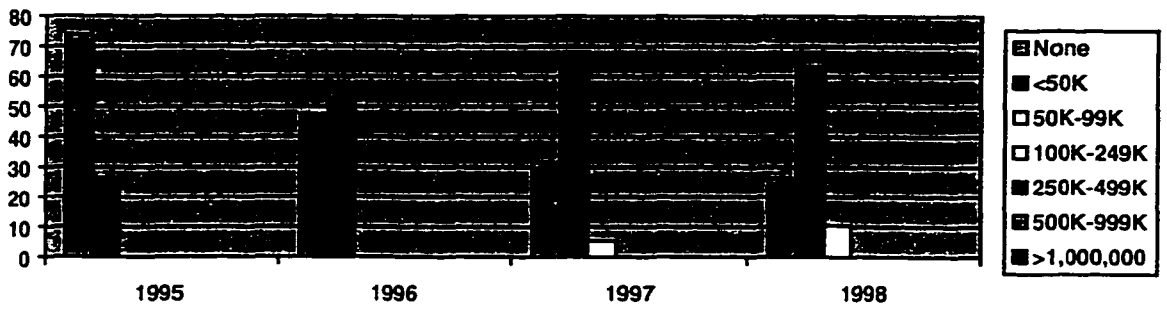

Figure 94. Radio investment (in dollars).

As shown in Figure 95, the expenditures for 1997 have very similar patterns between newspaper, magazine, and the television industries. Also, as previously seen, newspapers are decreasing their expected expenditures relative to their historical rate. This may open the

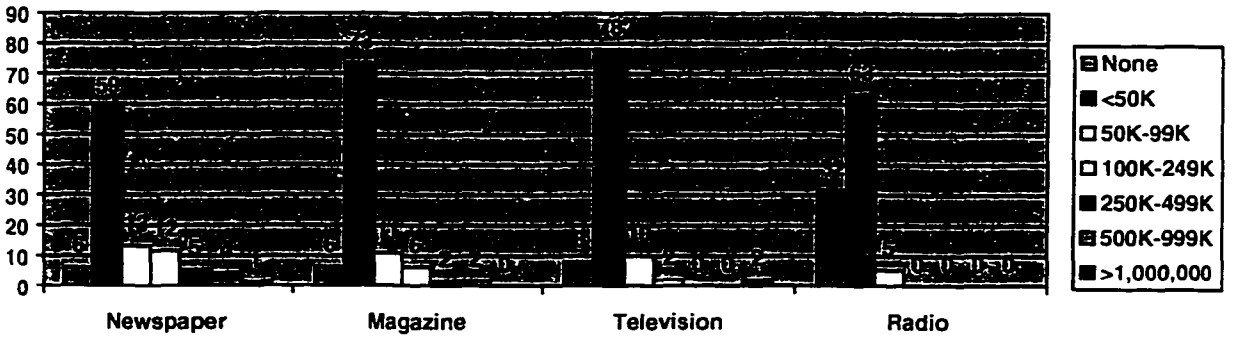

Figure 95. 1997 expenditures for on-line products by industry (percent of respondents).

door for the magazine and television industries to develop a Web site capable of surpassing the newspaper's Web site, both content wise and technologically.

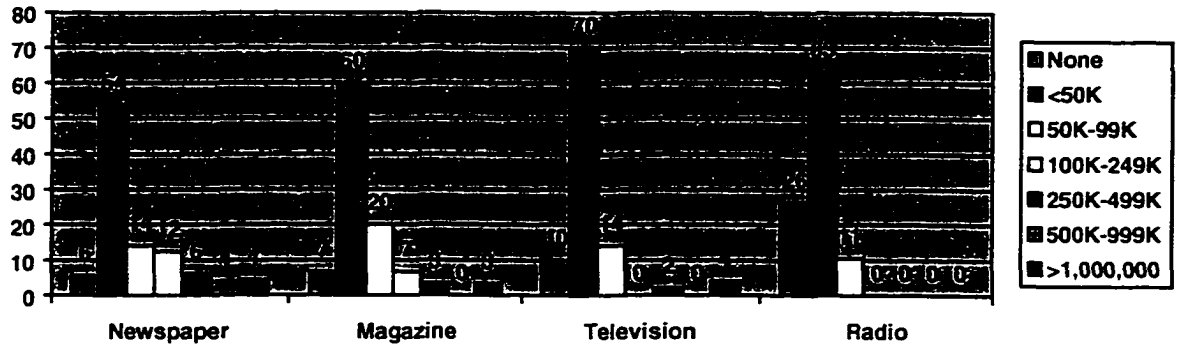

Figure 96. 1998 projected expenditures for on-line products by industry (percent of respondents).

For 1998, media companies plan to decrease spending in the less than $50K range, while increasing spending in the $50K-$99K range. It can be seen (Figure 96) that television and radio continue to outspend newspapers in the less than $99K ranges.

The big question for the last few years, has been whether or not media companies are making money with their on-line ventures. Pundits acknowledge that this is a new industry and losses can be expected. This survey found that to be generally true, and went deeper into the question by looking at profits and losses associated with page views per week and number of employees working on the Web product. The following five figures show these profits and losses for the four media groups for 1997.

Figure 97 shows 14 newspapers (5.7%) with losses greater than 1 million dollars. These newspapers averaged 26 employees and a little over 1 million page views per week. Two magazines (2.6%) also fell into this category, loosing more than 1.5 million dollars. For these magazines, page views per week are considerably lower than newspapers, however the number of employees used to produce the product is almost the same.

Business type	Page views	Employees	Income	Losses	# in category
Newspaper	1,233,801	26	553,571	-1,385,714	14
Magazine	215,000	22	350,000	-1,575,000	2

Figure 97. 1997 media losses greater than $1,000,000.

Figure 98 shows 20 newspapers (8.2%), 3 magazines (4.2%), and 2 television stations (3.9%) lost between $500,000 and $1,000,000 during 1997. Interesting to note is the number of employees versus page views and losses. In comparing Figure 97 and Figure 98, it can be seen that the number of employees is relative to page views and losses. As employees decrease, so do page views and losses.

Business type	Page views	Employees	Income	Losses	# in category
Newspaper	676,468	14	402,500	-675,000	20
Magazine	323,333	14	350,000	-666,666	3
Television	10,050	11	37,500	-562,500	2

Figure 98. 1997 media losses between $500,000 and $1,000,000.

Most media companies fall into the next category, with losses between zero and $500,000. Page views and losses continue to decrease with the reduction of employees.

Business type	Page views	Employees	Income	Losses	# in category
Newspaper	49,643	3	76,171	-152,148	128
Magazine	52,153	3	73,214	-130,357	28
Radio	56,744	2	30,555	-100,000	9
Television	58,475	3	32,608	-126,086	23

Figure 99. 1997 media losses between $0.00 and $500,000.

Turning to profits, it can be seen that some media companies are in fact generating profits. Figure 100 shows 35 newspapers (14.3%) with profits averaging almost $30,000. These 35 newspapers did this with less than one (0.7) employee producing the on-line edition. Interestingly, page views for these 35 newspapers average 21,545.

Business type	Page views	Employees	Income	Profits	# in category
Newspaper	21,545	0.7	92,142	29,285	35
Magazine	9,810	1	150,000	70,000	5
Radio	1,200	0	25,000	25,000	1
Television	62,583	1.75	212,500	70,833	6

Figure 100. 1997 media profits between $0.00 and $500,000.

Of the 35 newspapers in the $0.00 - $500,000 profit category, 18, or about half are weekly newspapers, 14 are dailies with circulation under 60,000. The remaining three are dailies with circulation levels between 100,000 and 160,000. The interesting point here is that weeklies, and small to medium sized newspapers are the ones making the money (Figure 101).

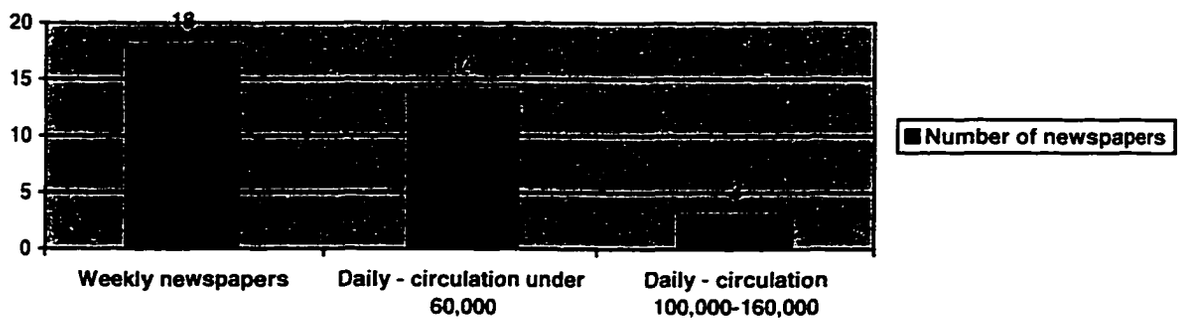

Figure 101. Number and type of newspapers that indicated a 1997 profit.

Finally, seven companies were found to be making more than $500,000 in profits during 1997. A reverse trend can now be seen (Figure 102), as employees, page views and profits are increasing. Of the six newspapers shown, two indicated circulation sizes of over 500,000, two were in the 100-150,000 circulation range. The other two did not indicate a circulation size.

Business type	Page views	Employees	Income	Profits	# in category
Newspaper	459,580	5	1,412,500	895,833	6
Magazine	300,000	9	1,125,000	500,000	1

Figure 102. 1997 media profits greater than $500,000.

Looking closer at income, four major categories were explored as part of this survey. They consisted of banner advertising, Classified advertising, Subscriptions, and Transactions. Figure 103 shows percentages of 1997 classified advertising revenue by industry.

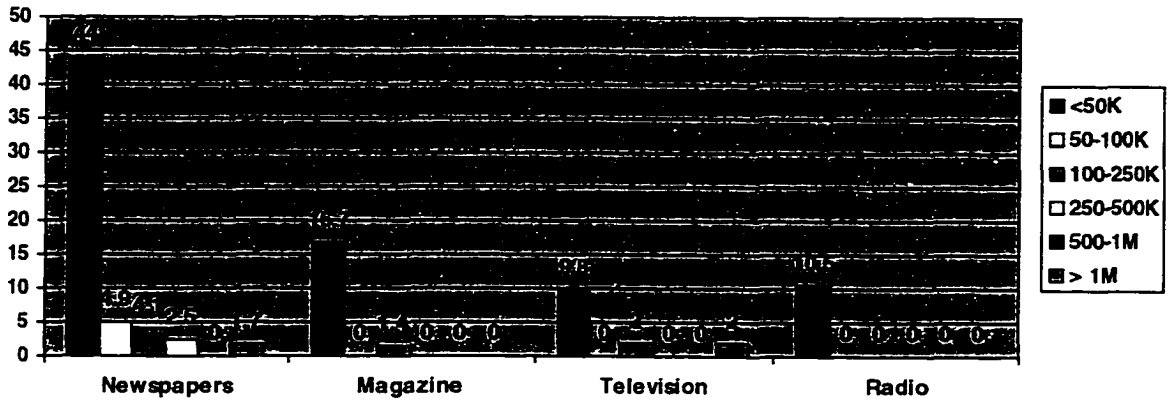

Figure 103. 1997 Classified advertising revenue by industry (percent of respondents).

Newspapers capture proportionately more classified advertising than the other three industries. Newspapers have a lower percentage of zero revenue earners and higher percentage of <$50K earners. The three other industries (magazine, television, and radio) show the majority receiving no revenue.

Although newspapers are experiencing impressive growth rates in banner advertising, magazines and television are moving upwards in the same range. Radio is decidedly lagging behind with lower revenue as shown in Figure 104.

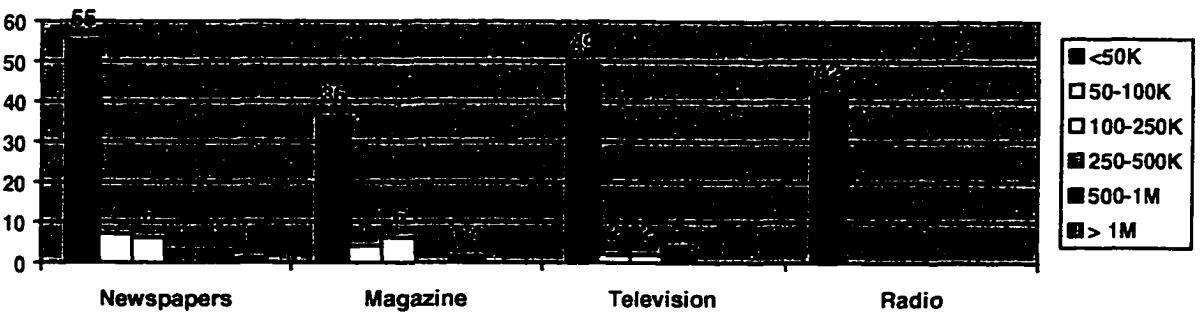

Figure 104. 1997 banner advertising by industry (percent of respondents).

Having determined the net result on overall banner revenue, this analysis now looks at the levels of banner revenue to determine if there is any differences or correlations between their behaviors and directions. It has been determined that newspapers charging in the upper range ($440 per month and up) of banner pricing capture 51% of the total revenue. The next determination is to see if the highest revenue earning newspapers consistently operate in accordance to the conjectures previously outlined. Specifically, if their actions towards measurement, alliances, promotion, and content, respond to the demands of a competitive product.

The data collected for banner advertising were reported in seven increments (None, <$50K, $50K-$99K, $100-$249K, $250-$499K, $500-$999K, and >$1Million). For graphing purposes, the seven increments were collapsed into the following four increments:

1) None 2) Less than $50,000 3) $50,000-$250,000 4) Over $250,000

Figure 105 shows that for those newspapers receiving higher levels of revenue, it is more likely that they provide measurement for advertisers. There is a strong positive correlation between revenue levels and incidence of measurement. In fact, 93.3% of the newspapers that are making $250,000+ provide measurement. This is a significant increase from the industry wide practice of only 51.2%.

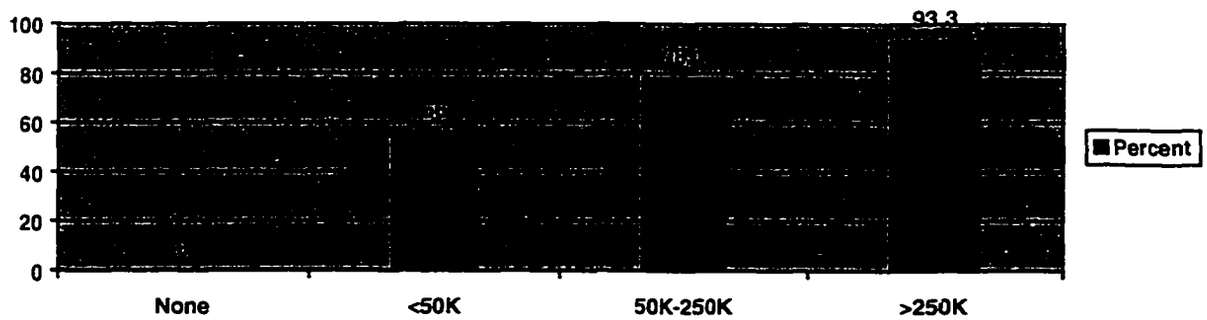

Figure 105. Revenue levels and percent that provide measurement.

The percentage of newspapers that have alliances with outside media companies is only 21.3%. Based on Editor & Publisher statistics from 1996, this is actually down from 29% that participated in alliances just last year. Using the same category delineation, Figure 106 shows that the high revenue generating newspapers are more often in alliances. In fact, 53.3% of them are in some type of alliances, whether it be in editorial, technological, marketing, advertising or other (Figure 106).

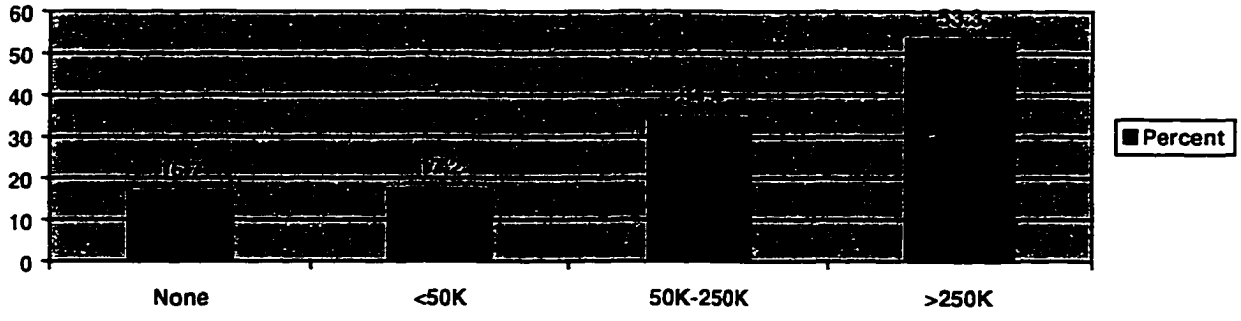

Figure 106. Revenue generators and percentage of those with alliances.

It was also discovered that as revenue streams increase, the number of weekly page views increases as well (Figure 107). It cannot be concluded that there is a causal relationship, however, a strong positive relationship exists between the two variables.

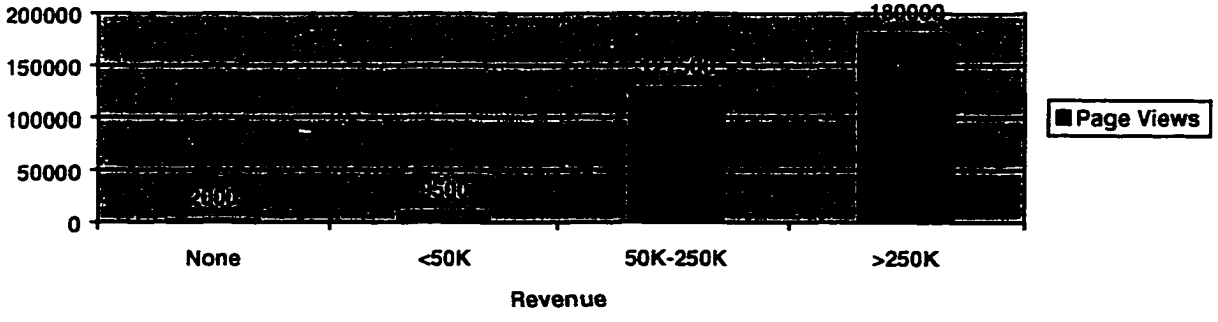

Figure 107. Page views and revenue streams.

It can also be concluded that high revenue generating newspaper sites are more substantive in editorial content. Newspapers in aggregate indicated that 68.4% of them have original editorial content, compared to 100% of the high revenue generators (over $250K annually). Further, it is important to point out the greater emphasis in the content mix, as seen in Figure 108.

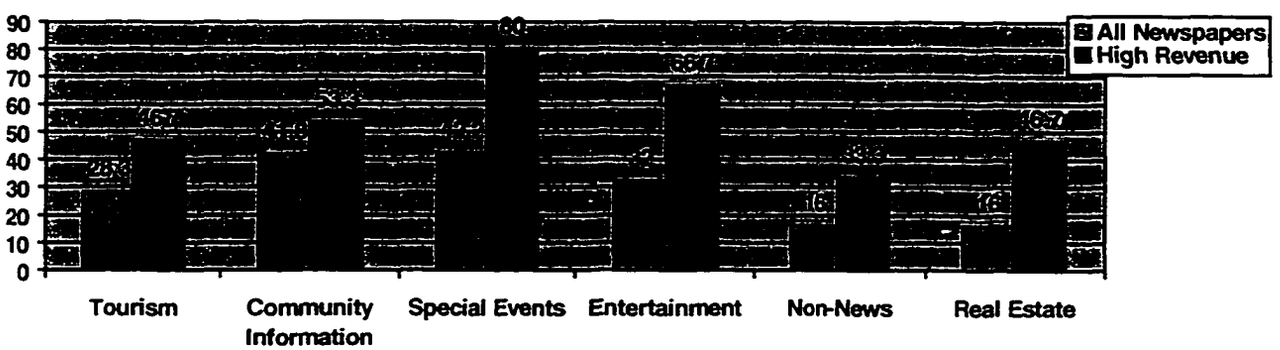

Figure 108. All newspapers versus high revenue generators and the content they provide (percent).

High revenue generators consistently have a higher incidence of the mentioned original content categories. Newspapers in the aggregate indicate that 5% of their content is from outside sources, compared to 10% of the high revenue generators. This is especially interesting because the high revenue generators have much more staffing. In fact, they have on average ten full-time staff members for editorial, relative to the aggregate newspaper's two staffers. This heavy investment of personnel is also extended into other areas such as promotion and measurement.

As discussed earlier (Figure 67), 51.2% of all newspapers provide advertisers with measurement data. Of this amount, only 16% went to outside independent sources for this data (Figure 68). However, among the high revenue generators, 46.7% went to outside

sources for measurement. This is particularly important due to the obvious conflict of interest involved and a price level which is 10 times as high as the lower levels.

With average promotion budgets around $10K-$12K, the high revenue generators are budgeting more often in the $50K-$100K annually. They also cross promote with other companies more often than the newspapers in aggregate (60% to 54%), and their emphasis in promotion, using other promotion vehicles (besides their core product), are more common. Figure 109 indicates that high revenue generators use promotion vehicles more so than the aggregate.

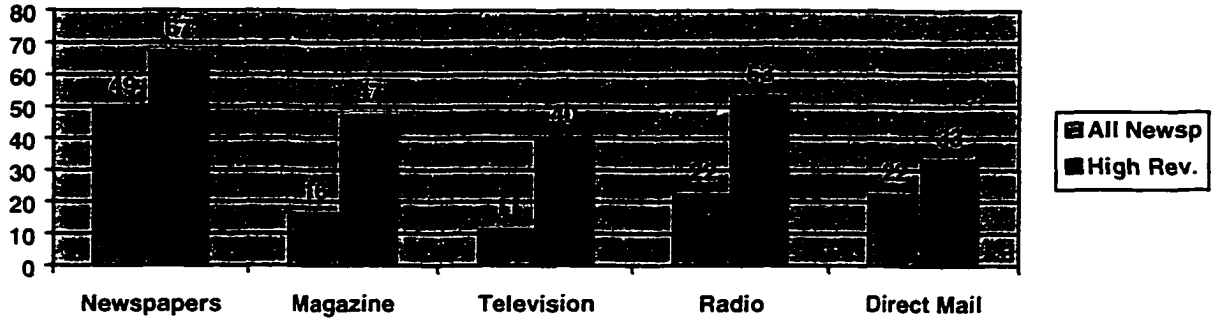

Figure 109. All newspapers versus high revenue generators promotion vehicles (percent).

There are also marked differences in the marketing tactics used to bring traffic to the Web site. As shown in Figure 110, URL searching, updating and free content are the only areas in which these groups have similar patterns.

The Web has had little effect on the core product of the four media groups. When asked what increases or decreases in advertising dollars have been experienced in the core product, as a result of the Web, 93% indicated they saw no change.

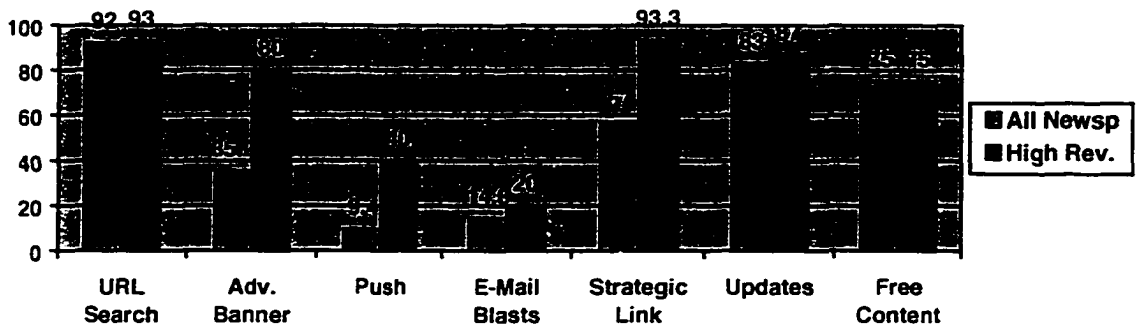

Figure 110. All newspapers versus high revenue generators marketing tactics (percent).

Only 1% saw a decrease in the core product, but a number of increases were seen by the remaining 6%, as shown in Figure 111.

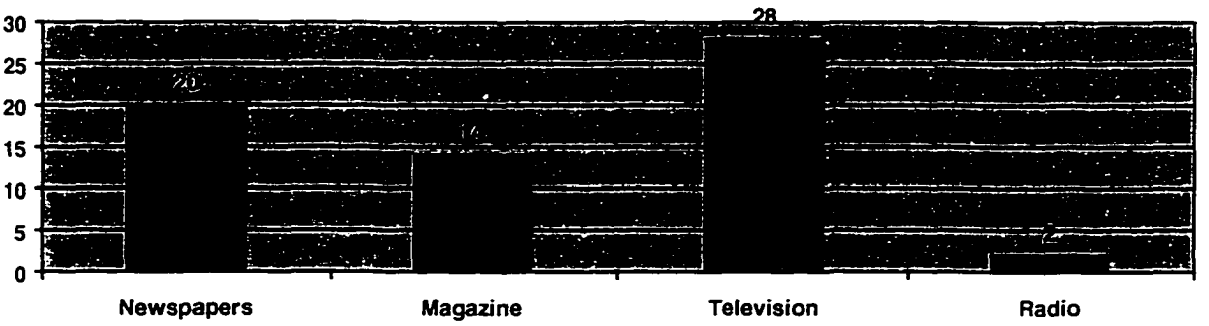

Figure 111. Percent increase in advertising in core product as a result of the Web.

When it comes to competition, media companies generally indicated that they do not have a lot of competition. Figure 112 shows the ranking of various competition, by industry, on a scale from 1-10, where 1 is no competition and 10 the highest competition.

	All Media	Newspapers	Magazine	Television	Radio
Newspapers	3.9	4.0	2.3	4.6	3.7
Radio	1.9	1.9	1.2	1.9	3.7
Television	2.6	1.6	1.7	4.6	2.5
Magazines	2.1	1.9	3.3	2.2	1.3
Niche Products	2.4	2.7	2.6	1.6	1.1
Yahoo	2.1	2.9	1.6	2.2	2.6
Monster Board	1.5	1.7	1.1	1.3	1.0

Figure 112. Ranking of media competition (1 lowest, 10 highest competition).

Showing this graphically, it can be seen that newspapers may be underestimating their competition. As shown in Figure 113, newspapers view other local newspapers as their biggest competitor in the on-line business. Magazine, television, and radio were all perceived as very little threat as indicated.

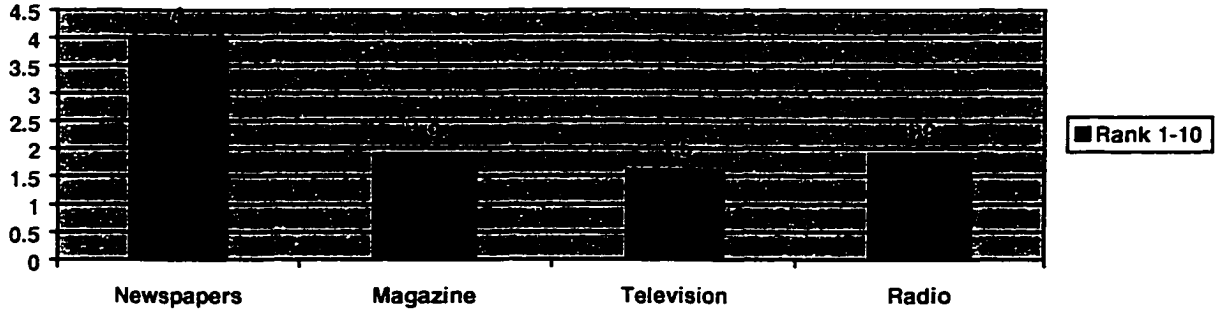

Figure 113. Competition ranking, 1 = least competition, 10 = most competition.

Cross industry conclusions

The newspaper, magazine, television, and radio industries are all in the on-line business to some degree, and the levels of success throughout the industries varies. It is tantamount to anyone's success to understand who the competition is and why. As revealed, newspapers seem to think that the other three industries are not much of a threat

to their business. This may be a very big mistake as other industries consider newspapers to be more competition than newspapers themselves. If fact, both radio and television rate newspapers twice as competitive than the newspapers rate them.

Newspapers may be underestimating their competition. Television and radio are already providing more community information and original content, and, they have similar numbers of users visiting weekly. Measurement by magazine and television are also at similar levels.

As a measure of success, the behavior of the highest revenue generating newspapers was studied. It was determined that proper content mix, measurement, alliances, cross promotion, standardization, and increasing on-line budgets were all elements these newspapers had in common. If this is an accurate measurement which can be applied in other industries pursuing banner and classified advertising, all four industries should take note.

Other

Negroponte (1995) believed that "The Daily Me" or personalized edition will be the future of news distribution. Of all media respondents, only 8.9% (not shown) indicated that they are providing this type of service. On the other hand, a number of media companies are capturing user names, addresses, and e-mail as shown in Figure 114.

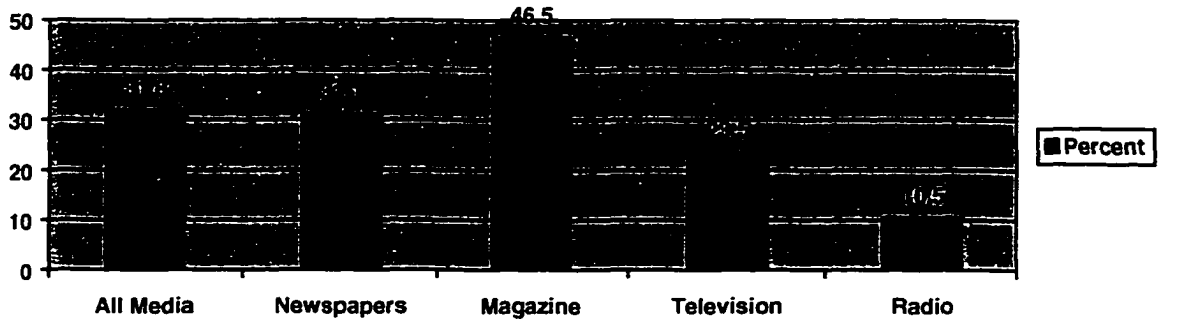

Figure 114. Media companies that capture user names and addresses (percent).

These addresses could be used for a variety of purposes, including future sales, promotional opportunities, marketing research. This information could also be sold to outside vendors, with the knowledge or permission of the user.

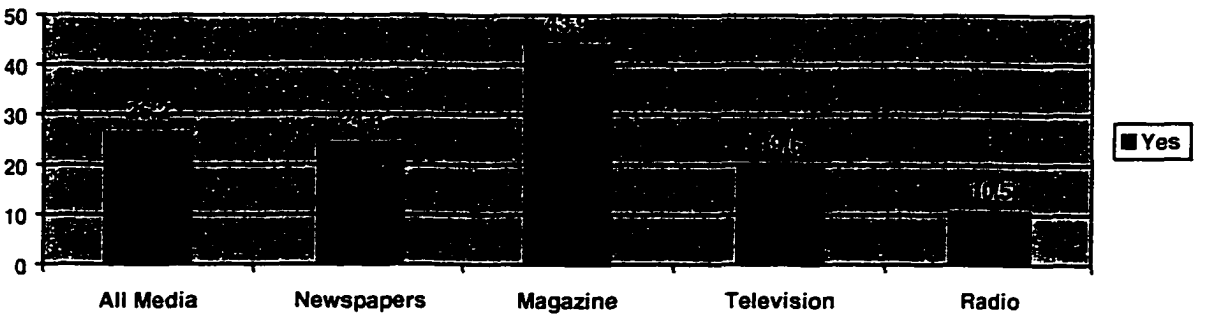

Figure 115. Plan to use user information for future sales and promotion opportunities (percent).

Overall, it appears that media companies are doing very little with this information (Figure 115). As can be seen, magazine companies far out-pace their competitors when it comes to marketing opportunities. Although the possibilities for selling this information to outside companies are great, few media companies plan to do so. It should be noted, however, that magazine companies are twice as likely to sell their database information (Figure 116).

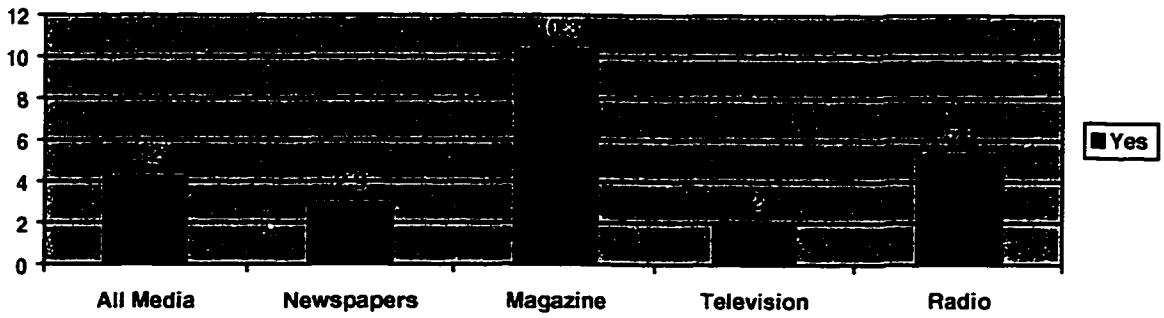

Figure 116. Plan to sell user information to outside sources (percent).

By capturing user information, demographics can be determined, especially in the area of site visitation. For example, sites will know who their local, national and international customers are. For those Web sites that capture user demographics, 50% found their customers to be local, while 25% were national, and 15% international. The remaining percent are suspected to be unknown .

Web site comparisons

Based on survey results, as well as findings from the research, step four of this dissertation required the examination of media Web sites by looking at ways in which they disseminate the news, advertising and other forms of information. With thousands of media Web sites providing hundreds of options for users, it becomes impossible to analyze media Web sites in aggregate. However, based on specific survey responses, various cites were reviewed and analyzed as follows.

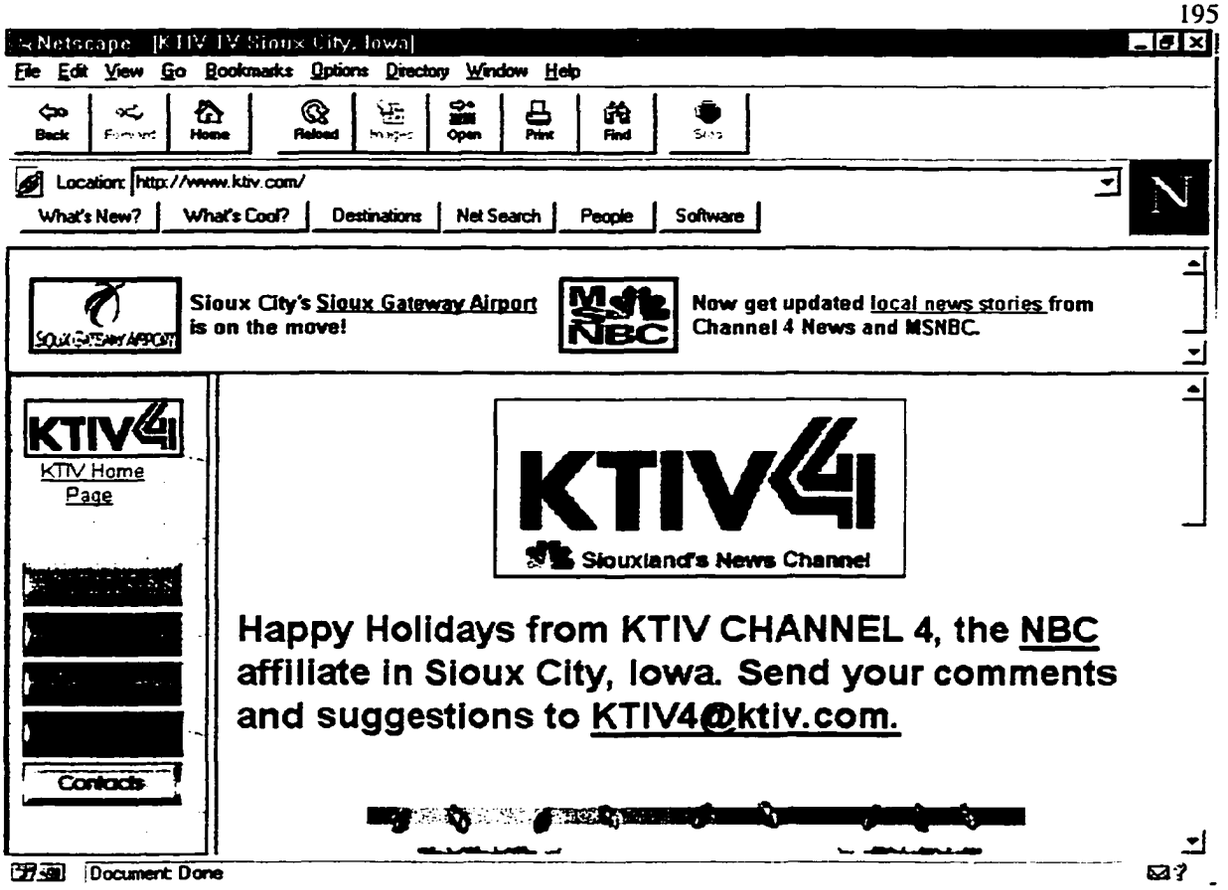

Figure 117. A television Web site. KTIV4. Sioux City Iowa.

Generally, it can be seen that television and radio Web sites offer little depth. Most offer news, weather and sports, providing only a few stories. Overall, few offer archival information, but some are affiliated with national providers. As an example, KTIV4 in Sioux City, Iowa (Figure 117) is affiliated with MSNBC. By linking to the MSNBC site, the user feels as though they are on the Sioux City site, even though they are looking at the MSNBC site (Figure 118).

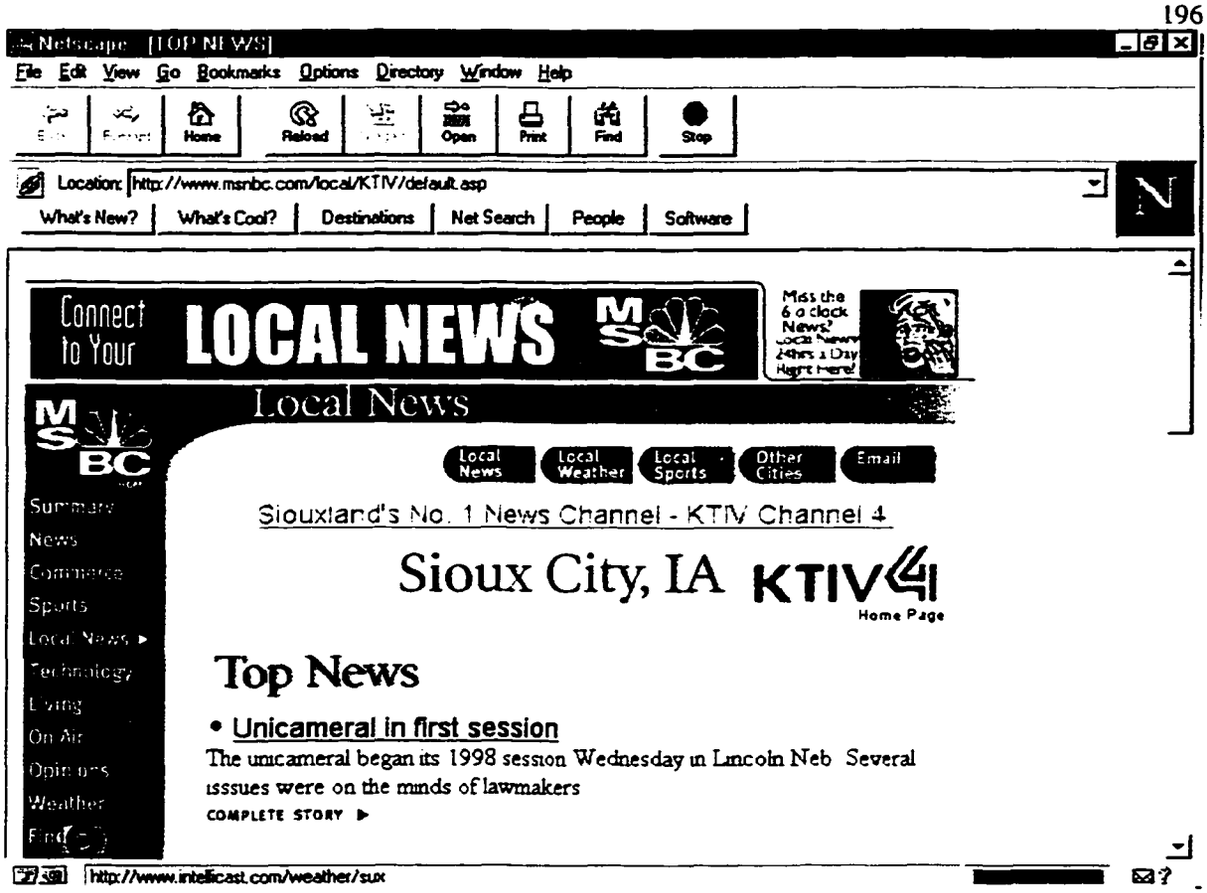

Figure 118. MSNBC link from KTIV4.

The Sioux City site also offers a "Sky Cam", or view of the city. This is something that a number of media sites offer. Though they claim to be "live views", most are still photos that are updated periodically. This seems to be an interesting feature for someone out of the area, particularly for someone who really want's to see what the area looks like. It does not however, appear to be a big draw for someone local.

On the Web, it is often difficult to tell the difference between a newspaper, magazine, television or radio or other type of Web site. Figure 119, as an example, at first appears to be a newspaper Web site, when in reality it is a Web site that provides culinary information for the newspaper.

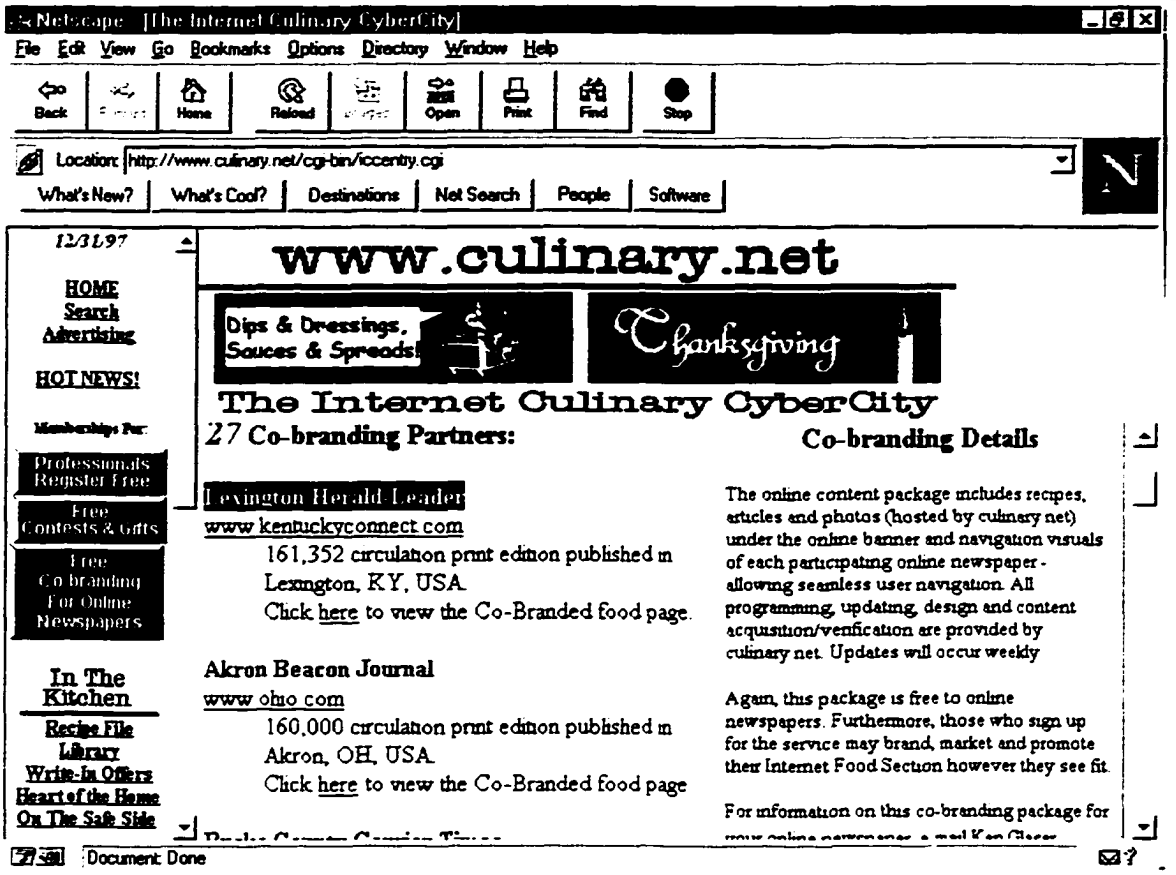

Figure 119. WWW.culinary.net Web site.

This unique site offers free co-branding for on-line media. In this way each newspaper is given their own URL on the culinary site, under their on-line masthead, with any other navigational controls that they wish to employ. This provides a seamless presentation to the user, making it easy for them to return to the electronic publisher's front page.

Advertising on the culinary site is negotiable. If a media company wishes to place their banners on the culinary page, they can do that. Alternately, the culinary site reserves the right to place their own banners on the page. To this point, many of the newspapers using the culinary site do not have banner advertising, so this has not been an

issue. Those that do have advertising have not pursued running their ads on the culinary site.

How does the site make money? All of the content is sponsored by food companies and commodity boards. While the content is advertorial in nature, the site is paid for by sponsors to drive the audience to their materials. The site also offers a small classified section related to the culinary industry, and allows users to post classified ads for free. Overall, the site is accomplishing their client's goals as well as their revenue goals, without banner advertising on the co-branded product.

Television and radio sites tend to run contests and giveaways much more than their

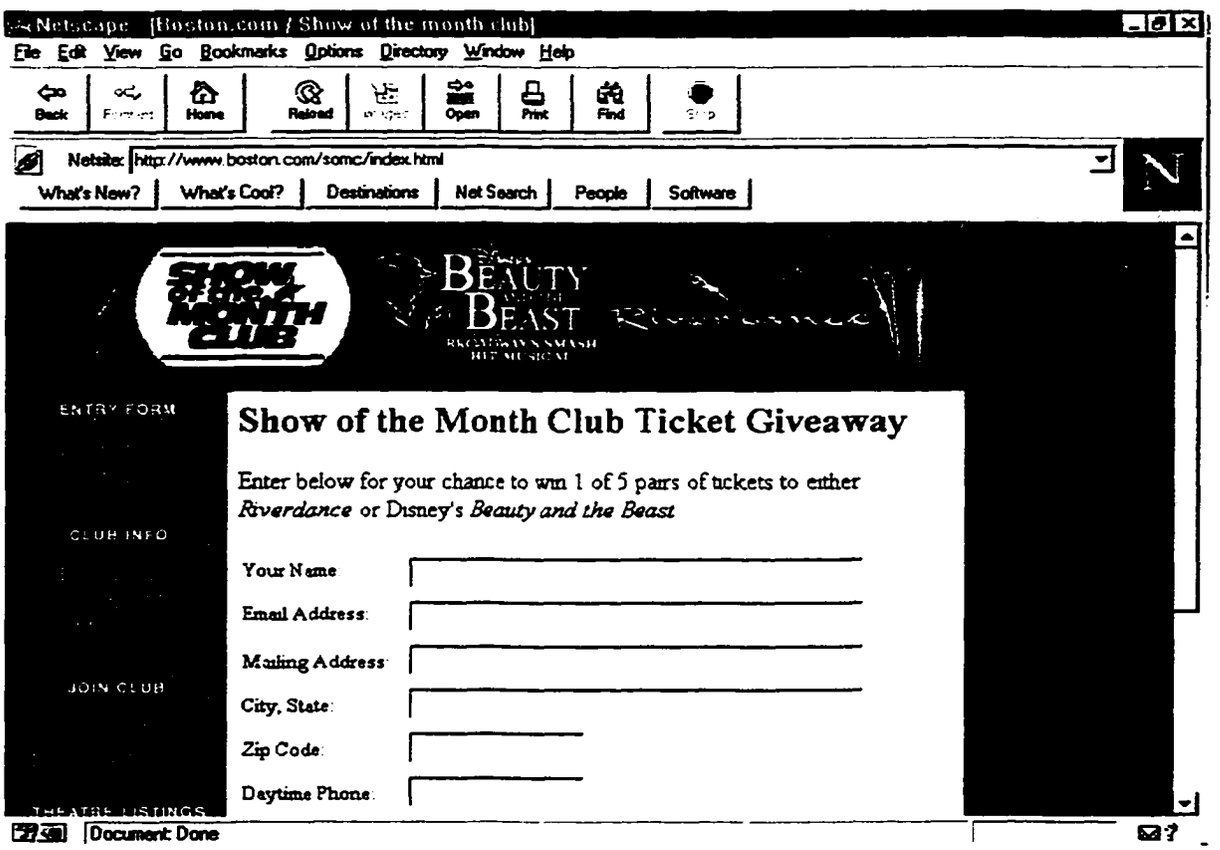

Figure 120. A Web site contest.

newspaper and magazine counterparts. This may be related back to their core product in which this type of behavior (contests) is typical. A contest is shown in Figure 120. Users are able to simply fill out an electronic entry form and send it.

A number of sites do not accept banner advertising. Quite often, these are public radio or television stations. Generally, these sites have sponsors to help fund the site.

Niche products are abundant on the Web, ranging from mountain climbers information, to Florida environmental, to the space agency (NASA), to The Black World Today, a unique, electronic only version which targets African Americans and blacks around the world (Figure 121).

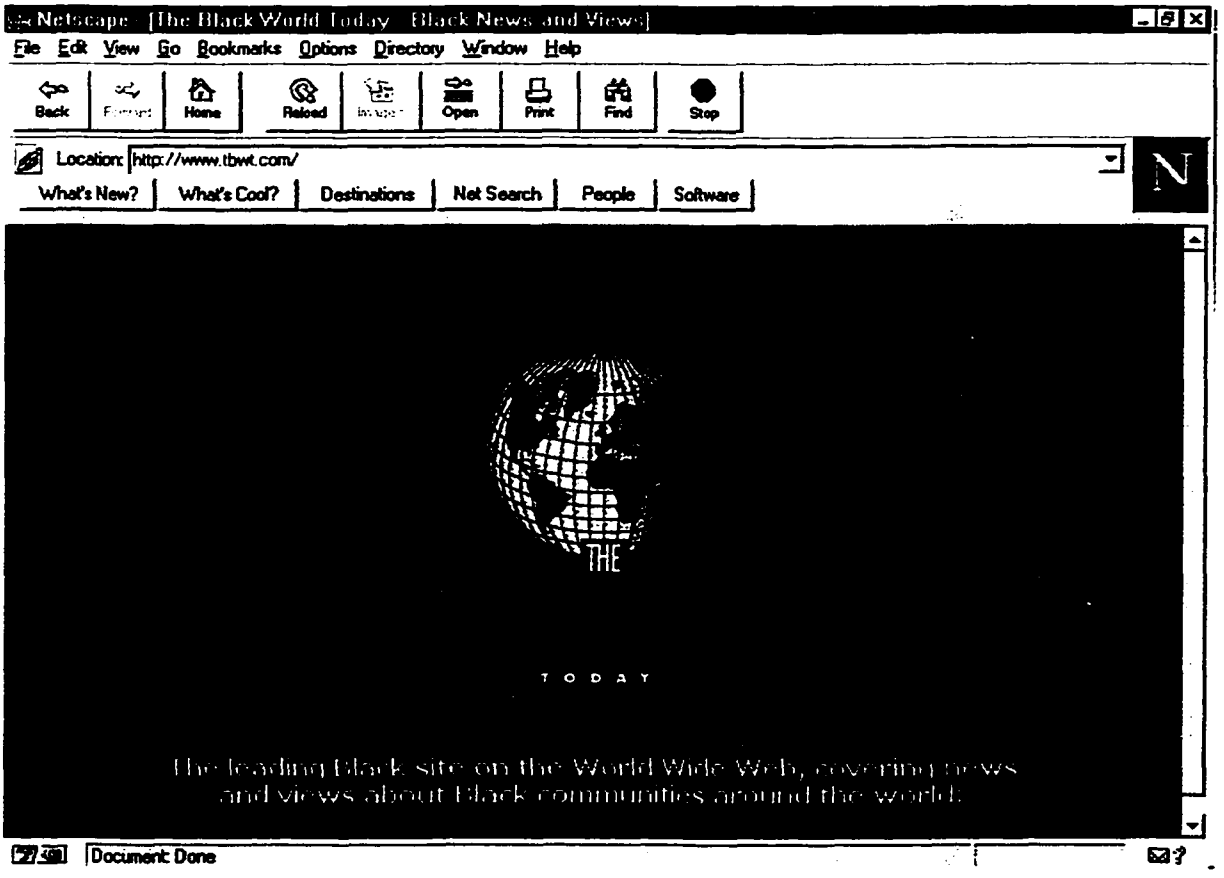

Figure 121. Black World Today, a niche product Web site.

With registration, some sites offer users the ability to customize their news, and receive e-mail updates daily.

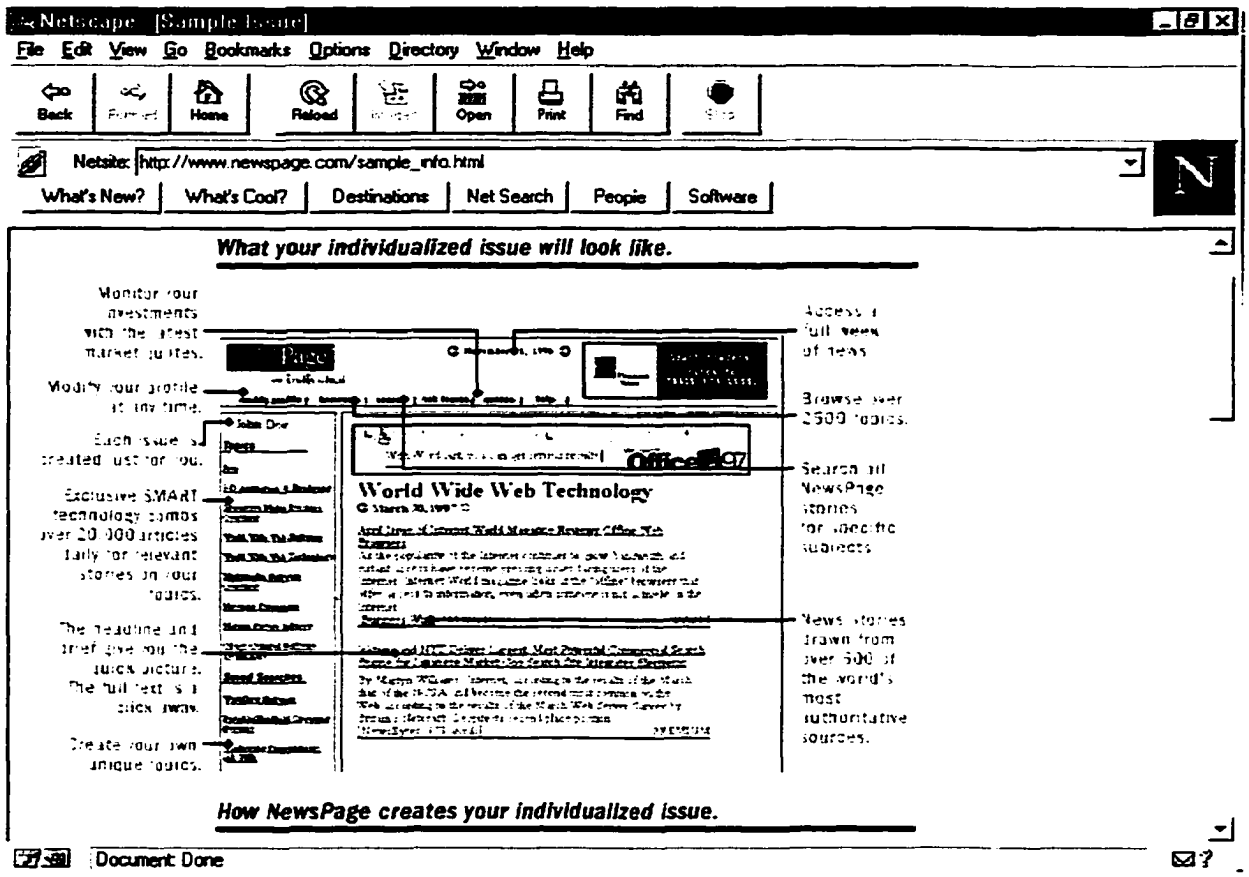

Figure 122. Newspage, an interactive news service that allows users to create the "Daily Me".

NewsPage (Figure 122) is an interactive news service from Individual, Inc., providing users with current, filtered news across a broad array of topics. NewsPage utilizes Individual's SMART agent technology to sift through and personalize up to 20,000 news stories each day from over 600 sources. Relevant news articles are sorted into 2,500 news topics and displayed on NewsPage in an intuitive, hierarchical structure for quick access.

The interesting feature of the service is just that, it is a service, not a newspaper, magazine, television, or radio station. The service gathers information from multiple

sources (some 600) and allows the end user to set up a personalized issue, where information can be collected and stored in one efficient interface.

Newspage does not create or edit any news stories. Instead, they have relationships with over 600 information providers who send their content electronically to Newspage. The content comes directly and verbatim from these providers.

One of the Web features trying to attract more users is streaming video. Some sites have begun experimenting with this, and, have shown good results (Figure 123).

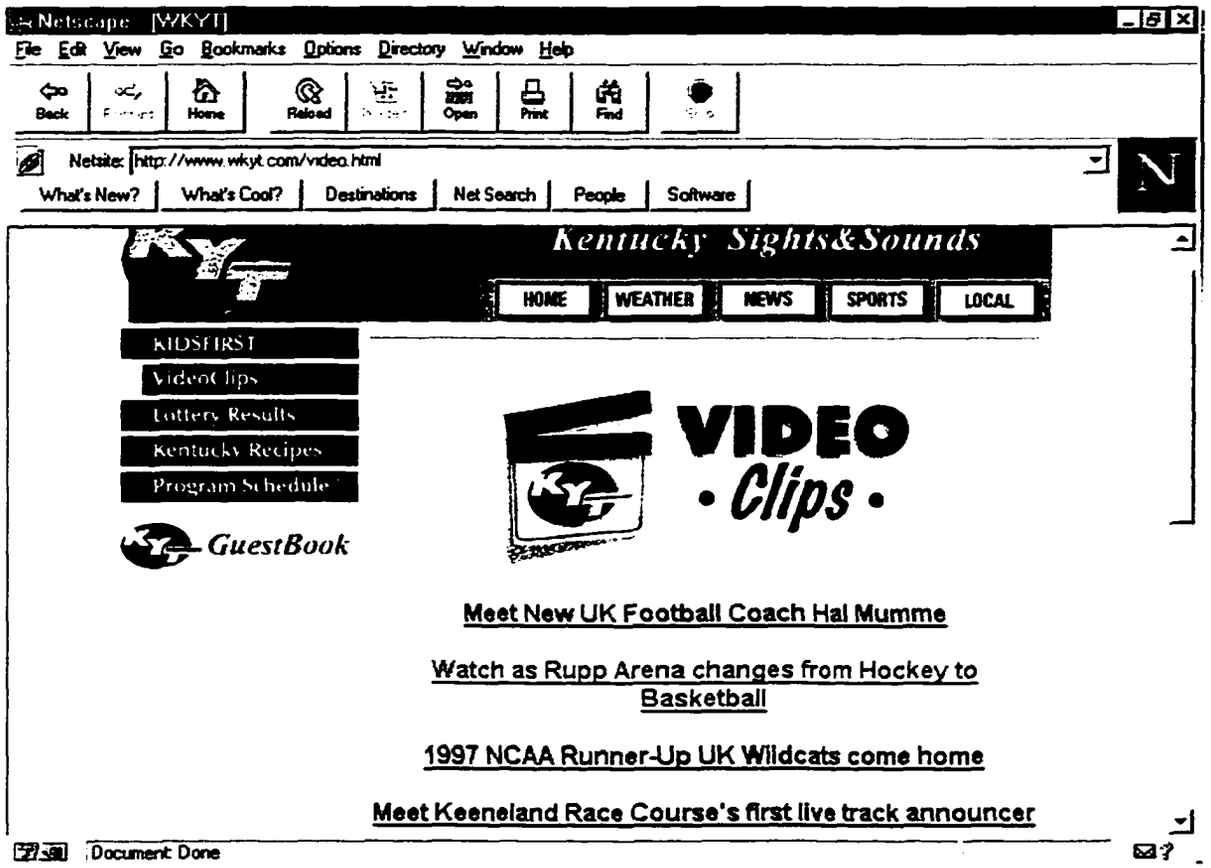

Figure 123. A streaming video Web site.

As noted in the survey results, only 15% (Figure 17) of newspapers currently provide video. This is due to several factors including cost and speed. Video files are quite large, and, as a result, they can take a long time to download to the user's computer.

This results in user frustration, often causing the user to give up, possibly switching to another Web site.

Many media sites provide weather reports and updates, and some provide live Doplar radar. However, none compare to the niche weather site known as weather.com. A spin off of the television channel (The Weather Channel), weather.com offers a comprehensive look at up to date weather information. Figure 124 shows a page from the weather channel site.

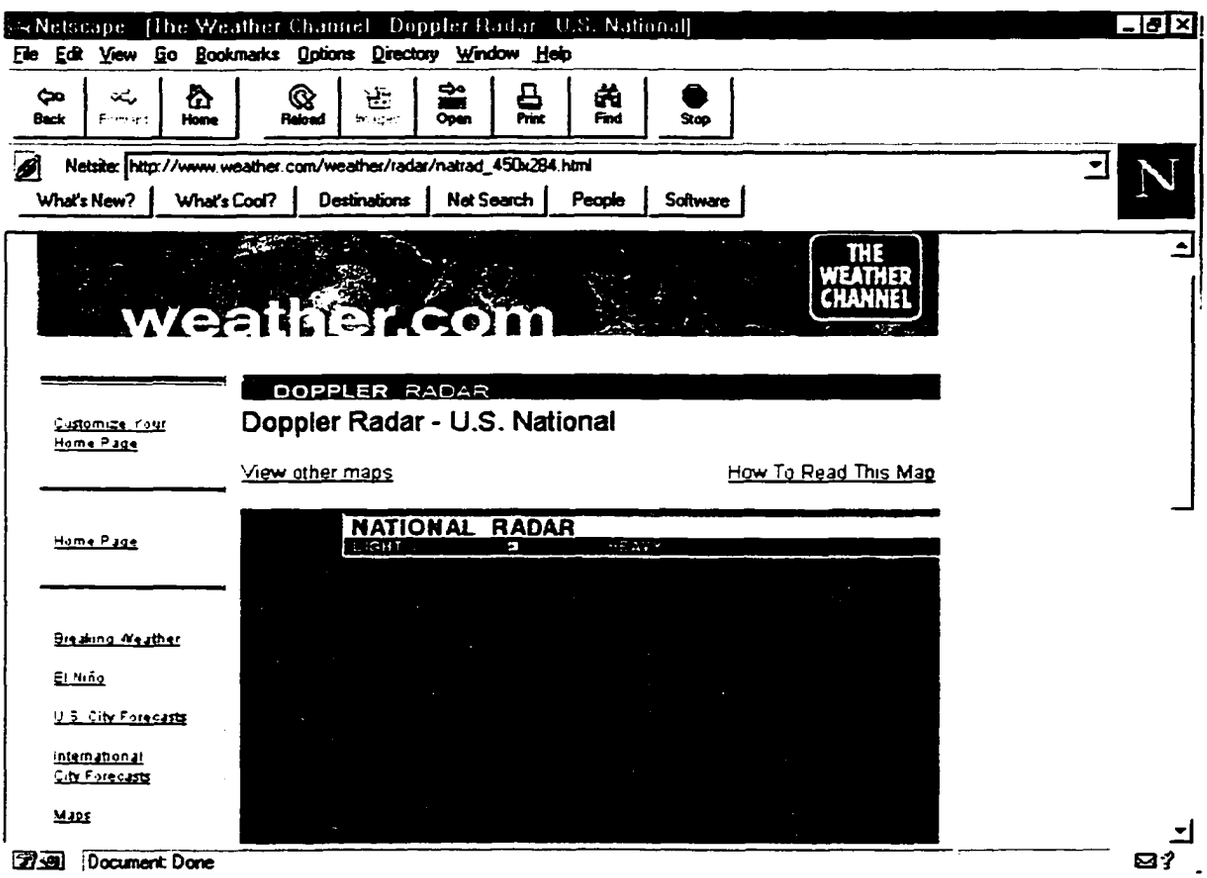

Figure 124. Web site of the weather channel.

In reviewing various Web sites, the researcher found several things annoying. One of the biggest problems was in Web sites trying to load cookies to the end user's PC. A cookie is simply an HTTP header that consists of a string that gets entered into the

memory of your browser. This string contains the domain, path, lifetime, and value of a variable that is set. If the lifetime of this variable is longer than the time the user spends at the Web site, the string is saved to file for future reference. Many users do not like cookies being loaded on their computers for a variety of reasons, the most common being privacy.

Often, when moving from one page to another on the same site, the host name disappears. Thus, if the user forgets where they are, or where they have been, they can become lost quite easily.

When it comes to what a particular Web site has to offer (depth), some sites are far ahead of others. Figure 125 shows ohio.com, which has a variety of items to choose from.

Figure 125. Ohio.com Web site, with a variety of options.

And sites like boston.com provide not only depth within their own site, but also provide links to other partners. Boston.com (Figure 126) boasts over 40 partners that provide reciprocal marketing.

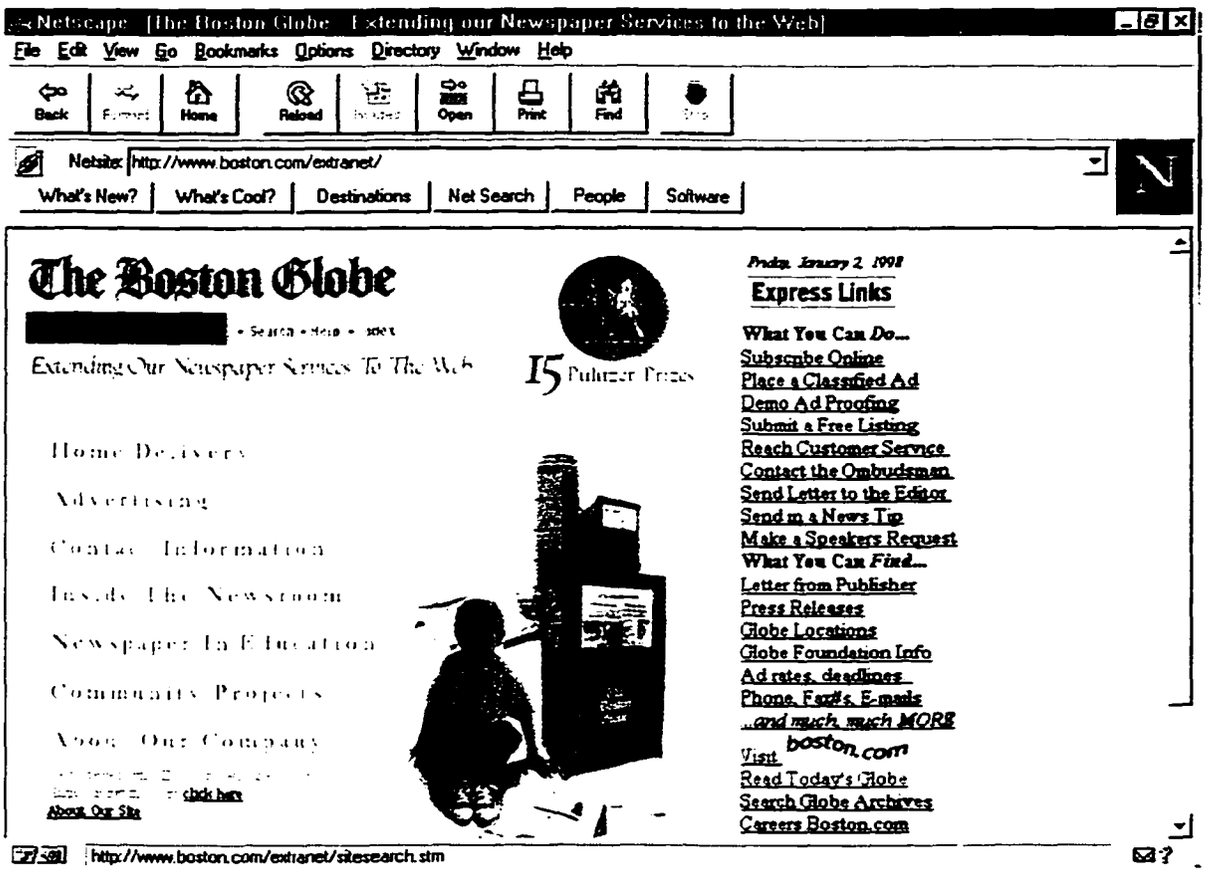

Figure 126. Boston.com. Web site of the Boston Globe.

As an example, the Museum of Fine Arts lists boston.com as their Web site on all of their materials. Likewise, ticket sellers advertise boston.com on the back of tickets they sell to concerts.

Boston.com is one of a few sites that offer an abundance of services to their audience. As shown in Figure 126, boston.com gives the user the ability to subscribe to the print product, place a classified ad, get advertisement proofing, send a letter to the editor and contact customer service, among other things.

A number of Web sites offer some sort of free services. As an example kjeo.com (Figure 127) shows a marquee in typical banner ad fashion, from the National Center for Missing and Exploited Children. While the banner stays in position on the page, the child's photo and personal information rotate about every 5 seconds.

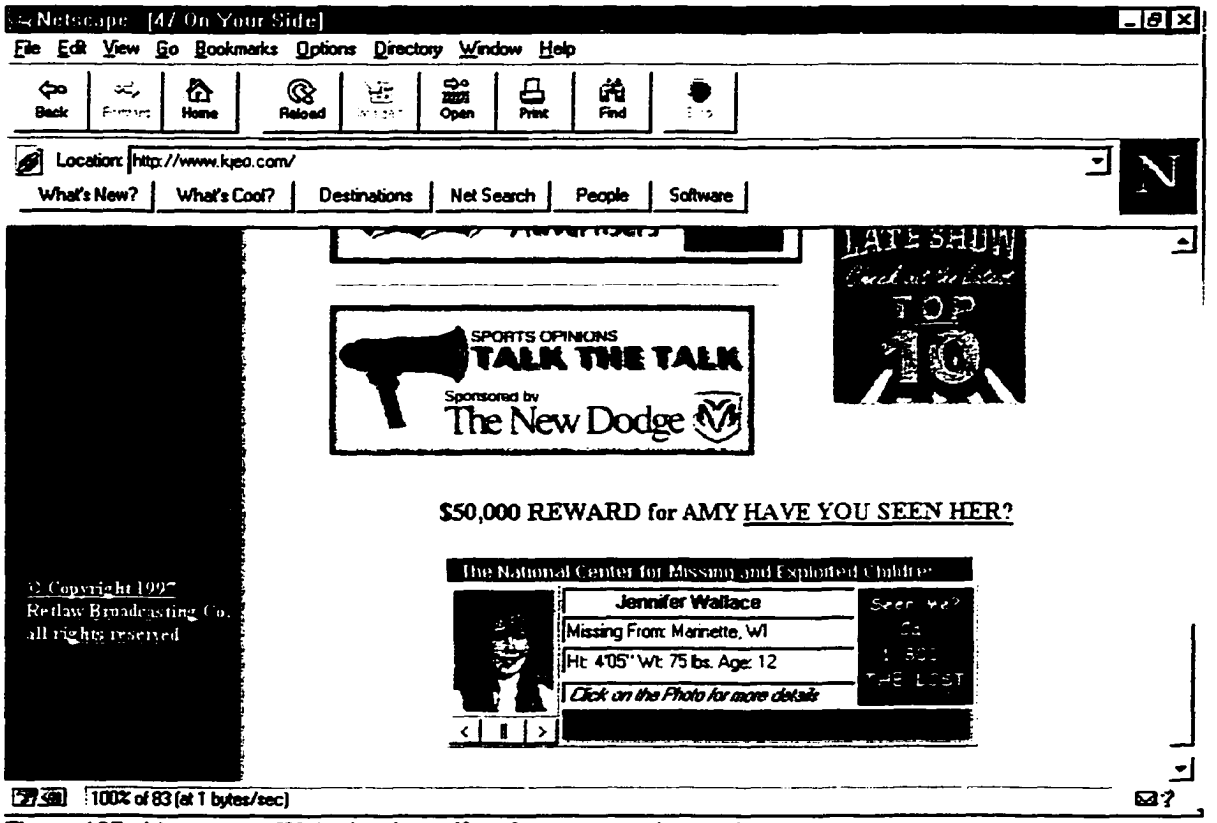

Figure 127. kjeo.com, a Web site that offers free community services.

Another free service offered by many Web sites is free Web pages for clubs, organizations, non-profits and government agencies. This attracts readers to the site in addition to reading the news. Figure 128 shows charlotte-florida.com, a site that is doing just that.

The idea was to find a way to involve the community in the Internet. Judges from across the country and around the world have repeatedly named Sunline's sites as the very best (source www.charlotte-floridaohio.com/internet/winner.htm). And each time,

the judges have said they are fascinated with the community site concept. Very few papers have promised to put the entire community on-line for free. Sunline charges nothing to create and host the Web pages for non-profit groups, community organizations and government agencies.

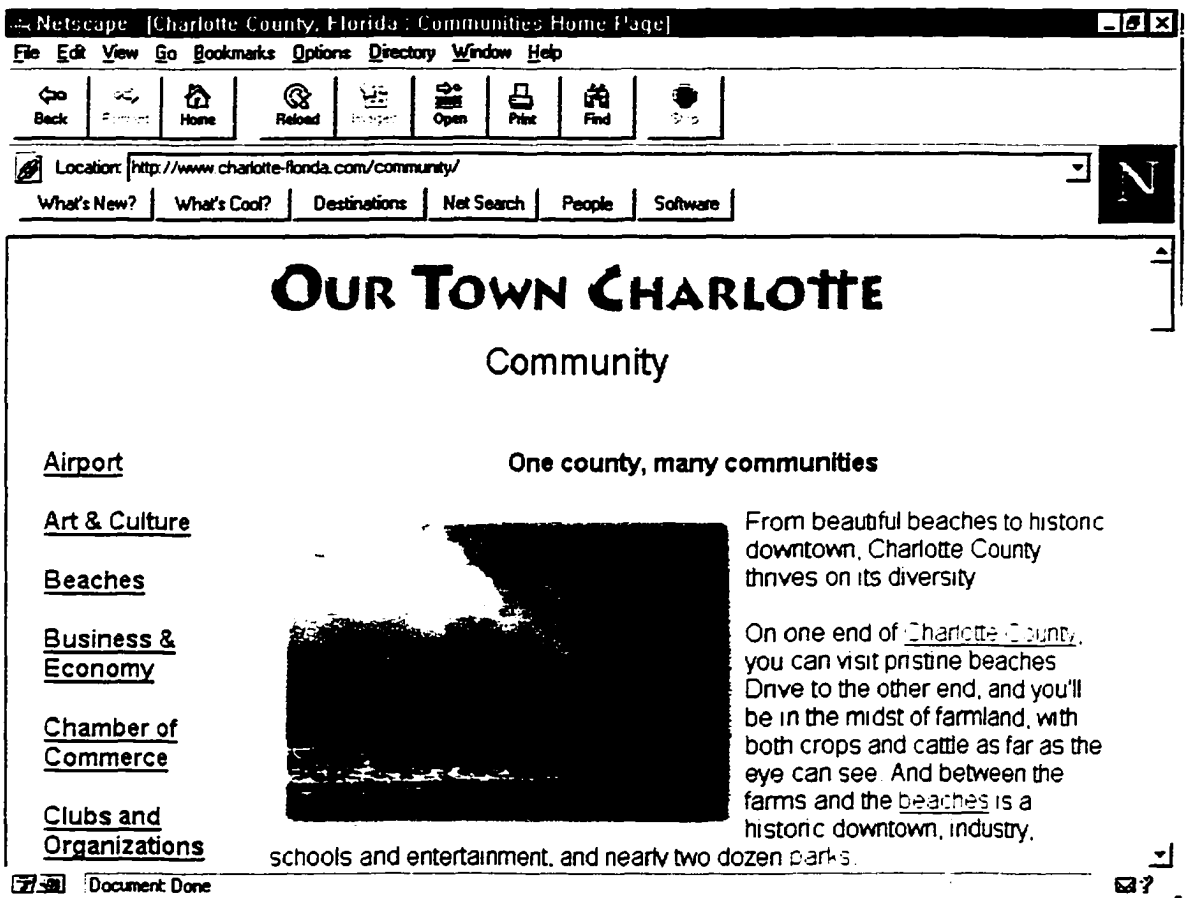

Figure 128. A true community newspaper Web site, charlotte-florida.com.

Residents can create their own Web pages in minutes through the use of Sunline's Create-Your-Own-Web-Page site. The result is a comprehensive community site that changes daily, if not hourly, and gives residents reasons to sign on every day. Sunline's sites have caught the attention of judges around the world, including those from the

Pulitzer Prize competition, according to information available on the charlotte-florida.com site.

Sunline offers different ways for their customers to create their own Web pages. **Personal Web Pages** - limited to Sunline customers only. This allows customers to upload text and photos in creating their own personal Web page. They can also choose a background color, a background image, text color and even the style of a Web page counter. **In Memory Pages** - On these pages, a photo and text can be placed as a tribute to a deceased loved one or friend. People who know their time on this Earth is short can also leave their own personal good-bys, including sound files. These pages are free for anybody to use. **Baby Pages** – Instead of carrying around pictures of children or grandchildren, users can now create pages on the Web in tribute to them. These pages are free for anybody to use. **Pet Pages** - Pictures of pets can be placed on Web pages. These pages are also free for anybody to use.

In an effort to become and remain profitable, a number of sites offer various services, for a fee. As an example, the Aurora News Register offers Web design, logo design, letterhead & business cards, scanning, photo prints & laser copies, illustration, brochures & flyers, as well as special packages.

Figure 129 shows another interesting idea, Web coupons. Users no longer have to clip coupons from the newspaper. They can simply use their computer, and with the click of a button, can save money on dinner tonight (Figure 130), or find other promotional offerings.

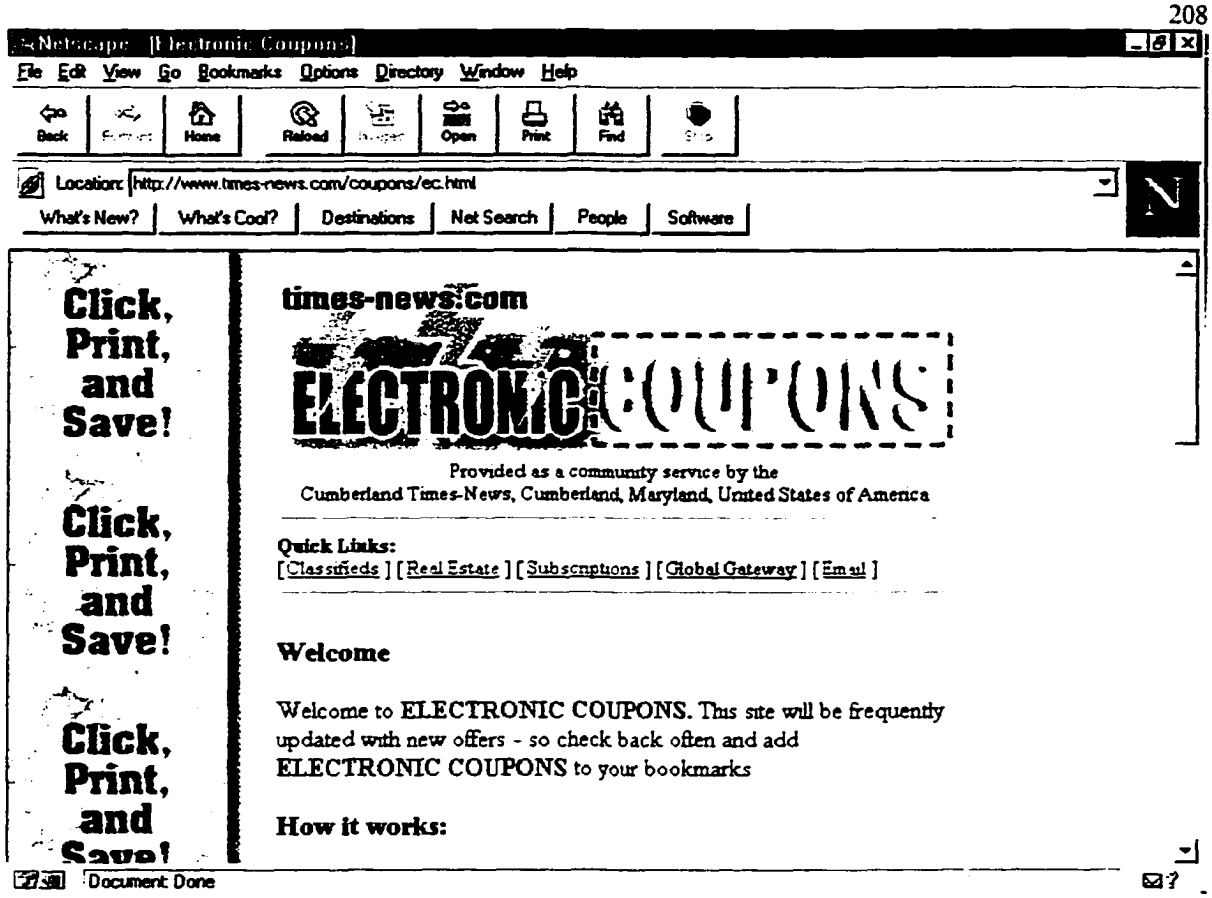

Figure 129. A Web site that offers electronic coupons.

Classified advertising is one area in which print publishers are in fear of their future profits. As seen from the survey results (Figure 69), 71.3% of the newspaper respondents have their classifieds on-line, as compared to only 5.3% for radio, and 9.8% for television. Smaller Web sites tend to just put whatever they have, on-line. This results in the user being required to search through all the ads to find what they are looking for. On the other hand, some sites offer dynamic queries, giving the user the ability to retrieve only those ads with the specific features they are looking for. Figure 131 shows a site that offers dynamic queries.

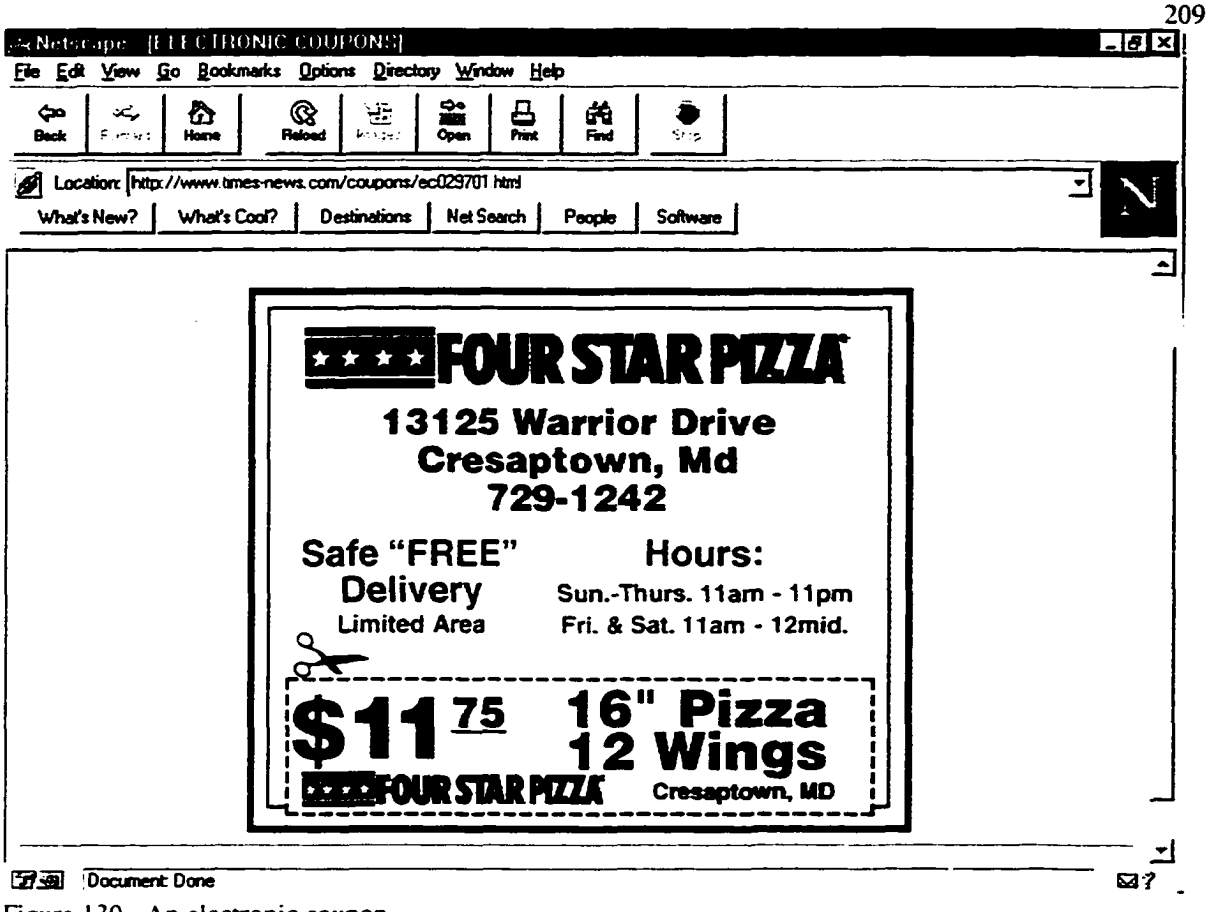

Figure 130. An electronic coupon.

As shown in Figure 131, the user can search by geographic location, by year, maximum price, maximum mileage, and a variety of other options. Users will be more attracted to sites offering this or similar capability, as opposed to sites that do not. This was evident in the survey findings (Figure 72) which showed a 115% increase in page views of sites that provided dynamic queries.

Another feature that Web sites should provide in their classifieds is e-mail notification. In this way, a user could put in a request for a certain type of automobile, or range of automobiles, and every time a match comes into the database the user would be notified via e-mail.

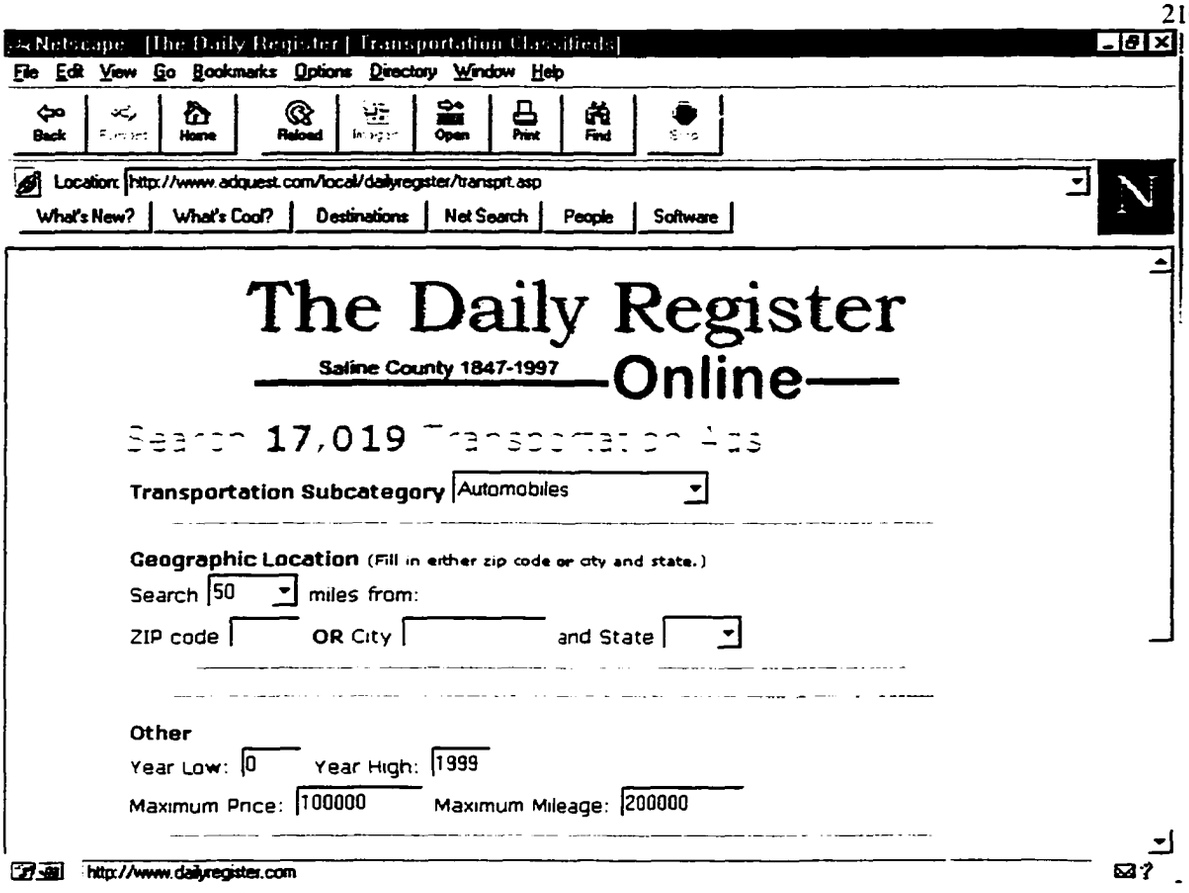

Figure 131. A classified search engine.

While this is a nice feature for the end user it could have a negative effect upon the Web site, because users would need to visit the site less often. There may also be an impact to net traffic as a result of e-mail notification.

Selling archival information is another area in which some Web sites are making money. These are generally sites that offer something unique, or something that can be found no where else. The survey found that 93.3% of all the media respondents do not charge for access to their archive, and unless consumers are looking for a hard-to-find article, they will probably try finding it on a free site. As a result, archival information will most likely remain free at many sites, for years to come.

Summary

Despite the extraordinary increases in advertising revenues from 1995-97, media companies (newspapers, magazine, television, and radio) continue to lose large sums of money, and as a result are slowing their involvement in this on-line business. This can be seen in the decreases in promotion expenditures, staffing, alliances, and plant and equipment investment (for on-line product). Further, the majority of media companies are not providing the correct mix of content to their users (Figure 108). The predominant absence of outside user measurement prohibits the facilitation of matching content-to-user, traffic-to-site, and finally web site-to-advertisers. This trend continues in light of editorial and technological developments which are standardizing the on-line product. This standardization has made the on-line product a potentially more viable line of business by reducing costs and increasing efficiency.

However, a small cluster of media companies are responding to these changes and are capitalizing on the opportunities. These few media companies are consistently acting in a similar fashion which support a long term investment and return. Their efforts to defray costs and provide measurement has enabled them to quantify and qualify users, while at the same time minimize their financial exposure through outsourcing their Internet services (consulting, web site construction and design), media alliances, and outside content providers. This process has induced a higher measurable traffic and translates into advertising revenue.

In general, it can be seen that media Web sites are similar in many ways. They all offer news, weather and sports, and most have community interest sections. There are

many differences and similarities that exist in the context of on-line products with media companies. These differences exist often because of the nature of these businesses as well as the need to use this medium to perpetuate their respective products. Often times it can be seen that there is no marked differences between any of the media industries, but that in and of itself may explain the level of involvement each may have in the on-line business.

If Web sites are to learn through other companies by example, perhaps the most successful firms can be identified and their behavior towards on-line products revealed. Identifying the commonalties and understanding the differences of these Web sites, may shed light that can be used by other Web sites. Upon close analysis of this group, it can be concluded that those companies that are among the "highest revenue generators" are reacting the same towards issues of alliances, promotion budgets, outside measurement, pricing, cross promotion, and content. Each of these activities shows a significant, positive relationship to overall revenue levels.

Chapter V

Conclusions, Implications, Recommendations and Summary

Conclusions

With the development of the Web, more than 4,000 electronic publishers have created Web sites, and are now in competition, not only with each other, but also with traditional media industries such as newspaper, magazine, radio and television. Due to a variety of factors, including advertisers expanding into Web markets, newspaper publishers perceive this new competition to be not only the most immediate, but also the most serious, systemic, long-term threat to traditional newspaper publishing to date.

The goal of this dissertation was to study the development of electronic newspapers, to ascertain how newspapers are currently using the World Wide Web, to suggest how new technologies, such as the Web, might be used by newspaper companies in the future to keep their share of the information dissemination marketplace, and to draw conclusions as to the importance of the Web to newspapers, now, and in the future.

The study found that millions of dollars have been spent by newspapers to get their product on the Web, and millions more will be spent to keep their presence on the Web. However, few publishers are making money on the Web, and some have ceased Web operations, almost as quickly as they started. Through the implementation of a survey, questions on topics such as: profitability, staffing, pricing, promotion, and subscriptions were answered. Ultimately, 58 questions were answered, providing

information that can be used in a variety of ways by newspaper companies, to help them in the decision making process when moving forward in the on-line world.

The outcome of this project was based on the literature review, the results of the survey, and the final analysis, which has put into perspective where the electronic publishing industry is today, and what newspaper publishers need to do in the future to remain competitive, while maintaining their share of the market. Although the literature contained much hype about the Web, the final results of this paper show that the newspaper industry, as a whole, is not in as much danger as most publishers fear. And because most newspapers have created Web sites, they have positioned themselves well to fight off competition.

The eight objectives of the survey were met as follows:

1.) *to gain a better understanding of the driving force behind Web publishing activities.*

A better understanding of the driving force behind Web publishing activities was found to be that traditional newspaper publishers are afraid of the potential competition of the Web. This has proven to be a benefit to newspapers because publishers have put up the financial backing required to develop a Web site for the local franchise. And because most newspapers have created a Web site, they have positioned themselves to easily defend their market. It has also benefited the consumer, providing them with thousands of newspaper Web sites to search. On the downside, many publishers have invested too much into this new technology, and as a result, they will not see profits any time soon.

2.) *to measure the level of interest in the Internet among the four media groups, newspapers, magazines, radio, and television.*

The level of interest in the Internet among the four media groups was found to be quite high. Although newspapers generally led the way in most categories throughout the survey, it should be noted that radio and television are making great strides with the on-line endeavors, and they should be taken as a serious competitor to the newspaper's core product, as well as the on-line product.

3.) *to understand who survey participants consider to be their major competitors.*

Survey participants consider others within their industry to be their major competitors (Figure 112). For example, newspapers consider other newspapers, magazines consider other magazines, radio stations consider other radio stations, and television stations consider other television stations to be their biggest competitors. These media groups, especially newspapers, should realize that strong competition can easily come from outside their industry.

4.) *to report how survey participants measure consumer activity within their Web site.*

Survey participants do little to measure consumer activity within their Web site (Figure 68). Although many sites provide internal auditing, few sites employ outside companies to provide verified audit reports on consumer activity. If the newspaper industry did not supply verified audit reports, advertisers would go elsewhere. Why should on-line be any different?

5.) *to understand if Web products are helping or competing against core products.*

Web products are generally helping the core product, and in most cases are not competing against the core product. In fact, by the end of 1997, newspapers saw little if any affect from the Web in their core products (Figure 111).

6.) *to report the staffing sizes of various media, and to identify any trends with regard to staffing size.*

Staffing sizes of various media were found to be higher for those with more outside content, averaging 8.5 persons per site (Figure 51). It was also found that Web staffs are generally integrated with the staff of the core product (Figure 33), and that staff sizes increase with the increase of page views on the Web site (Figure 80).

7.) *to ascertain if Web publishing is profitable.*

The survey determined that by the end of 1997, Web publishing in general, is not profitable (Figures 97-102). Most media Web sites are losing money and will continue to lose money in 1998.

8.) *to provide a comprehensive analysis of the survey data.*

From the survey data 58 questions were analyzed, providing a comprehensive analysis of the survey data.

The projected outcomes presented in the Methodology chapter of this dissertation were answered through the literature review, or through the survey results. Those predictions, along with the findings are as follows:

1.) *Most U.S. newspapers, certainly those of medium to large size, are on the Web.*

Through the literature research, this was found to be true.

2.) *Newspaper Web sites are far ahead of their competitors (magazines, radio, television) in terms of archives, page views, staffing, content, and profitability.*

Results of the survey found this to be generally, not true. Magazines had more Web sites (2.577 versus 2.544) than newspapers at the end of 1997 (Philips, 1998). Profitability among the four media groups is negligible (Figures 97-102), but magazines and television actually show higher average profits (Figure 100). Staffing among the four groups is similar (Figure 79).

3.) *Those Web sites with less content have a smaller audience (less page views), and thus lower pricing of banner ads, and, less profitability.*

True. The survey found that sites with more content replication from the core product have, more page views (Figure 42), higher pricing of banner ads (Figure 41), and more revenue. Due to a variety of factors including equipment costs, promotion, and newness, profitability is not yet forthcoming.

4.) *Few companies in the media industry provide Internet services. Those that do will have a larger technical staff, and should have more revenue.*

Not true. Survey results found 44.2% of all media provide Internet services for other companies (Figure 23). Staff sizes of Internet providers are slightly higher for all media (Figure 81), with newspapers having the largest spread (8.4 for providers, 5.4 for non providers). Revenue of Internet providers was similar to non providers.

5.) *A large percentage will have had their Web site on-line less than two years.*

True. On average, 65.2% of the respondents have been on-line less than 2 years (Figure 13).

6.) *Many Web sites operate their own server and require a larger technical staff to support the in-house technology.*

Not true. Figure 21 shows that on average, only 34.3% of all media operate their own Web site.

7.) *The size of banner ads is standardizing as the industry moves forward.*

Not true. Of all media, 60.7% indicated that they have standard banner sizes (Figure 59). When asked what that size was, it was determined that only 15.5% actually had a common (standard) banner size. This was found to be 468x60 pixels.

8.) *The use of "Push Technologies" by the media industry as a whole is minimal. However, those that do use this technology are seeing a high rate of page views.*

True. Figure 20 shows that only 12.6% of all media use push technology. Those that do, however, see five times as many page views as those who do not.

9.) *The Web product is having no effect on the core product.*

True. The intent of this question was to ask if the Web product was having any negative effects on the core product. Survey respondents indicated that the Web has actually helped the core product obtain more advertising dollars (Figure 111).

10.) *Few Web sites are doing "shovelware" (putting their core product content on-line) and are instead opting to produce original content.*

Not true. Figure 38 shows that both newspapers and magazines replicate 50% of their core product to the on-line product, while television and radio replicate 40% and 20% respectively.

11.) *Web sites with large archives available are getting the most page views, are spending more to provide archives, and are making more money in the process.*

Inconclusive. Overall, 62.4% of the respondents indicated that they provide archival information (Figure 54). It can not be concluded that they are receiving the most page views, spending more to provide archives, or making money in the process.

12.) *Newspapers have more content than magazines, radio and television.*

True. Although this could not be determined by the survey results, by performing the literature review as well as the Web site comparisons, it was found that newspapers have much more content and archive material available than the three other media groups.

13.) *Very little, if any, outside measurement data are being provided to advertisers by these Web publishers.*

True. Overall, only 15.4% indicated that they provide outside measurement data (Figure 68).

14.) *Few Web sites offer on-line classifieds. Those that do have more expenses and should have higher revenue.*

Not true. Overall, 52.8% offer on-line classifieds (Figure 69). Newspapers have the highest incidence with 71.3%. There is no correlation to expense and revenue.

15.) *Outside of their core product, most Web sites do little promotion and have relatively small promotional budgets.*

True. More than 77% of the respondents have promotions budgets of only $10,000 or less (Figure 76). They typically promote within their own media group (Figure 74).

16.) *Newspapers have a larger overall staff size as compared to magazine, radio, and television, and the size will stay about the same in 1998.*

Not true. Staff sizes are similar among the four media groups (Figure 79), and change dramatically relative to page views (Figure 80).

17.) *Few Web sites charge for access or to retrieve archival information. Those that do charge will have lower page views resulting in lower banner rates.*

Overall, only 7.9% of all media charge for access to their Web site (Figure 85). Those that do charge see more than double the page views, on average, than those who do not charge. However, this is probably skewed due to the low (24) number of sites that charge.

18.) *Few sites require registration, yet many sites are in some way capturing user demographics, and will sell this information to third parties.*

Most Web sites (94.5%) do not require registration (Figure 88). Many, however, capture user information and will use it for their own internal purposes (Figure 115). Few (4.9%) have plans to sell this information to outside companies.

19.) *The average Web site will spend $50,000 - $100,000 per year for equipment and services (not including salaries).*

True. Figures 91 through 96 support this prediction.

20.) *Overall, there is little, if any, profit among the four groups.*

True. Most media companies lost money on their Web sites in 1997 (Figures 97, 98, 99). Thirty-five newspapers averaged profits of $29,285, and six newspapers averaged profits of $895,833 (Figures 100, 102).

21.) *Competition on the Web (newspaper versus television for example) will be similar to the competition they normally have outside the Web, which may be true due to a high rate of local users.*

True. Although media companies in general do not acknowledge competition (Figure 112), the literature review found competition to currently be about the same on the Web as it is outside of the Web.

22.) *Few Web sites give the user an ability to customize their content.*

True. Only 6.2% of the respondents give their users the ability to customize their content.

Implications

In accessing the findings in the literature review as well as the survey, the first, and most important finding is the realization that newspapers are not in as grave danger with on-line competition as pundits would have them believe. In fact, television is much more vulnerable to subscriber erosion. This is indeed good news for the newspaper industry, which is rapidly finding that the Web may be more of a benefit than a hindrance to the core product.

The project above all else proved that groundwork in this new field has just barely been laid. Many publications have rapidly set up Web sites without considering the consequences. This rationale is a reflex action and one that is not conducive to newspaper's survival into the next century. Millions of dollars are being spent on newspaper Web sites, yet few are able to show profitability. At this stage, continuation of an electronic publication is not economically feasible for many newspapers, and will not be for some time to come, if ever.

The one overriding implication of this study is that as a communications medium, the Web can be viewed potentially, as an equalizer among the large and the small, the powerful and the weak. The reality, however, is that most newspapers have successfully defended their market by producing an on-line product, and will easily fight off competition with the huge resources they have available. The ability to provide a blanket of news and information, relevant to the local community, is best served by the newspaper that has its roots in the community. This has proven to be a major deterrent to new competition.

Areas for further study

One of the conclusions likely to be drawn by publishers is that because consumers spend only 5% of their Web access time looking at Web newspaper's sites, there must be something wrong with the electronic edition. This may well be faulty reasoning. Studies need to be conducted on how the Web affects traditional newspaper reading habits such as:

1.) Do consumers read the Web edition as well as the print version?

2.) Have consumers stopped reading the print version in favor of the on-line version?

3.) What are the habits of Web users, specifically as they relate to visiting newspaper Web sites.

Another relevant study would be in the area of the "haves" and the "have-nots" which are those people who will be left uninformed on a daily basis as a result of not using this new technology. Along this same line, a study on market fragmentation is necessary to determine, if in fact the Web will become so fragmented, that no one in the media business will be able to profit.

Certainly another area for study is within the newsroom itself. For example, how does the newsroom of the print product interact with that of the on-line product? Will "shovelware" be the future, or will on-line media have to create new stories on a daily basis? Newspapers operating strictly with an eye on the bottom line might be persuaded to drop certain kinds of news coverage if computer tracking indicated that those stories were not heavily read. This could have very serious implications for the traditional watchdog role of the press in a democracy.

Finally, a study similar to this research should yield interesting results in several years. A number of items to pay particular attention to are: push technologies, content, staff integration, archival information, standardization of banners, partnering, outside measurement, classifieds, promotion, staffing, profitability, and registration requirements.

Recommendations

Four areas of recommendations are presented:

1. Portable electronic display devices
2. Shovelware
3. Web site creation and continuation, with minimal expense outlay
4. Generating profits

Portable electronic display devices

What if newspapers could use their existing print production process to drive an array of news, information, advertising and electronic shopping services that are both portable and personal? Timeliness and portability dramatically increase the value of advertising content in both the print and the electronic publication.

Fidler (1997) is convinced that to eliminate printed newspapers, a highly portable, simple to use device capable of displaying hypertext and audio/video clips, while allowing the user interactivity, is needed. The solution that Fidler (1997) proposed is what he calls a portable tablet, which at about the size of a thin notebook can be carried just about anywhere (Figure 132).

Figure 132. An electronic tablet, similar to what Fidler (1997) has proposed. Note. From "Where are we going," by C. Robinson, 1997, TechNews, The NAA Magazine of Newspaper Operations, p.32. Copyright 1997 by the Newspaper Association of America. Reprinted with permission.

Fidler's (1997) proposed tablet does not use the traditional LCD panels for display, which are usually hard to read, especially in bright light. Instead, he is working with Kent State University in developing a new technology called cholesteric liquid crystals. There are many unique features to these crystals but the most interesting is that they display like a newspaper, black type on a white background.

With the use of personal computer memory cards, (similar to the concept of a phone card) Fidler (1997) believed that consumers would be able to read comfortably on a train, plane, bus, at a coffee shop or in the comfort of their homes. By using memory cards, subscribers to the tablet edition could get information anywhere, anytime, through a global network of electronic newsstands similar to automated teller machines. Fidler

(1997) believed that by the year 2010, electronic newsstands may be routinely found in airports, train stations, hotels, shopping malls, and bookstores, as well as in homes and offices. Another possibility is to use cellular technology to update these devices all day long.

Fidler (1997) contended that although the Web provides publishers with an opportunity to develop an electronic outlet for their content, the Web is not likely to emerge as the digital successor to mechanical printing presses. His reasoning was that the Web, like early Videotex services, lacks several important attributes which are traits of the document domain: portability, portrait-oriented pages, and the ability to be easily browsed. The tablet, as proposed by Fidler (1997), has the greatest potential to fulfill these traits.

Users of the tablet, for instance, will not have to leave their homes nor hotel rooms to locate a newsstand or wait for delivery. Newspapers will not pile up on doorsteps and magazines will not fill up mailboxes when subscribers are out of town. Instead, credit-card-size memory cards containing 600 megabytes of information (as much or more than a typical CD-ROM) will give subscribers the ability to conveniently read the news whenever and wherever they want. Frequent travelers, for example, will have the ability to pack several newspapers, magazines, and books, as well as personal papers, reports and speeches into just one memory card.

Others have discussed the use of portable computers to read the newspaper as well. Elderkin (1996) for example, described an ultra light, ultra thin tablet (similar to Fidler's) with two viewing screens connected by a hinge. This system would display color pages as well as full motion video. Elderkin contended that these devices should be

sold in drug stores for around $10-$20. Certainly, a great many people would use the electronic newspaper at that price, however pricing that low is not foreseeable in the near future. Newspaper publishers should realize that society is nowhere near this level of sophistication. There is no doubt, however, that when a portable computer starts to be used by a large number of people, the newspaper industry will be radically changed (Elderkin, 1996).

Shovelware

Survey results found that 50% of the newspapers replicate their core product to the on-line product (Figure 38). Additionally, 39.5% indicated that they replicate 75-100% of their core product. Because newspapers that replicate core product content are seeing a greater incidence of page views (Figure 42), they are able to charge more for banner advertising (Figure 40). The recommendation therefore is to continue this practice for those who are doing so, and to greatly increase core product replication for those who are not.

Web site creation and continuation

Most newspaper companies have developed Web sites throughout the country and, as a result, have greatly halted any potential threat to their core product. In fact, because most newspapers have created Web sites, competitors will have a difficult time trying to start-up a new operation in the newspapers market. As a result, the threat of competition to most newspapers today, is much the same as it was before the Web. Start-

up operations simply do not have the listings, the information, the credibility, the name recognition, nor the clout in the community to compete against the local newspaper. However, publishers need to balance the amount of investment in their Web sites to revenues, generating profits or at minimum, a break-even point.

Generating profits

This researcher supports Robinson (1997) who stated that generating profits will be possible if publishers focus on the following:

1. Be market-driven.

   Do not attempt to take a technology such as the Web, and create a market. Know your customer, their needs, and what will attract them to your product. Requiring customer registration will help in identifying customer needs, and with future promotion with direct marketing.

2. Know your strength.

   Understand that the core business of the newspaper is in gathering, editing, and disseminating the news. No one else has the resources or the community involvement as the local newspaper

3. Partner with other companies.

   Few companies in the computer and communications industries are purely friends or purely foes. Newspaper companies should open up and look for new partnerships that will ultimately attract new consumers as well as advertisers.

4. Get top management involved.

   Top management needs to be involved, not only in the core product, but in on-line endeavors as well. Because they supply the money and make decisions about the future of the Web site, top management needs to understand, and support, the efforts of both products and the markets in which they deal.

5. Invest conservatively in new media.

   Many media companies have invested heavily in the Web technology over the past few years, and, as a result it will take many more years to become profitable. Publishers need to begin taking a hard look at where, when, and how much money to invest in the Web.

Summary

There is no argument that the Web has grown at a phenomenal rate, with millions of new Web sites including thousands of newspapers, magazines, television and radio station Web sites. Two fundamental reasons are cited why media organizations spend millions of dollars to create Web sites.

First, media companies are determined not to be left behind in this new technology (Fidler, 1997). Many companies had no idea what they were getting into, or where this new medium would lead, while others still do not know, and continue to pour money into their Web sites, hoping something good will come of it.

Second, as competitors within the same market went on-line, other competitors felt threatened and immediately took steps to defend their franchise (Fidler, 1997). Again, many were unsure, but felt that they could not afford to sit by and watch.

The end result of these two factors was the creation of over 5,000 media Web sites by January, 1998. This resulted in an enormous wealth of information for consumers, most of it free. More and more, consumers are expecting to find their local news, not only on the front lawn, but on-line as well. With so many Web sites to choose from, consumers use their local media Web site for news, weather, sports and classified advertising. In fact, a 1997 study by Tribune Corporation found that 40% of their one million weekly page views came from people searching the classifieds (Silver, 1998).

Mantooth (1982) predicted two major changes in American newspapers as a result of technological advancements such as the Web. First, a reshaping of the newspaper, and second, a stronger need for newspapers to provide better dissemination of the news. Newspapers have rapidly adjusted and reshaped as a result of the Web as evidenced by the following:

1. Most American newspapers now offer an on-line edition.
2. Increase in staffing to support Web based products.
3. Providing greater content on their Web site.

A better dissemination of the news has also been witnessed.

1. Allowing their core product to be "scooped".
2. Providing 24-hour per day access to their Web site.

Mantooth (1982) concluded that an electronic publication was not economically feasible at many newspapers, and would not be, until such time as a large number of

people had home computers. Although there has been an explosion of home computers, electronic publications are still not economically feasible. This is evident in the 1997 losses sustained by newspaper publishers in keeping their Web sites on-line (Figures 97-102).

Levins (1997) found that over 90% of the more than 800 Web sites run by U.S. newspaper companies lost money in 1996. With the exception of a few local Web sites, such as Boston.com and the San Jose Mercury Center, local sites are not getting the traffic nor the ads needed to turn a profit. "They're not attracting the national advertisers and they're not picking up significant amounts of local advertisers" (Levins, 1997, p.4i). Based on the results of this dissertation's survey findings, little has changed since the 1996 Levins study. Newspapers are continuing to make large investment in the Web, with little return.

Neuwirth (1998) found that during 1997, major newspaper corporations incurred huge losses in maintaining their Web sites. For example, the Tribune Corporation lost 30 million dollars and generated only 12 million dollars in revenue. Neuwirth pointed out that in addition to this, Tribune expects to lose 40 million dollars in 1998. Tribune was not alone, with Knight-Ridder Corporation posting a 16 million dollar loss in 1997 to support their 32 Web sites. The New York Times Corporation saw a 66% increase in Web revenues from 1996 to 1997 and still posted a 15 million dollar loss, with 1998 projections of 12 million dollars in losses. Even a smaller newspaper group such as the Central Newspapers, reported that the cost of keeping its Phoenix, Arizona and Indianapolis, Indiana dailies on-line is only around two million dollars, but they still lost money in 1997.

No matter how large the company, they cannot continue to absorb losses such as these. With several years in the Web business, stockholders will begin to demand profits. As a result, it is expected that a number of media Web sites will scale back operations to obtain at least a break even point, while some will maintain a small loss just to keep their Web presence. A few sites will continue to make money such as the Wall Street Journal and CNN, however the success of some on-line operations will doom others to failure. Executives will demand to know why their Web site is losing money while their competitors are profiting. Layoffs, cutbacks, and small to medium size newspapers going off-line may be the norm for 1998.

In January 1998, the New Century Network announced a 10% reduction in force, signaling what may well be a down-turn in the on-line media business. At the same time, Microsoft who has experienced heavier than expected losses with their Sidewalk Web-based entertainment product, announced a major reorganization that will focus less on local content and more on Microsoft's Expedia travel site. These changes have come about as a result of low page views (lack of consumer interest), and losses which were far more than planned (ZDNet, 1998). At the time of this writing, the New Century Network had been completely shutdown.

Pundits have predicted heavy losses in traditional newspaper classifieds, however, at this time, the newspaper industry does not have any empirical evidence that Web competition is having an impact on print classifieds. Newspaper classifieds continue to grow at a steady pace as shown in Figure 133 (NAA, 1997). Overall, traditional newspaper classified ad revenues increased from 10.5 billion in 1996, to 11.7 billion in 1997, a 10% increase.

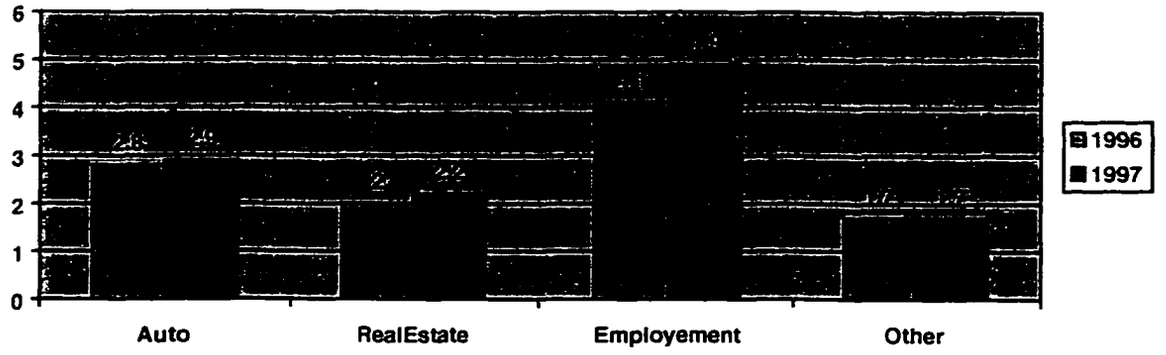

Figure 133. 1996 to 1997 increase in newspaper classified ad spending, in billions of dollars.

Liebeskind (1997) stated that the newspaper industry's long-standing dominance of classified advertising is not threatened by the increasing numbers of on-line classified services, as newspapers have met the on-line challenge by joining it (creating their own Web sites). With 71.3% of the newspapers surveyed indicating they have on-line classified services (Figure 69), they have forced much of the potential competition out of business. Liebeskind (1997) explained that start-up operations simply do not have the listings, the information, nor the clout in the community to compete against the local newspaper. Newspapers, in general, have the contacts, the market and the ability, while the new companies who are just setting up sites, do not have the credibility nor the name recognition that newspapers have.

Liebeskind (1997) believed that newspapers are well positioned to take advantage of the Internet. Many newspapers today have interactive capabilities and offer products to their advertisers that are worthwhile and profitable. Liebeskind stated that services started by companies, not already in the classified business, can not compete with newspapers because they cannot get enough listings to achieve "critical mass."

The 7th Web survey (1997) from Graphic, Visualization, & Usability (GVU), a part of Georgia Tech, found that 86.03% of Web users use the Web to gather information. However, that does not mean news. A similar survey, the 1997 Price Waterhouse Consumer Technology Survey found that Web users spend 77% of their time accessing the Web, to gather information (43%) and send or receive e-mail (34%). Other uses included entertainment such as playing games (9%), reading magazines and newspapers (5%), participating in on-line chat rooms (4%), on-line banking (2%), two-way voice communications (1%), and on-line shopping (1%). This is shown graphically in Figure 134. An important point here is that reading magazines and newspapers accounts for only 5% of the time spent on-line. Mantooth (1982) found the exact same amount of time being spent reading newspaper articles more than 15 years ago with the Videotex project. Web Publishers should be aware of this finding as well as others from the survey, in that the Web is showing a number of similarities to the Videotex project from the early 1980's.

The Price Waterhouse survey also found that an average of 4.2 hours (252 minutes) per week were spent on-line by these households. Based on the results of the Price Waterhouse survey, Web users spend (252 minutes / 5 = 50.4) about 50 minutes per day accessing the Web, but only 5% (2.5 minutes) of that time looking at a newspaper Web site. Users quickly check the head-lines and move on to something else on the Web. As Pogash (1996) pointed out, on-line newspapers are not only competing against other forms of media, but also against thousands of other sites.

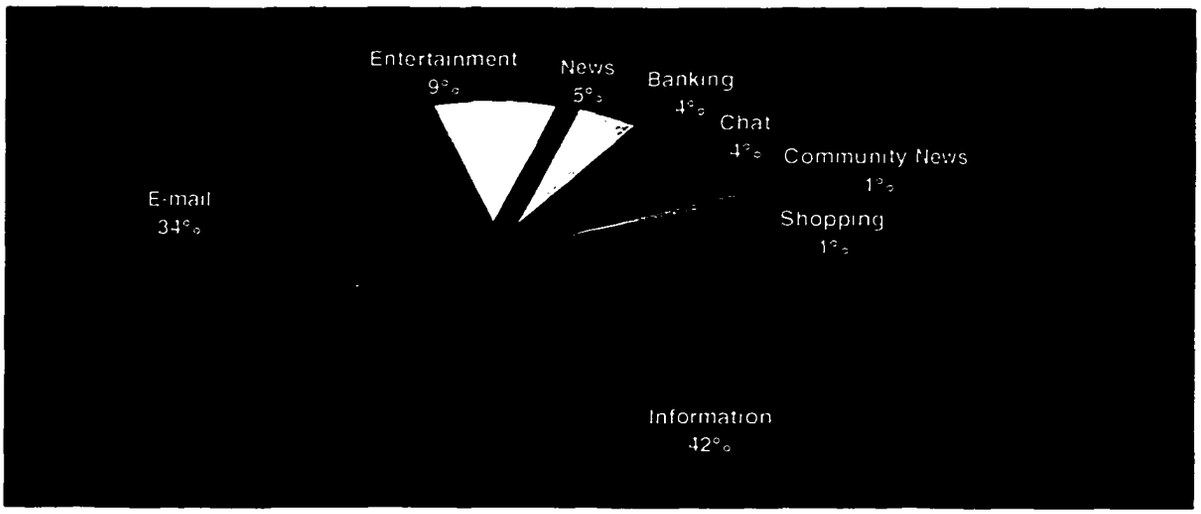

Figure 134. Where time is spent by consumers while on-line (percentages).

Case (1997), citing a 1996 survey by Advertising Age, found that nearly half (44.2%) of on-line users never even look at on-line banner ads. Of the 55.8% who look at on-line banner ads, 50.3% never click on these banner ads for more information. Case contended that newspapers have a very small piece of the Internet ad market, and despite intensive efforts to get hometown retailers to commit advertising dollars to the on-line newspaper, newspapers are finding that many of these businesses are not willing to invest in the Web. It may be that advertisers are not seeing the results they need, which may be due to the small amount of time spent by consumers on newspaper Web sites, and that they do not tend to support banner advertising.

Crosbie (1996) stated the Web newspaper business model hopes that consumers will markedly change their daily habits and commit their increasingly rare, free time, to the burden of getting on the Web and surfing the newspaper Web sites to retrieve information that previously had been delivered to them in the form of a newspaper.

Crosbie contended that historical trends show the average consumer's disposable time shrinking to less than four hours of free time per day, and as a result, less time will be spent on the Web, and on newspaper's Web sites.

Despite this trend, the Web newspaper business model assumes that with the technological ability to deliver more information, more frequently, this will motivate people to expend more of their increasingly rare free time surfing the newspaper's Web site. The hope that Web newspaper circulation can be built and maintained by attracting advertisers and possibly paying subscribers, based on the previously mentioned assumptions, will see Web newspapers failing (Crosbie, 1996).

One of the biggest challenges for newspapers is in making their information available to everyone who wants it, and to attract and retain new customers. A December 1996 study by Aragon Consulting Group (as reported by Investor's Business Daily, 2/20/1997) found that about 40% of the U.S. households will ultimately have computers with Web connections. Of the remaining 60%, one-half (30%) do not care at all about computers, nor the Internet, and never will. The other half are not very eager to enhance the capabilities of their television sets. The study was conducted primarily to see what the market, if any, is for WebTV products.

The biggest fear today is that as we build an information-based economy, a large segment of the population will be fragmented, those who are not computer literate, and those who cannot afford to buy computers. In other words, the poor and the uneducated will be pushed even further into the disadvantaged underclass (Rowland, 1996).

Furthermore, new media designers at the MIT media lab and elsewhere, predict that the day-to-day mass audience will divide into further niches because of the enormous amount of information and sites that will be available on the Web. Audience fragmentation will become so high that a majority of Web sites will experience a large erosion in their users. In fact, pundits predict that the Web will become so fragmented that virtually no one will be able to profit.

Another related point came from Fidler (1997) in which he stated that consumers generally embrace a new technology, but quickly become tired of it. As an example, Fidler discussed the Videotex project in which users were eager to sign up, tried it for a few months, then quit. Although there is much talk about how rapidly the Web is growing, few analysts talk about "churn"; people who try the Web, then quit. Alarmingly, Seminerio (1998) found that during 1997, the Web experienced a 15.9 million user churn in American adults.

Much like the Web today, Videotex services in the early 1980's were viewed as a logical extension of traditional printed newspapers. Fidler (1997) stated that most publishers perceived the benefit of these services was their ability to provide news and information in a timely, thorough, and more personal fashion. The assumption that Videotex would become an up-to-the minute newspaper, capable of providing a wealth of information not typically found in mainstream media proved however to be wishful thinking.

For newspapers, the Web today has many of the same problems that caused the failure of Videotex. For example, a database of general news, information, and

advertising was not all that appealing to subscribers. As discussed earlier, Web users today spend only about 5% of their time on newspaper and magazine Web sites. Other problems included a technology that was attempting to drive a market, slow speeds, and the inability to keep information up to date. Fidler (1997) found that subscribers could get the information they wanted more easily and more quickly from other sources.

Fifteen years ago, Noll (as reported by Fidler, 1997) raised concerns that computerized databases might be too time consuming, difficult to use, and inadequate for most people. Noll's suggestion that transactions and interpersonal message services might be more important than information retrieval to on-line customers, has so far proven to be the same with the Web, said Fidler.

Summarization

The process of gathering, sorting, selecting, evaluating, and validating information will require more time, effort, and expense than most people will be willing to devote to Web news sites. Fidler (1997) contended that in general, most people will continue to rely on professional journalists, information managers, and producers for the majority of their information and entertainment. Based on this assumption, there is little doubt that people will continue to prefer newspapers, magazines, books, and other documents that they can read anywhere and anytime.

Compounding the above assumption, the Web today is far from being a medium that can support newspapers and the advertisers that support newspapers. Web users

spend very little of their time accessing newspaper Web sites (only 5%), and less than 50% of these users will look at an advertiser's banner ad. Newspaper publishers have been forced into creating a presence on the Web, first because of the potential competitive threat and second because consumers expect it. These publishers must now realize, however, that the Web is not the threat once predicted, and will not be for a long, long time, if at all. However, due to a variety of potential Web competitors, newspapers will need to continue to maintain their Web sites.

Newspapers that have created Web sites are now well positioned to take advantage of the Web, however they need to balance the amount of investment in their Web sites to revenues, generating profits or at minimum, a break-even point. Most importantly, they will need to do so with the correct mix of content, shovelware, staff, and alliances to keep losses at a minimum.

The future of newspapers is anyone's guess, yet it can be safely assumed that the print publication, as well as the on-line product will be here for a good many years to come. What is not clear is the future of, and advancements made in the areas of broadband communications, interactive services, full motion video, electronic tablets and other similar devices, and how these various services will impact the printed newspaper in the future.

Appendix *a*

Editor & Publisher

Ninth Annual Study on Information Services offered by Media Companies

General

To ensure that you receive a free copy of the results, as well as the $300 discount for attending future conferences, please enter your E-Mail address . Because we will be matching electronically, it is important to use the E-Mail address that the survey letter was sent to.

1. What industry is your main (core) business?

   Newspaper Magazine Radio Television _____
   If daily newspaper, what is your circulation level? _____

2. What is the percentage distribution of your customers?
   (should total to 100% for each business)

	% core business	% web business
Local	_____	_____
National	_____	_____
International	_____	_____
Not Known	_____	_____

3. How long has your web site been in existence? years ____ months ____

Technology

4. Do you operate your own server? Yes ____ No ____
If no, the site operates on a server
___ with other sites within your media company.
___ with other sites with other non-media companies.
___ with other sites with other media companies.

5. Do you provide Internet services for other companies? Yes ____ No ____
   (i.e. web site design, construction, consulting)

6. Have you established HTML standard or other structural guidelines for your web site? Yes ____ No ____

7. Does your web site include:
   the following authoring tools

___Backstage design
___Claris Homepage
___Corel Web designer
___Hot Dog Pro 3.0
___Internet Creator
___FrontPage 97
___Net Object Fusion
___Navigator Gold
___Page 1 3.0
___Visual Page
___Other, Specify _____

   any of the following

___Video
___Audio
___Animations
___Hot Metal 3.0

8. Does your web site archive its own HTML page structures for each edition?
   Yes ____ No ____

9. Do you employ "push" technology to deliver Web information? Yes ____ No ____
   If yes, which of the following do you use:
   __Pointcast __Backweb __Ifusion __Icommon __Intermind
   __Marimba __NIT delivery __Wayfar __Other __Specify _____

Editorial/Content

10. Do news features in/on your core product reference your web site?
    Yes ___ No ____
    If yes, how frequently?
    __Daily __Weekly __Bi-Weekly __Monthly

11. Do you have an editorial procedure in which corrections are edited in your archives?
    Yes ___ No ___

12. Does your editorial staff use the Internet to gather information? Yes ____ No ____
    If yes, do they use it for
    researching stories? Yes ___ No ___
    as feedback from Web users? Yes ___ No ___
    to keep track of competitor's Web reporting? Yes ___ No ___

13. Is your Web newsroom staff integrated with the newsroom of your core product or are they completely separate? __Integrated __Partially Integrated __Separate

14. Have you developed original editorial content for your web site? Yes ___ No ___
If yes, check all of the following categories that contain original content.
__Tourism
__Community info
__Special events
__Entertainment
__Non-news editorials
__Real Estate
__Other Specify _____

15. Do you allow your Web product to "scoop" your core product? Yes ___ No ___

16. What percentage of your content is originated specifically for the Web? ___%

17. What percentage of your core product is replicated for the Web? ___%

18. What percentage of your Web product is used in your core product? ___%

19. What percentage of your content is from outside sources? ___%

20. Do you provide archival information on your web site (past editions)?
Yes ___ No ___

21. How long do articles stay current in the Web edition before going to archival or deletion?
__1 day __between 1 day & 1 week __between 1 week & 1 month
__more than 1 month

22. Approximately how many articles do you have available on your web site? _____

23. Are you in alliance with other communications companies in your market?
(i.e. CitySearch, Digital Cities, Sidewalk, cable, radio, broadcast, business bulletin)
Yes ___ No ___

If yes, please indicate which of the following you are doing:

	Name of the company(s)
Editorial	_____
Advertising	_____
Marketing	_____
Technological	_____
Other	_____
Advertising	_____

24. Does your web site have paid advertising? Yes ___ No ___

25. Does your web site have sponsors? Yes ___ No ___

26. Have you standardized your banner size? Yes ___ No ___

27. Which do you consider to be the ideal banner size?
    a. ___x___ pixels
    b. Other _____

28. What do you charge for an ad size to run 1 month in your web product? $_____

29. Do you provide dynamic advertising (query specific)? Yes ___ No ___

30. Have you standardized your ad size? Yes ___ No ___

31. Do you participate in network advertising such as: (check all that apply)
    __AdExpress __Real Media __NCN __Other __None

32. Do you have a Web rate card specific to your web product for: (check all that apply)
    __Retail __Classified __Neither

33. Do you provide your advertisers with advertising measurement data?
    Yes ___ No ___
    If yes, is this measurement determined through outside sources (i.e. Real Media)?
    Yes ___ No ___

34. On average, estimate the usage of your site by page views per week. _____

35. Do you offer Web classified? Yes ___ No ___
    If yes, are they keyword searchable? Yes ___ No ___

36. Is your Web classified advertising sold separately from your core product?
    Yes ___ No ___ N/A ___
    If no, what percentage of your classified advertising on the web site is also in your core product? ___%

37. Do you offer Web coupons of any kind? Yes ___ No ___

Promotion

38. What promotion vehicles (beside your own) do you use to promote your web site? (check all that apply)

__Newspapers
__Magazines
__Radio
__Television
__Direct Mail
__Other Specify _____

39. Do you cross promote with other web sites? Yes ___ No ___

40. What is the size of your promotion budget?
__Less than $10K __Between $10K-$50k
__Between $50K-$100k __Over $100K

41. What Internet marketing tactics do you use to bring in traffic? (check all that apply)

__Listing URL on search engines
__Advertising banners
__Strategic links
__E-mail blasts
__Push technology
__Updating content on a regular basis
__Building community of interest with approriate free content
__Other Specify _____

Staffing

42. Does your Web staff function as a "separate entity" from your core operation?
Yes ___ No ___

43. How many employess (primary function) work on the Web product?

	Full Time	Part Time
Advertising	_____	_____
Editorial	_____	_____
Technical	_____	_____

44. What percent of overall change in your Web staff do you anticipate for 1998?
___ % increase ___% decrease ___No change

45. Does your web site have its own full time editorial director? Yes ___ No ___

Subscriptions / Transactions

46. Do you charge for access to any portion of your Web product? Yes ___ No ___
If yes, how many subscribers do you currently have? _____
The respondents who do charge, please choose one or more of the following pricing charges:
__Under $10 flat fee per month
__$11-$30 flat fee per month
__more than $30 flat fee per month
__per search charge
__per article charge

47. What do you charge for archives?
$_____ per minute $_____ per article __Nothing __N/A

48. Do you intend to charge for your Web product in the future? Yes ___ No ___

49. Do you require registration at your site? Yes ___ No ___

50. Do you provide secure electronic financial transactions? Yes ___ No ___
If not, do you plan to in the future? Yes ___ No ___
Do you provide a secure "firewall" of protection? Yes ___ No ___

Sales and Profitability
Note: The following information will be kept strictly confidential. Figures you supply will be used as an aggregate whole to obtain industry averages, and, will not be used in any other way. It is our hope that you will supply this information, freely and accurately.

51. NOT including salaries, what is the approximate amount your company spent, or expects to spend on its Web site for equipment and services, for the following years: (check only one for each year)

Amount Spent	1995	1996	1997	1998
None	____	____	____	____
Less than $50,000	____	____	____	____
$50,000 - $99,999	____	____	____	____
$100,000 - $249,999	____	____	____	____
$250,000 - $499,999	____	____	____	____
$500,000 - $999,999	____	____	____	____
More than $1,000,000	____	____	____	____

52. Please indicate approximate gross sales for the following

	Banner Classified	Advertising Advertising	Subscriptions	Transaction
Year	95 96 97	95 96 97	95 96 97	95 96 97
None	___	___	___	___
Less than $50,000	___	___	___	___
$50,000 - $99,999	___	___	___	___
$100,000 - $249,999	___	___	___	___
$250,000 - $499,999	___	___	___	___
$500,000 - $999,999	___	___	___	___
More than $1,000,000	___	___	___	___

53. Are your advertisers shifting advertising dollars from your core product to your Web product? What percentage change has your core product incurred (within the past 1 year) from the presence of your Web product?
Decreased ___% ___Increased ____% ____No change

54. How would you rate the following Web sites as your competitors? Please use a scale from 1-10, where 1 is no competition and 10 the highest competition.

	Local	National
Newspaper(s)	____	____
Radio	____	____
Television	____	____
Magazines	____	____
Niche products	____	____
Yahoo	____	____
Monster Board	____	____
Sidewalks	____	____
Other	____	____ Specify _____

55. Do you provide a method for your users to customize their own daily edition (i.e. only parts are delivered, or specific writer's stories)? Yes ____ No ____

Other

56. Have you developed a corporate intranet? Yes ____ No ____

57. Do you participate in any outside intranets? Yes ____ No ____

58. Do you capture your user's names, addresses and e-mail into a database?
Yes ____ No ____
If yes, do you use this information for future sales and promotion opportunities?
Yes ____ No ____

Do you intend to sell this database to outside companies? Yes ____ No ____
What percentage of those visiting your site are local (your market)? ____%
What percentage of those visiting your site is national (beyond your market)? ____%
What percentage of those visiting your site are international
(outside your country)? ____%

Comments

59. Please comment about your feeling or ideas regarding the Web publishing industry

60. Please comment about this survey

61. Other comments

Thank you for taking the time to complete this survey. If you have any questions or further comments regarding the survey, please contact Ed Lindoo at lindooe@scis.acast.nova.edu. Questions regarding any other new media activity at Editor & Publisher should be directed to Marsha Stoltman at 212-675-4380 x502 or marshas@mediainfo.com.

Appendix B

Survey Letter

Dear New Media Executive:

It is with great pleasure that the Editor & Publisher Company invite's you to participate in a very exciting new media research project. A free copy of the results of the survey will be yours for completing the survey.

As you no doubt are aware, Editor & Publisher has been serving the newspaper industry for the past 113 years with a wide range of products and services. In the past two years we have greatly expanded our new media group and are working diligently to measure the activities of new media departments within not just newspapers, but also magazines, radio and television stations and information companies.

Our commitment is to help executives across all media face the challenges and learn and profit from the online medium. We do this through our conferences, print publications, Web site, Members Network and through research projects such as this one.

This year's survey will be quite different than past surveys. Ed Lindoo, who is working on his Ph.D. at Nova Southeastern University, will be conducting the survey for us via the Web at **http://ep.dcsouthflorida.com** during the month of August. As an independent analyst, Ed will be gathering the survey data and reporting his findings in his dissertation, as well as forwarding raw data to us for further analysis.

Please take a few moments to go to this site and complete the survey. The benefits to you and your industry will greatly outweigh the small amount of time (15-20 minutes) it will require. AND, we offer you a $300 discount off of any upcoming Editor & Publisher conference. (Visit our Web site at **http://www.mediainfo.com** for details on conference programs.)

Help us help you by participating in this research project which promises to be the first of its kind available in the market anywhere. Please answer the survey in its entirety. Please note that by supplying your email address, it will only be used to give you the survey results and any future discounts. Your identity will not in any way be tied back to your survey answers.

As an additional incentive, the first 100 respondents will receive a free copy of the Editor & Publisher Market Forecaster, a $269.00 value.

Any questions or comments regarding the survey should be directed to Ed Lindoo at Nova Southeastern University (email: **lindooe@scis.acast.nova.edu**). Questions regarding any other new media activity at Editor & Publisher should be directed to my attention at 212-675-4380 x502 or marshas@mediainfo.com.

Best regards,
Marsha A. Stoltman
Vice President, Market Relations
Editor & Publisher Co.

Appendix *e*

List of URL's referenced in this dissertation

ABC television	www.abc.com
Arlington Star-Telegram	www.arlington.net
At Hand	www.athand.com
Black World	www.tbwt.com
Career Cast	www.careercast.com
Career Mosaic	www.careermosaic.com
Career Path	www.careerpath.com
Casper Wyoming Star-Tribune	www.trib.com
City Bank	www.citibank.com
Classifieds2000	www.classifieds2000.com
CNN Interactive	www.cnn.com
Detroit News	www.detnews.com
Digital Alta Vista	www.altavista.digital.com
Digital Cities	www.digitalcities.com
Editor & Publisher	www.mediainfo.com
ESPN SportsZone	espn.sportszone.com
Excite	http://corp.excite.com/
IntelliMatch	www.intellimatch.com
Interactive Search	www.isearch.com
Internet Culinary CyberCity	www.culinary.net
Jerusalem Post	www.jpost.co.il
Kejo.com	www.kejo.com
Kentucky Sights and Sounds	www.wkyt.com
Knight-Ridder Newshound	www.newshound.com
Mainichi Shimbun Newspaper	www.shinmai.co.jp
Match.com	www.match.com
Monster Board	www.monster.com
MSNBC	www.msnbc.com
New Century Network	www.newcentury.net
Newspager	www.newspage.com
Newshare	www.newshare.com
Ohio.com	www.ohio.com
Our Town Charlotte	www.charlotte-florida.com
Rent Net	www.rent.net
Reuters New Media	www.reuters.com

San Jose Mercury News	www.sjmercury.com
Souix City KTIV4	www.ktiv.com
The Boston Globe	www.boston.com
The Chicago Tribune	www.chicago.tribune.com
The Dallas Morning News	www.dallasnews.com
The Daily Register	www.adquest.com
The Farm Journal	www.farmjournal.com
The London Telegraph	www.telegraph.co.uk
The Los Angeles Times	www.latimes.com
The Minneapolis Star Tribune	www.startribune.com
The Nando Times	www.nando.net
The New York Times	www.nytimes.com
The Philadelphia Inquirer	www.phillynews.com
The Times of London	www.the-times.co.uk
The Wall Street Journal	www.wsj.com
The Washington Post	www.washingtonpost.com
The Washington Times	www.washtimes.com
Times News	www.times-news.com
Weather.com	www.weather.com
USA Today	www.usatoday.com
Virtual Job Fair	www.vjf.com
Virtual Wire	www.vw.org
Yahoo	www.yahoo.com

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IMAGE EVALUATION
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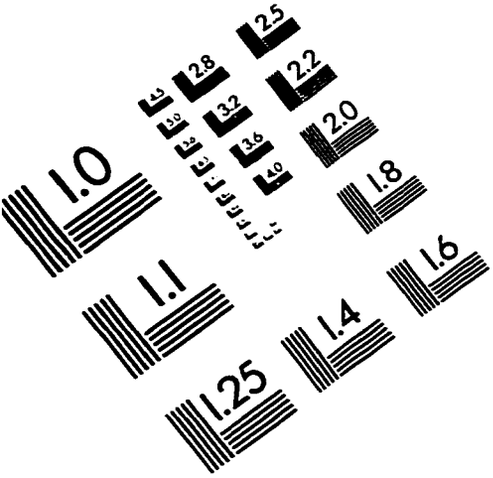

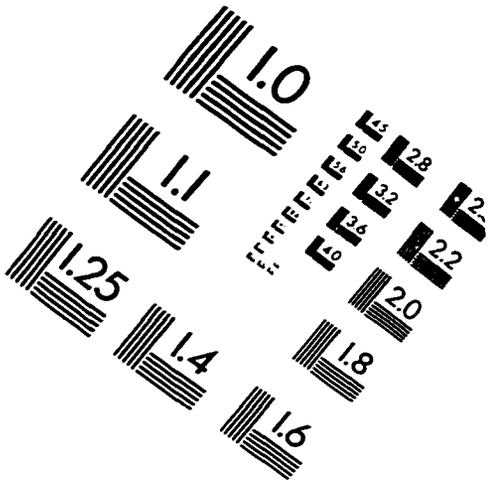

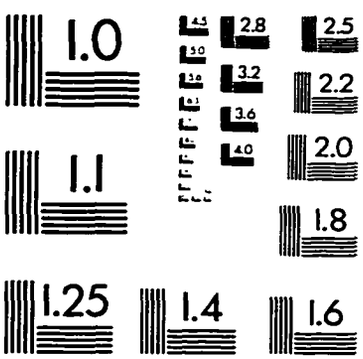

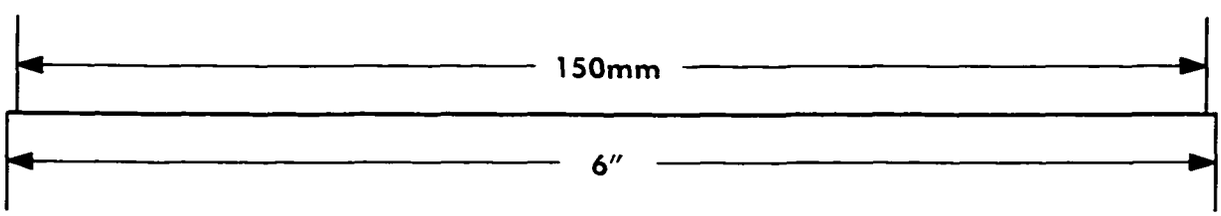

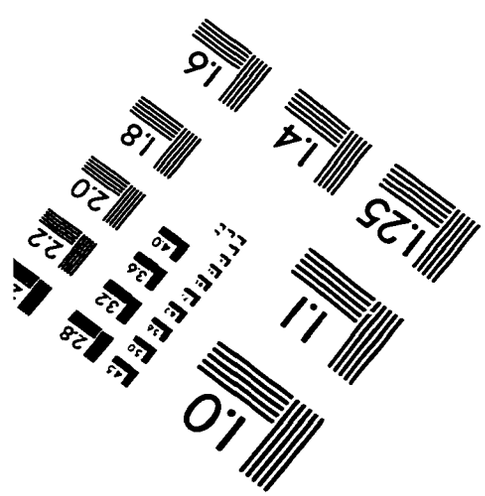

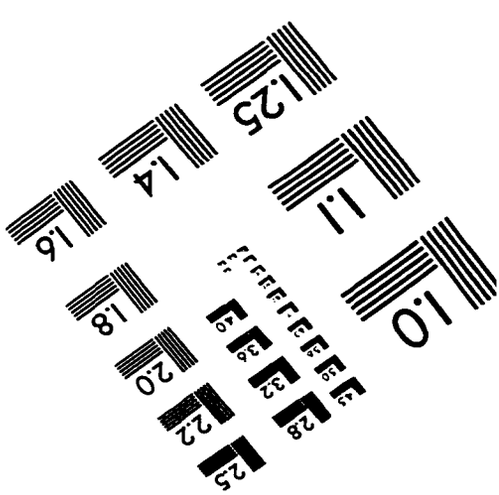

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