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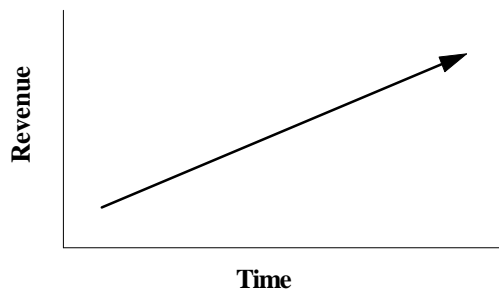
**Technology:
Internet/New Media**

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The Internet Advertising Report

**The Good News:
Most Charts in This Report Look Like This One**



- One of the big unknowns concerning the Internet is Internet-based advertising. Will it work? How big could it be? How much money will companies spend to deliver advertising messages to potential customers? Is it much ado about nothing? Or is the Internet spawning the next mass medium? And what's the likelihood of an Internet bandwidth meltdown, anyway?

- In our opinion, there are currently three good public-market proxies for the growth trends in Internet-related advertising: CNET, Yahoo! (which we don't cover), and America Online.

- In this report we describe the trends, the terminology, and the outlook for Internet-based advertising. Based on our review of the development of new media in the past, we conclude that, in time, the opportunity for advertising and direct marketing on the Web will be significant. Even so, there will be fits and starts along the way.

- See our report on CNET for more details on the financial operations of a leading advertising-based Internet company.

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The Internet Advertising Report

Overview

Background Thoughts

By our math, one Internet year equals three PC years (imagine going from the 386 chip to the Pentium Pro in 12 months!). Just one year ago, we spent a lot of hours describing exactly what an Internet browser did and why it was, well, *cool*. Now, a little over a year later, more than 46 million people are using Netscape's Web browsers. Clearly, we can move from great unknowns to mass consumption very quickly these days. It took the world 15 years to go from fewer than 1 million PC users to 150 million (1980–95) — we estimate that in no more than five years, the number of Internet users will jump from less than 1 million to about 150 million (1995–2000). Since 15 years divided by five years equals three years, one could say that it's kind of a dog's life to live at the Internet's pace.

Following our report of one year ago — Morgan Stanley's "The Internet Report" — we think that enough visibility has developed that we can now more closely examine one of the biggest unknowns in the Internet arena — advertising. In this report, we will try to answer a number of key questions: Will Internet-based advertising work? How big can it be? How much money will companies spend to deliver advertising messages to potential customers? Is there lots of excitement over a lot, or very little? Is the Internet spawning the next mass medium? And, as demand for In-

ternet services continues to surge, what's the likelihood of an Internet bandwidth meltdown, anyway? Based on our review of the development of new media in the past, we conclude that, in time, the opportunity for advertising and direct marketing on the Web will be significant. Even so, there will be fits and starts along the way.

Public Market Proxies for Internet Advertising Trends

In our opinion, there are currently three good public-market proxies for the growth trends in Internet-related advertising: CNET, Yahoo! (which we do not cover), and America Online. Watching these three companies should give investors a good feel for the health and direction of the Internet.

CNET, which went public in July 1996, is the first public company that is a pure play on Internet content. The company generates revenue largely from selling advertising for its Web sites, which focus on technology-related news and information. CNET supported \$2.7 million in September-quarter revenue from Internet advertising (up from zero in the previous year and up 54% on a quarter-to-quarter basis). Traffic (based on average daily page views) grew 13% quarter-to-quarter, to 1.5 million page views per day from 1.3 million in 2Q. CNET had 75 advertisers, up from 64 in 2Q, taking up 78% of available inventory in the period. The CPM (cost per thousand impressions) for CNET.COM remained constant at \$75 from 2Q to 3Q.

Yahoo!, a leading search engine and content aggregation site on the Web, went public in April 1996. The company supported \$5.5 million in 3Q revenue, all from advertising (up 1,815% from a year ago and 68% sequentially). Traffic grew 56% quarter-to-quarter, to 14 million daily page views from 9 million in 2Q. Yahoo! had 340 advertisers, up from 230 in 2Q. We estimate that, based upon its revenues, page views, and CPMs, Yahoo! was able to sell about 25% of available inventory in the quarter. We estimate that the average CPM for Yahoo! in 3Q was \$23, compared with \$20 in 2Q.

America Online, a public company since March 1992, is the largest Internet online service, with more than 7 million subscribers. In 3Q the company supported \$5.2 million in revenue related to advertising (up 845% year-over-year and 79% quarter-to-quarter). Traffic grew 15% quarter-to-quarter, to 92 million page views per day (including content, Internet, main menu, and member services). If we included AOL's People Connection (chat) and mail usage, average 3Q daily page views would have been near 166 million. AOL had 50 advertisers, up from 29 in 2Q, taking up 70% of available inventory in the quarter. Average CPM, across various AOL channels/pages, is currently around \$45.

As a potential proxy, on an annualized run-rate basis, AOL's advertising business is at nearly the same revenue run rate that MTV's advertising business was in 1983, or at close to half the advertising revenue run rate of the entire cable industry in 1980. In 1983, MTV generated \$25 mil-

lion in advertising revenue; in 1996, MTV (plus VH-1) should garner over \$400 million in ad revenue. We think it's important, as well as symbolic, that AOL recently hired Bob Pittman, an early pioneer in the cable industry (and founder of MTV and Nickelodeon), to run AOL Networks.

For now, we are using advertising trends for CNET, Yahoo!, and America Online to gauge market growth. We like these as proxy companies for several reasons: 1) Based on usage, they are leaders in their spaces — content, search, and online, respectively; 2) they have “skin in the game” — if these companies don't generate revenue from advertising they will have big problems; and 3) general market data in emerging or fragmented markets can be suspect; in other words, we'll take Intel as a proxy for PC unit growth, thank you, and for now we like such companies as CNET and America Online for online/Internet advertising. (In this report, we use the terms “online,” “Internet,” and “Web” interchangeably, as do most people nowadays, although there are technical differences.)

In aggregate, these three so-called Internet advertising “leaders” generated a puny total of \$13 million in Internet-related advertising revenue in 3Q. None of these companies is operating at a profit — cash burn in this area is expected to last for a while — and many advertising-supported Web sites are expected to fail. Heretofore, the advertising model on the Web simply has not worked. Nonetheless, these are early days, and we believe that some big winners in this space will emerge, in time.

An Internet Portfolio

For investors, Morgan Stanley's Internet investment approach continues to focus on a portfolio of companies (Table 1): *Internet infrastructure* companies, such as Cisco, Cascade, Ascend, and US Robotics (followed by George Kelly, Neil Danzger, and Chris DePuy); *Internet software* companies, such as Netscape and Microsoft; and *Internet content/aggregation* companies, such as America Online (Microsoft also fits here). We believe that rounding out an Internet portfolio with certain emerging companies that rely on *Internet advertising*, such as CNET, makes sense.

We have some observations about this portfolio approach. First, these stocks, in general, have performed well, and we believe any investment in the current stock market is a market call as much as a stock call. Second, Internet advertising is still in the very early stages and, in our opinion,

Table 1

Morgan Stanley Technology Research Recommended Internet Stock Portfolio

	Price (12/6/96)	1996 YTD Return	Mkt. Cap. (\$B)	Mkt. Cap./ C1997E Rev.	P/E C1997E
America Online	\$39	4%	\$4.3	2.5	NM
Ascend Comm.	69	70	8.8	9.5	47
Cascade Comm.	68	199	6.6	11.5	60
Cisco Systems	65	74	43.9	5.7	27
CNET	21	31*	0.3	8.3	NM
Microsoft	76	73	98.3	9.7	37
Netscape	58	(17)	5.3	10.0	105
US Robotics	74	69	7.1	2.2	21
Mean		63			

* CNET's public offering was on July 1, 1996, at \$16 per share.
America Online, CNET, Microsoft, and Netscape are covered by Mary Meeker. Ascend, Cascade, Cisco, and US Robotics are covered by George Kelly, Neil Danzger, and Chris DePuy.
E = Morgan Stanley Technology Research Estimate.

business-model viability (for relevant companies, America Online and CNET) will become clearer in mid-1997. Third, investors in the rapidly emerging, and rapidly changing, Internet space must have a high-risk profile, must be selective, and must be nimble.

Internet Advertising — Small but Mighty

Advertising revenue in the Internet space has been small (Figure 1) but growing rapidly (Figure 2). According to 3Q data from Jupiter Communications' AdSpend report, the annual revenue run-rate for Web advertising is \$264 million (in comparison, cable industry ad revenue in 1982 was \$230 million and is expected to top \$6 billion in 1996). Further, Jupiter estimates that 1996 Internet-based advertising (including online services like America Online and Web-based "push" services like PointCast) should be over \$300 million, up from \$55 million in 1995.

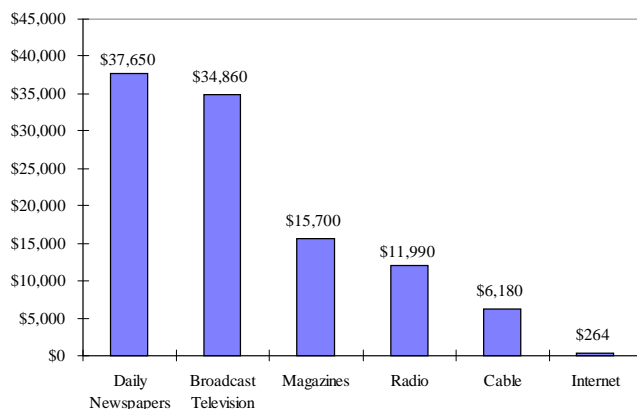
While small, the Internet's revenue ramp is fast. It was only about a year and a half ago that crazy little Netscape supported \$14 million in quarterly revenue — the company just printed \$100 million in revenue for 3Q96. So, things move quickly in the Internet world. If advertising on the Web works, then it makes sense that it will lag core Internet growth but should, on a relative basis, ramp just as rapidly.

By its very nature, advertising is an inexact science. Companies spend millions of dollars on advertising and advertising research and, when push comes to shove, have a difficult time proving the benefit of the effort. As retailer John Wannamaker once said, "Half the money I spend on advertising is wasted, and the trouble is, I don't know which half." Anyway, ads should be for TVs, radios, newspapers, magazines, envelopes, or towed by planes at the beach, right? Did the Fairchild Eight or Steve Jobs ever envision banner ads floating on PCs in the workplace? Probably not.

So we were a little suspicious about this ad stuff, initially. But our spreadsheets, Internet companies' "forward looking" statements, our Web-weary eyeballs, and our growing number of new media contacts in advertising and corporations have been telling us that the momentum is strong. We like momentum! If past is prologue, when a new medium emerges, advertising opportunities become significant — especially when a new *mass* medium is created.

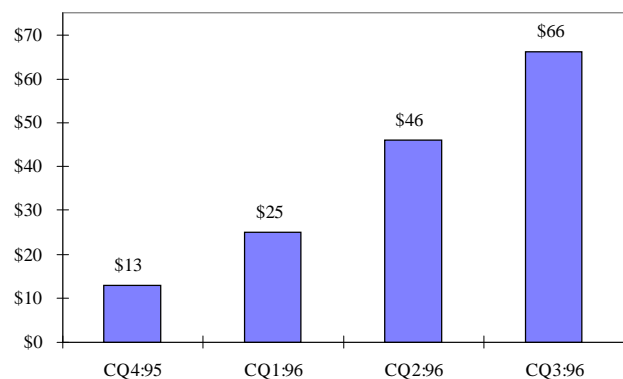
We define a mass-communications medium as communication from one person or group of persons through a transmitting device (a medium) to a large audience or market. And, in looking at the evolution of other mass media, one can draw corollaries with the early stages of the Internet's development.

Figure 1
1996E Advertising Revenue for Various Media
(\$ Millions)



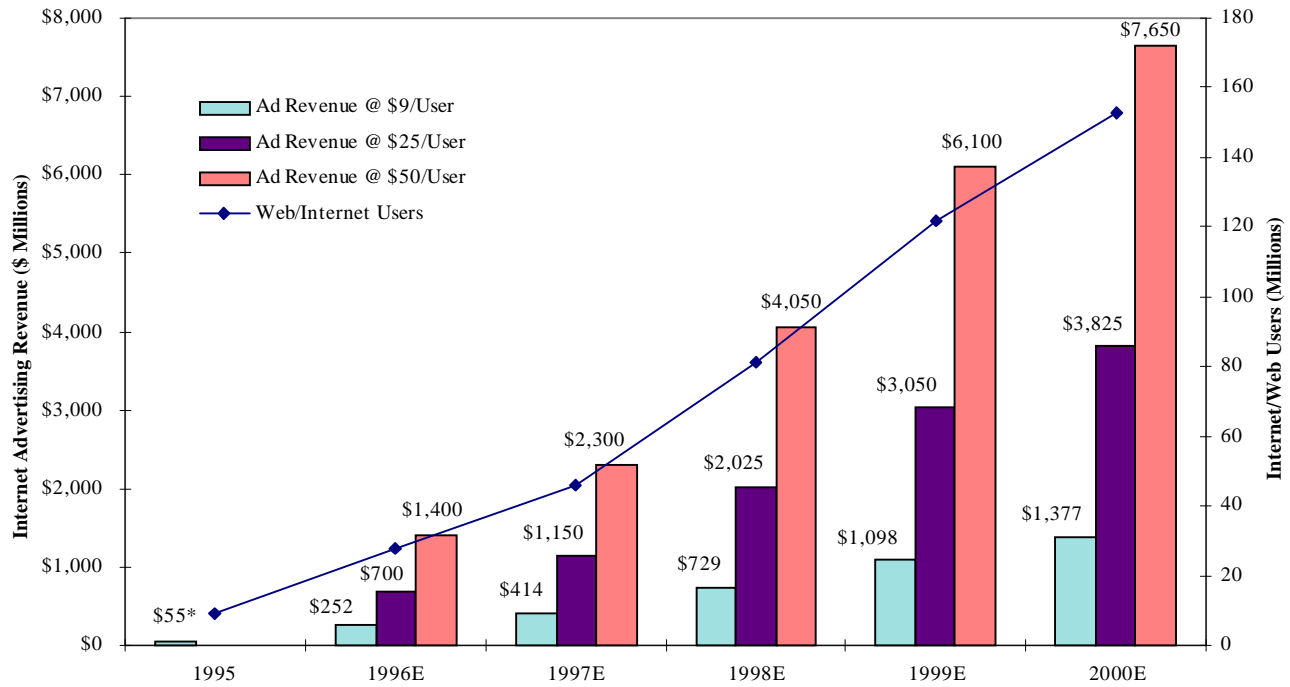
Source: Veronis, Suhler Associates, Paul Kagan Associates, Jupiter Communications. (Internet revenue estimate based on annualized run-rate of industry's 3Q96 revenue of \$66 million).

Figure 2
Internet Advertising Revenue Growth by Quarter
(\$ Millions)



Source: Jupiter Communications.

Figure 3

Estimated Web Users vs. Advertising Revenue, Using Various Steady-State Assumptions, 1995–2000E

Source: Morgan Stanley Technology Research.

* 1995 contains actual revenue, as reported by Jupiter Communications.

E = Morgan Stanley Technology Research Estimate.

We have taken a pass at potential growth rates for Internet advertising (Figure 3). Extrapolating current advertising spending rates per Web user (of \$9) to the year 2000 with an estimated 152 million Internet users) implies that Web-related advertising could become a \$1.4 billion business in 2000. If we tweak the spending rate per user to \$25, we get to \$3.8 billion in annual revenue, and it's easy to ramp up the per-user spending. In our opinion, these assumptions may prove to be conservative. For example, the average amount spent in four of the top five mass media is \$281 per user annually, so it seems like there could be lots of upside to our Internet estimate. The bottom line, though, is that it's still too early to tell which scenario will play out — although, for now, things are looking good, feeling good, and we are bullish about the growth of advertising on the Web.

Details of our analysis follow — see pages 2-3 and 2-4. As a sanity check, we have compiled similar historical data for

other media (newspapers, magazines, radio, broadcast, and cable TV) in Chapter 9.

Just Give Those Ad-Types Some Eyeballs and Ears

To us, the Internet potentially represents the creation of the greatest, most efficient distribution vehicle in the history of the planet. In time, an e-mail address will be as common as phone numbers are today. History has taught us that changes in the distribution of goods and services create substantial business opportunities for deft companies. With the Internet, which offers ubiquitous points-of-sale, advertising in time will become, in effect, transactions, thus making the total business opportunity created by the Web quite substantial.

Advertisers will buy eyeballs and ears through any conduit or distribution vehicle that delivers a desirable audience — the opportunity to market goods and ideas gets advertisers stoked. And the direct, interactive marketing capability of

the Web is very intriguing to advertisers, compared with the hit-or-miss nature of broadcast marketing.

For example, a master marketer would get a lot more jazzed about putting up a billboard for the hot BMW Z3 roadster convertible in Woodside, Calif., than in Anchorage. However, that same marketer should get even more interested if a Web site (such as CNET, at www.cnet.com) can route advertisements to a demographic group that includes only males who are at least 35 years old, have household incomes in excess of \$100,000, live in California, and use Pentium PCs with Netscape Navigator — and then provide that demographic sample with a click-of-the-mouse option to visit BMW's site (www.bmwusa.com), view color animated images of the BMW Z3 roadster, take a virtual test drive (complete with roaring engine), view color options and price packages, and then click to the local dealer's site or to Auto-by-Tel (www.autobytel.com) to inquire about or buy the car at the best price (taking care of any hassles via e-mail). Further, that same marketer could get pretty excited about using agenting technology to find Web users who have expressed interest in BMWs in the past, and sending them HTML-rich e-mail about BMWs.

Here's a great Web marketing story: Cisco, the internet-working company, established a business-to-business commerce area (Cisco Connection Online) on its Web site five months ago and recently indicated that it has generated \$75 million in sales to date. These are huge numbers, and the company's products sell at prices ranging from hundreds to hundreds-of-thousands of dollars! Cisco believes its Web-related sales could reach a \$1 billion run-rate by July 1997 (upwards of 30% of its total sales). The efficiencies and gross margins that Cisco can achieve through selling on the Web can be pretty sweet — and, yes, it's keeping its customers happy and providing fast response time and round-the-clock service and support.

Advertising on the Web is not just about advertising and distributing messages. It's also about building customer relationships, building "cyber"-brands, providing customer services, generating electronic sales of goods and services,

efficiently delivering marketing messages to appropriate audiences, and creating mass customization and interactive/direct marketing.

At the same time, the onus is on the creators of Web sites to deliver audiences (eyeballs and ears) with compelling demographics to advertisers. Web publishers have to create information or content for their sites that will not only add new users but also keep the old ones coming back. Again, advertisers are simply buying space and time to nab eyeballs and ears, just as soap operas were created to sell detergent to housewives doing the ironing in the afternoon, while Monday Night Football was created to sell beer to couch potatoes in the evening. On the Web, one finds ads for Cisco routers on CNET, while the NFL has ads on ESPN SportsZone. Been there, done that? Yep.

In the history of the Web (which generally is said to have been born in March 1993 with the debut of the Mosaic browser), advertising usually has taken the form of banner ads, which emerged in late 1994. Since then, a Web advertising infrastructure has evolved; it includes companies that create ads, buy ads, sell ads, measure ads, and manage ads. Late 1996 marked the time when many advertisers shifted their Web advertising budgets from experimental status to advertising budget line items, along with magazines, radio, and TV.

Recently, *Advertising Age* indicated that 46 of the 100 top domestic advertising spenders have purchased Web advertising in 1996 and nearly all have corporate Web sites. The biggest issue for advertisers continues to be market size (while 28 million users is a big number, the user "traffic" is very scattered), followed by the compiling of statistics for measurement. Frankly, though, the measurement of advertising efficiency has always been weird science. In our view, the good news/bad news about the Web is that, in time, efficiency tracking and the measurement of computer-generated ads to users will become precise — and this may add to the confusion about the accuracy of "soft" advertising data in other media.

On the Horizon

As Internet advertising ebbs and flows over the next 12–18 months, the key events to look for, in our opinion, include:

- The launch of major Web-site sponsorships by corporate advertisers. Expect some excellent examples on AOL. The likes of Procter & Gamble and General Motors debut innovative Web advertising.
- A rise in the cross-promotion of Web sites in TV, print, and radio.
- An increase in cross-media events, like big TV ad campaigns launched simultaneously with Web events (recent examples are the Olympics, the NCAA College Basketball Tournament, and the Super Bowl).
- Appreciation of the emergence of cyberbrands (such as AOL, MSNBC, CNET, Yahoo!, and Motley Fool) becomes more pronounced.
- Web content continues to improve — more users get hooked and usage rises, with the best sites getting better.
- Improvements in Web-advertising creative — ads become more entertaining and useful. The competitive juices on Madison Avenue start flowing.
- An increase in advertising budgets devoted to online advertising — Web ad spending continues to support strong sequential growth.
- Several major Web publishers go out of business (or are acquired at low prices) due to high cash burn. Business models that work on the Web remain minorities, and Web publishers continue to scramble for new types of Internet revenue streams.
- The best Web sites remain inventory-constrained, subsequently limiting their revenue growth. CPMs rise for the best sites, but fall for the also-ran sites.
- Nielsen ratings continue to indicate that TV viewership, especially for the 18- to 34-year-old demographic, is falling due to rising online usage.
- Concerns about the reliability of Web ad-measurement tools continue to rise. Several major advertisers complain about poor response rates on the Web. Management tools/metrics improve.
- The impact of ad “filtering” software on ad delivery becomes a growing issue for Web publishers and advertisers.
- Complaints about Internet/online system breakage (slow response time and disconnects) continue to nag the industry.
- Online evolution analogies with cable become clearer (like the emergence of brands, channels, and networks), and the opportunity for direct marketing on the Web is supported by strong revenue growth from related companies.
- Web commerce companies, like Amazon.com and Cisco Connection Online, continue to show strong revenue growth.
- Mid-1997 (2Q–3Q) becomes a critical juncture for Internet advertisers — what is working and what is not working will be clearer.
- Post-Christmas Web-shopping data from the likes of www.llbean.com provide useful insights into consumer Internet buying patterns.
- Audio and chat begin to play an important role in Internet advertising and marketing.

Internet Breakage and Changing Business Models

One of the biggest issues facing the Internet as a whole this year and next is *breakage*. The Internet is overcrowded and capacity-constrained, and it can be trying, even impossible, sometimes to visit one’s favorite Web site. Even a “brief” technology meltdown (of Metcalfe-ian proportions), which cannot be ruled out, would likely cause dislocations in the growth for Internet-based advertising. In addition, FCC changes to local access charges could also have a negative impact. However, despite these worries, we believe that the organic demand for Internet services is so significant that the industry will just power through the problems, and what appear to be major dislocations of the

moment will, over time, barely appear as blips on the growth charts.

Another issue for the Internet is the impact of *changing business models*. We call many of the first round of Internet firms the Kamikaze companies. The most extreme companies, in our view, are Netscape and America Online. In late 1994, Netscape decided to throw a Hail Mary pass — in a quite unorthodox move, it began to give away its Netscape Navigator browser program for *free* via Web downloads. Within 24 months, Netscape had become the fastest-growing software company in history (based on first-year revenue), garnering in excess of 46 million customers. America Online has burned hundreds of millions in cash in

its quest to nab online subscribers — it now has more than 7 million customers, who pay on average \$17 per month for an annual revenue run rate of \$1.4 billion. Not bad, although the company's still burning cash.

The good news and bad news here is that being reckless or aggressive can be great for Internet companies, or awful! Changing business models, driven by Web-related trends, have caused companies to commit unnatural acts — like giving away products and sucking up increasing costs to fortify user bases — in the hope that, ultimately, customers will pay for the products or advertisers will support ongoing business efforts.

By Macromedia's own estimates, it has had 12 million downloads of its Shockwave product but no direct revenue to show for it. Despite having an awesome brand and a hugely successful magazine, investors balked at *Wired* magazine's online-related cash burn. PointCast (the Web-enabled PC screen saver) has negatively affected the growth rates for PC screen-saver king Berkeley Systems, but it is still waiting for advertising revenue to drive profitability. Intuit has reorganized and increased operating expenses in an attempt to tap the opportunity for Web-based financial services — a business that the company believes may not turn a profit for three years.

Our point here is simple: If advertising and transaction revenues on the Web don't ramp nicely, then lots more cash will be burned than generated — for lots of companies that appear to be strategically well positioned. It's noteworthy that in the magazine business, start-ups typically burn cash for three years and make-or-break in year three. In summary, the jury is still out on whether lots of Web sites can become financially viable through advertising support, but we believe that a select few will benefit from impressive traffic and eventually become quite successful.

Onward with the Report

In this report, we attempt to describe the trends, the terminology, and the outlook for Internet-based advertising. To update what we said in *The Internet Report*, in December 1995: "Two things are certain: Growth will be significant (in fits and starts) and investors will vacillate between riding the growth wave and worrying about risk/reward and

valuations; and companies, strategies, and the very structure of the market will change rapidly. When we first set out to write this report, we wanted it to answer all the questions about [advertising on] the Internet. The goal was impossible to achieve; by its very nature the Internet is chaotic and can only be described clearly in hindsight. Consider this report our puck on the ice at the beginning of a very long game."

For the purposes of our discussion, we have limited our analysis almost exclusively to the U.S. However, since about 40% of Web usage is outside the U.S., the worldwide business opportunity should be significant. For now, though, all of the highest-traffic sites are U.S.-based, as are most Internet advertisers.

Note: All Web page addresses in this report are simplified. For example, Microsoft's site would be listed as www.microsoft.com (which will work just fine with the latest versions of Netscape Navigator and Internet Explorer), rather than the more technically correct <http://www.microsoft.com/>.

Our outline for this report is as follows:

- 1) Assess the potential of the Internet as an advertising medium.
- 2) Who buys and sells Internet advertising?
- 3) Where are advertising dollars spent in traditional media? What's the value of an eye? Of an ear?
- 4) An update on Internet usage trends/forecasts.
- 5) The latest and greatest from some of the hottest Web sites.
- 6) Buzzword mania — the nuts and bolts of Internet advertising.
- 7) The whys and hows of advertising measurement.
- 8) How companies can succeed in Internet advertising.
- 9) A look at the histories of traditional media.
- 10) Emerging companies in the Internet advertising space.
- 11) A glossary of Internet advertising terms.
- 12) A time line history of Internet advertising.
- 13) Advertising data.
- 14) Rate card data.

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Chapter Summaries

Like *The Internet Report*, this document is a beast to read, so for the tired, the weary, and the sane, we offer the summary points from each chapter in the following pages:

Chapter 1: Assessing The Potential of the Internet as an Advertising Medium

- ◆ We believe that **Internet usage will continue to ramp** (it's a secular thing) and that **Internet-based advertising/marketing spending will continue to rise from a very low, early stage base**. This ramp in usage and ad support will not likely be smooth, as concerns related to bandwidth constraints, still relatively high PC costs, market-size confusion (consumer versus corporate users), and effective advertising asset allocation and measurement will ebb and flow.
- ◆ However, we posit that, in time, the **Internet could prove to be the next mass medium** and that users will embrace it, on a relative basis, faster than prior media (newspapers, magazines, radio, broadcast television, and cable television). So far, they already have. For now, though, the Internet's user base of an estimated 20–35 million pales in size compared with the “mass” media, which have hundreds of millions of users. But the base of PC users (nearly 165 million) bodes well for a rapid Internet ramp.
- ◆ **Advertising on the Web is not just about advertising and distributing messages. It's also about building customer relationships, building “cyber” brands, providing customer services, generating electronic sales of goods and services, efficiently delivering marketing messages to appropriate audiences, and creating mass customization and interactive/direct marketing.** The advertising opportunity on the Web is very different than it is for other media. Internet advertising is more robust than radio or television advertising. Through the Internet, users can receive very specialized information, offered in an intriguing way, with new and rich measurement opportunities (as good as direct mail, but without waiting for the post office).
- ◆ The **benefits of obtaining information and entertainment via the Internet** (such as interactive information when you want it, where you want it) **are just too compelling** (especially for the well-trained Generation X audience) **when compared with traditional media**. And if past is prologue, advertisers will find it tough to resist the opportunity to nab new eyeballs — that's what they exist to do.
- ◆ The trends in the evolution of traditional media indicate that there may be **similarities between the evolution of cable television programming and the Internet**. Successful media companies on the Internet will likely be those that build the best brands, “channel” expertise, and drive revenue from advertising and premium pricing models — America Online appears to be very well positioned here (the near-term trick will be for AOL to figure out how to generate positive cash flow, given its recent price changes). But it's important to note that many companies that attempt to use this model will likely fail, and consolidation will likely ensue.
- ◆ As new media have evolved, there have been several pervasive themes in their development: 1) **New technologies/changes** create new media opportunities and secular media changes; 2) **young visionaries** who understand all dynamics of the media (market, technology, and business) take huge bets and drive the new industries forward; 3) content drivers in new media can vary, but in time focus on the same themes; 4) as new media develop, **massive new franchises/brands and wealth are created**; 5) **advertising pays for a large chunk of the operating costs** for mass media; 6) **new talent/celebrities/brands** drive the success of new media acceptance; and 7) over time, **media properties are consolidated** and the best operations survive.

Chapter 2: Internet Advertising — Where the Money Is Today, Where It Might Be Tomorrow

- ◆ **The biggest advertisers on the Internet were also the biggest recipients of advertising revenue.** And in 3Q96, the **ten highest-grossing revenue sites accounted for 56% of total Web ad revenue.** As one might expect, the most trafficked sites on the Internet generate the highest advertising revenue.
- ◆ **As online media become more established, and more “eyeballs” start moving online, we look for the time spent per person online to also rise significantly.**
- ◆ Jupiter Communications estimates that **\$13 million in Web-based ad revenue was generated in 4Q95, \$24 million in 1Q96, \$43 million in 2Q96, and \$66 million in 3Q96.** That’s an average of 72% sequential growth.
- ◆ **Extrapolating the current advertising spending rate per Web user (of \$9) out to the year 2000** (with an estimated 152 million Internet users) implies that **Web-related advertising spending/revenue could be a \$1.4 billion business in 2000**, up from a current estimated run-rate of \$264 million (implying compounded annual growth of 52%). But, it’s reasonable to assume that advertising spending on a per user basis will rise as the medium grows and becomes better understood, so that **\$1.4 billion number could prove to be quite conservative.** We present other, more aggressive, assumptions in this chapter.
- ◆ **There is an inventory paradox on the Web.** While there is an enormous amount of available inventory on the Web in aggregate, the highest traffic sites have a limited amount of high-traffic inventory. This paradox can govern revenue growth for the Web in aggregate by keeping CPMs low and for the highest traffic sites in particular by keeping CPMs high, but with limited space.
- ◆ This chapter also takes a look at some of the hot online channels.

Chapter 3: Where Are Advertising Dollars Spent in Traditional Media? What’s the Value of an Eyeball or an Ear?

- ◆ **Media usage is staggeringly high, and advertising support of media has been, and should continue to be, the major component of media company revenue streams.**
- ◆ In 1995, the average American watched TV for 1,575 hours, read newspapers for 165 hours, and used consumer online and Internet services for 7 hours (average use for an America Online user is 100 hours per year and rising — this is active use, as opposed to the passive use of other media). And the number of Internet users (estimated at 7% of the U.S. population and 0.4% of the worldwide population) is still quite small compared with the audiences for mass media.
- ◆ **Domestic annual measured media advertising spending (including television, radio, daily newspapers, and magazines) was \$100 billion in 1995** (broadcast television accounted for 32% of the total; cable television, 5%; daily newspapers, 37%; magazines, 15%; and radio, 11%).
- ◆ **Broadcast television and broadcast radio are 100% funded by advertising**, while 80% of newspaper revenue, 50% of cable network revenue, and 63% of magazine industry revenue are derived from advertising.
- ◆ **To date, advertising revenue in the Internet space has been small (but growing rapidly), and, according to Jupiter/AdSpend’s 3Q results, the annual revenue run-rate for Web advertising revenue is \$264 million.** Jupiter/AdSpend also notes that 1996 Internet-based advertising should be nearly \$311 million, up from \$55 million in 1995. Our bet is that, in time, successful Internet sites will support significant advertising revenue, and that the interactive nature of the Web could assist the rollout of transaction-based revenue and point-of-purchase sales for Web sites.

- ◆ **Traditional media buying has been based on CPMs (cost-per-thousand impressions).** So far, this model has been the standard advertising rate card pricing tool for Web sites. **While CPMs on the Web vary widely, on average they have been at higher levels than they are in most other media** due to: 1) the lack of accurate measurement of a potentially desirable Web audience; 2) the focused nature of Web advertisers (for now, mostly Internet, technology, and telecommunications companies); 3) the small supply of highly trafficked Web sites; and, to some degree, 4) the experimental nature (and relatively small size) of Internet ad budgets to date, which may be less price-sensitive at this stage. It is possible that direct-marketing nature of the Web could continue to put upward pressure on CPMs for the hottest Web sites.

One of the biggest problems that hot Web sites deal with is the creation of high-quality inventory — while millions of Internet users may come to the “front door” (a great place for ads and high CPMs), once users go through the door, they have sometimes thousands of different potential routes — subsequently, user traffic levels spread and diminish quickly, thus limiting high-traffic inventory on even the highest traffic sites.

- ◆ **Growth in Internet advertising may affect advertising growth in other media.**

Chapter 4: An Update on Internet Usage Trends/Forecasts

- ◆ **The Internet is growing at an unprecedented pace,** and, for now, most market data are suspect. There are numbers that seem solid, like the 7 million-plus America Online users (largely consumers) and the 46 million users of Netscape Navigator (although Netscape believes that 80% of those users are Intranet users, and frequency of usage “beyond the firewall” is tough to predict).
- ◆ We believe there **are currently 20–35 million Internet users (our point estimate is 28 million).** That’s a huge range, but big at both ends, nonetheless, and it’s especially compelling since we believe there were only about 8 million users one year ago. These users are a mix of both business people and consumers.
- ◆ We project **compounded annual growth in Internet users for the next four years of 53%,** and we believe that **more than 150 million people will use the Internet by the year 2000** — in fact, this assumption may be conservative, since there are already 150–200 million PC users worldwide.
- ◆ **Web demographics are compelling for marketers.**

Chapter 5: The Latest and Greatest from Some of the Hottest Web Sites

- ◆ In this section, we show **examples of how various content providers are approaching their online content offerings, in the hopes of gaining traffic/users, luring advertisers, and generating revenue in other ways.**

Chapter 6: Buzzword Mania — The Nuts and Bolts of Internet Advertising

- ◆ In this section we describe **the current offerings of the ever-changing array of Internet advertising products/methods,** including banner ads (the “billboards of the information superhighway”), buttons, key words, portals, hot corners, “offline” ads, sponsored content, targeted direct mail, and pay-per lead.
- ◆ We also discuss **the current state of, and potential for, other revenue models for the Web related to transactions and subscriptions.**
- ◆ In a new medium, there is a natural tendency initially to adopt the business models of those media that have preceded it (i.e., the traditional CPM model). **No doubt, Internet advertising dynamics/methods will change — Netizens are already calling for the “death of the banner” ad. The bottom line is that we think advertisers will shift spending to where they can find the best advertising/marketing value and get the most bang for the buck; agencies will strive to change or improve their**

offerings to make advertisers happy; and Web content providers will scramble to provide relevant demographics to advertisers. As technologies improve, the very nature of Internet advertising should change, too. We believe that America Online, thanks to its current features of the service (plus upcoming rollouts for members like streaming media, offline technology, and AOL Phone), will be a hotbed for innovation in online advertising.

Chapter 7: The Whys and Hows of Advertising Measurement

- ◆ **The principal element that drives advertising in all media is ratings.** And each medium uses a different unit to judge viewership.
- ◆ **Advertisers will not be totally comfortable advertising on the Web until confidence builds that Web advertising measurement is accurate and auditable by a reliable third party in a “Nielsen-like” way.** This relates to accurate information and tracking of site traffic and activity, advertisement delivery accuracy, and user response. Scores of new companies are emerging to create solutions for these problems.
- ◆ **The power of ratings was evident in the recent skirmish between TV broadcasters and Nielsen Media Research. Nielsen claims that TV lost viewers this fall, especially those in the 18-to-34-year-old demographic, to, yes, other pursuits, like online services and the Web.** The TV networks claim that the Nielsen ratings, which they have relied on for years to gauge viewership and revenue, are now unreliable and suspect — NBC and Fox are considering lawsuits against Nielsen, and the six commercial-broadcast networks could end up owing advertisers something like \$100 million for lost airtime. Meanwhile, the FCC has launched an investigation of the issue. We don’t have all the facts here, but we do know that America Online alone has seven million-plus subscribers (93% of whom are in the U.S., or 3% of U.S. households), who pay AOL an average of \$17 or more per month and, on average, use the service for eight hours per month. So, our instincts tell us that Nielsen is on to something. Coopers & Lybrand recently reported that 58% of Internet users indicate that their online time comes at the expense of watching television.

Chapter 8: How Companies Can Succeed in Internet Advertising

- ◆ Given the potential size of the opportunity for advertising on the Web, we think **companies that want to be successful in the Internet ad game need to prove there is a business model that works, determine growth factors, provide good feedback to advertisers, and make the right friends.**

Chapter 9: A Look at the Histories of Traditional Media. Yes, Been There . . . Done That . . .

- ◆ In a sentence: Been there, done that. **There have been five major media that have developed in the U.S. since the Pilgrims landed at Plymouth Rock. And while we haven’t spent a lot of time trying to figure out if Steve Case was separated at intellectual birth from Ben Franklin or William Paley, we think a few key points (articulated in Chapter 3) can be gleaned from a little journey through time to look at the evolutions of newspapers, magazines, radio, broadcast TV, and cable TV. And, yes, we conclude: Been there, done that.** In this chapter, we devote snippets of air time to five media time capsules.
- ◆ Our conclusions and analogies? In **Newspapers**, it’s easy to say that Will Hearst (of @Home Networks) was “separated at birth” from William Randolph Hearst (of The Hearst Corporation); in **Magazines**, Steve Case (America Online) was separated at birth from Henry Luce (*Time* magazine); in **Broadcast TV**, Marc Andreessen (Netscape) was separated at birth from David Sarnoff (American Marconi/RCA/NBC), while Halsey Minor (CNET) was separated at birth from William Paley (CBS), David and Tom Gardner (The Motley Fool) were separated at birth from Chet Huntley and David Brinkley (NBC’s “The Huntley-Brinkley Report”), and Ted Leonsis (AOL) was separated at birth from Brandon Tartikoff (NBC); in **Cable TV**, Steve Case was again separated at birth from a unique combination of John Malone (TCI) and Ted Turner (Turner Broadcasting), and, in the easiest call, Bob Pittman (AOL) was separated at birth from himself, Bob Pittman (MTV). Finally, Bill Gates (Microsoft) may end up being separated at birth from all of the above.

- ◆ The good news? We don't yet know who was separated at birth from Elsie the Cow, Captain Kangaroo, Mister Magoo, and Doris Day (much to our surprise, Martha Stewart doesn't have a Web site yet). And we can't wait to figure out who was separated at birth from George Burns and Gracie Allen.

Chapter 10: Emerging Companies in the Internet Ad Space

- ◆ There are **many existing and emerging companies, both public and private, capitalizing on the rapid growth of advertising on the Web.**
- ◆ We have identified four unique Internet market subsegments, comprising four major categories (besides the companies that create and operate Internet sites that are funded, in whole or in part, by advertising dollars):
 1. **Advertising Agencies and Web Site Developers** — Companies involved in the generation of Internet advertising campaigns, from campaign planning to media buying, as well as developers of sites that allow companies to promote their brands and develop an online consumer presence. Since advertising is essentially the promotion of the company and its products and services, on the Web this is achieved either through buying advertising space at other sites or through simply designing a site that serves the same purpose.
 2. **Market Research Providers** — In such a new field, advertisers, publishers, investors, and other interested parties are all looking for real data about what's happening, how big it is, and where it's going. These are companies that are tracking the evolution of Internet technology with a focus on its impact on business and certain industries, including the Web advertising arena.
 3. **Traffic Measurement and Analysis Companies** — To validate advertising media buys on the Internet, advertisers need to be able to justify and verify the investments they make. These companies fill that need by offering software and services to aid publishers in tracking traffic and executing advertising delivery on their Web sites.
 4. **Networks/Rep Firms** — These companies provide value-added services for Web advertisers and publishers alike, by brokering the distribution of advertisements and overseeing their delivery.
 5. **Order Processing and Support** — Companies that provide outsourcing services to Internet publishers and service providers.

Table 2

Public Internet Companies

Ticker	Offer Date	Split Adjusted IPO Price	Price 12/6/96	Discount/ Premium % to IPO	52 Week		Discount/ Premium % to the 52 -Wk		Current S/O(MM)	Current Mkt. Cap. (\$ MM)	
					High	Low	High	Low			
Infrastructure											
Data Networking/Telecommunication Equipment											
Ascend	ASND	5/12/94	2	69	3,338	75	29	(8)	139	128	8,832
Cascade	CSCC	7/28/94	2.5	67	2,595	91	20	(26)	230	99	6,633
Cisco	CSCO	2/1/90	1	65	6,400	69	32	(6)	104	676	43,940
US Robotics	USRX	10/1/91	3.5	74	2,025	106	33	(30)	129	96	7,104
							Avg	(17)	150	Total	66,509
Internet Security Equipment and Software											
Axent Technologies	AXNT	4/24/96	14	14	2	24	9	(41)	52	10	140
Check Point Software	CHKPF	6/28/96	14	22	55	36	13	(40)	64	33	726
CyberGuard (1)(2)(3)	CYBG	10/7/94	3	12	308	25	3	(51)	250	7	84
Cylink	CYLK	2/15/96	15	13	(16)	29	9	(56)	44	25	325
Dr. Solomon's	SOLLY	11/26/96	17	17	(3)	18	17	(7)	0	18	306
Milkyway (CN)	MKY-T	7/2/96	10	5	(50)	14	3	(65)	47	9	45
Raptor	RAPT	2/6/96	15	22	43	39	13	(45)	69	13	286
Secure Computing	SCUR	11/17/95	16	10	(41)	65	8	(85)	23	15	150
Security Dynamics	SDTI	12/13/94	4	36	797	55	21	(34)	69	34	1,224
Trusted Info Sys.	TISX	10/9/96	13	12	(6)	18	10	(33)	24	11	132
V-One	VONE	10/23/96	5	6	15	6	4	(10)	35	13	78
Vasco Data Security	VASC-U	8/10/90	0.06	4	7,192	11	4	(58)	9	16	64
							Avg	(44)	57	Total	3,560
Internet Service Providers											
BBN Planet/BBN Corp. (4)	BBN	1970s	N/M	22	-	48	16	(54)	43	21	462
Digex	DIGX	10/17/96	10.1	11	4	13	10	(18)	4	11	121
Hookup Communications (CN) *	HU-T	3/25/96	7.5	2	(76)	7	2	(76)	20	7	14
ID Internet Direct (CN) (5)(6) *	IDX-V	2/28/92	0.2	1	175	2	0	(77)	15	8	8
IDT	IDTC	3/15/96	10	13	28	18	7	(27)	89	21	273
iStar Internet Inc.(CN) (7) *	WWW-T	11/27/95	12	4	(63)	17	3	(74)	30	24	96
Metricom	MCOM	5/1/92	6	12	106	20	9	(37)	34	13	156
MFS Communications (9) *	MFST	5/24/93	11.9	47	295	52	22	(10)	110	222	10,434
MindSpring	MSPG	3/14/96	8	7	(14)	13	5	(47)	31	7	49
Netcom	NETC	12/15/94	13	17	31	68	13	(75)	36	12	204
OzEmail	OZEMY	5/28/96	14	10	(29)	17	6	(42)	65	10	100
PSINet	PSIX	5/1/95	12	12	1	29	7	(58)	80	40	480
Rocky Mountain Internet	RMI	9/5/96	3.5	2	(47)	3	2	(41)	13	4	8
Startronix	STNX	7/786	5.3	1	(86)	3	0	(77)	142	13	13
							Avg (9)	(54)	46	Total (9)	1,866
Total for Infrastructure (9)							Avg	(44)	67	Total	71,935
Software and Services											
Application Software											
Accent Software	ACNTF	7/21/95	4.7	7	57	35	6	(79)	16	12	84
ForeFront	FFGI	12/20/95	8	6	(28)	22	4	(74)	39	6	36
FTP Software	FTPS	12/16/93	4.5	8	82	39	5	(79)	68	34	272
MetaTools	MTLS	12/12/95	18	17	(8)	41	11	(60)	53	12	204
Microsoft (9) *	MFST	3/13/86	0.6	76	12,567	83	40	(8)	90	1,294	98,344
NetManage	NETM	9/20/93	4	7	85	33	5	(77)	38	43	301
Netscape	NSCP	8/8/95	14	58	313	87	35	(33)	68	91	5,278
Spyglass	SPYG	6/27/95	9	16	81	61	10	(73)	63	12	192
VocalTec	VOCLF	2/6/96	19	5	(75)	21	4	(77)	23	9	45
Voxware	VOXW	10/30/96	7.5	7	(8)	9	7	(21)	6	12	84
							Avg (9)	(64)	41	Total (9)	6,496
Enterprise and Related Software											
Business Objects	BOBJY	9/23/94	18	13	(29)	56	9	(77)	45	16	208
Verity	VRTY	10/6/95	12	18	53	55	9	(67)	99	11	198
Open Text	OTEXF	1/23/96	15	6	(60)	27	4	(77)	47	17	102
Visigenic	VSGN	8/8/96	7.5	15	97	18	8	(19)	90	13	195
							Avg	(60)	70	Total	703

Sources: Bloomberg, Securities Data Corp., NASDAQ Stock Market, latest quarterly report, prospectus, and Morgan Stanley Technology Research.

Table 2 (continued)

Public Internet Companies

Commerce Enablers											
Broadvision	BVSN	6/20/96	7	9	27	9	5	(3)	69	20	180
Connect	CNKT	8/14/96	6	7	19	10	5	(29)	39	19	133
Cybercash	CYCH	2/15/96	17	27	59	65	24	(58)	15	11	297
Edify	EDFY	5/2/96	15	17	11	56	13	(70)	24	16	272
OneWave	OWAV	7/1/96	16	10	(38)	22	10	(54)	1	15	150
Open Market	OMKT	5/22/96	18	17	(6)	42	12	(60)	48	28	476
Premenos	PRMO	9/19/95	18	10	(38)	42	7	(76)	50	11	110
							Avg	(50)	35	Total	1,618
Internet/Online Consulting and Development											
CKS Group	CKSG	12/14/95	17	21	25	45	18	(53)	18	13	273
Eagle River Interactive	ERIV	3/21/96	13	7	(48)	23	5	(70)	35	13	91
The Leap Group	LEAP	9/27/96	10	6	(41)	11	5	(44)	12	14	84
							Avg	(167)	65	Total	448
Total for Software and Services (9)							Avg	(58)	42	Total	9,265
Content/Aggregation											
Organization/Aggregation											
Excite	XCIT	4/3/96	17	14	(20)	21	5	(36)	173	16	224
Infoseek	SEEK	6/11/96	12	9	(25)	17	5	(45)	71	26	234
Lycos	LCOS	4/1/96	16	13	(17)	29	6	(54)	132	14	182
Yahoo!	YHOO	4/14/96	13	21	58	43	16	(52)	32	27	567
							Avg	(47)	102	Total	1,207
Online Services/Information Services											
America Online	AOL	3/92	1	39	3,788	71	22	(45)	74	110	4,290
CompuServe	CSRV	4/18/96	30	13	(57)	36	9	(64)	49	93	1,209
Individual	INDV	3/15/96	14	5	(64)	25	4	(80)	29	14	70
Infonautics	INFO	4/29/96	14	4	(69)	15	4	(71)	13	9	36
M.A.I.D.	MAIDY	11/24/95	15	14	(5)	21	9	(32)	63	23	322
Online Systems	WEBB	5/22/96	7	5	(31)	11	3	(59)	48	3	15
							Avg	(58)	46	Total	5,942
Publication/Static											
CMG Information Services	CMGI	1/25/94	8	15	92	49	9	(69)	68	9	135
Mecklermedia	MECK	2/11/94	3	19	533	25	9	(22)	124	8	152
							Avg	(45)	96	Total	287
Publication/Interactive											
CNET	CNWK	7/1/96	16	21	31	22	12	(3)	79	13	273
							Avg	(3)	79	Total	273
Transaction Processing and Financial Services											
CheckFree	CKFR	9/27/95	18	16	(12)	28	11	(43)	51	41	656
CUC International	CU	11/5/84	1.4	25	1,695	27	18	(8)	37	394	9,850
E-Trade	EGRP	8/15/96	10.5	12	10	14	8	(17)	39	29	348
iMall, Inc. (8)	IIML	1/24/96	2.8	3	16	16	2	(79)	49	57	171
Security First Network Bank	SFNB	5/23/96	20	13	(37)	45	10	(72)	23	8	104
							Avg	(44)	40	Total	11,129
Total for Content/Aggregation							Avg	(51)	58	Total	18,838
Total for all Internet Companies (9)							Avg	(50)	57	Total	100,038
Amex Internet Index	IIX	--	--	263		277	190	(5)	38		
MS Tech 35	MSH	--	--	401		415	266	(3)	51		

Note: Share data are taken from FactSet, prospectus or latest quarterly report

* Indicates data not included in market cap. figures

- (1) On 10/7/94 Harris Computer Systems Corp. was spun off from Harris Corp. and began trading publicly under (NASDAQ: NHWK) on 10/10/94.
- (2) The spin-off was in the form of a tax-free stock dividend to holders of Harris Corp. on the basis of one share in the new company for every 20 Harris Corp. shares.
- (3) On 6/27/96 Harris Computer Systems changed its name to Cyberguard (NASDAQ: CYBG).
- (4) BBN Corp. was founded in the 1940s. Its internet business began in 1995 (5) Changed name to ID Internet Direct from Arling, effective December 7, 1995
- (6) ID Internet Direct agreed to merge with Montreal based Totalnet Inc. to trade publicly under TotalNet name.
- (7) Created by merger of NSTN Incorporated and i*internet Inc. in August 1995
- (8) Began trading after merger with Nature's Gift, a previously publicly traded company
- (9) Microsoft and MFS Communications not included in average discount/premium to 52-week high/low or in market cap. figures (CN) = Canadian company

Sources: Bloomberg, Securities Data Corp., NASDAQ Stock Market, latest quarterly report, prospectus, and Morgan Stanley Technology Research.

Chapter 1: Assessing the Potential of the Internet as an Advertising Medium

Summary

- ◆ We believe that **Internet usage will continue to ramp** (it's a secular thing) and that **Internet-based advertising/marketing spending will continue to rise from a very low, early stage base**. This ramp in usage and ad support will not likely be smooth, as concerns related to bandwidth constraints, still relatively high PC costs, market-size confusion (consumer versus corporate users), and effective advertising asset allocation and measurement will ebb and flow.
 - ◆ However, we posit that, in time, the **Internet could prove to be the next mass medium** and that users will embrace it, on a relative basis, faster than prior media (newspapers, magazines, radio, broadcast television, and cable television). So far, they already have. For now, though, the Internet's user base of an estimated 20–35 million pales in size compared with the “mass” media, which have hundreds of millions of users. But the base of PC users (nearly 165 million) bodes well for a rapid Internet ramp.
 - ◆ **Advertising on the Web is not just about advertising and distributing messages. It's also about building customer relationships, building “cyber” brands, providing customer services, generating electronic sales of goods and services, efficiently delivering marketing messages to appropriate audiences, and creating mass customization and interactive/direct marketing.** The advertising opportunity on the Web is very different than it is for other media. Internet advertising is more robust than radio or television advertising. Through the Internet, users can receive very specialized information, offered in an intriguing way, with new and rich measurement opportunities (as good as direct mail, but without waiting for the post office).
 - ◆ The **benefits of obtaining information and entertainment via the Internet** (such as interactive information when you want it, where you want it) **are just too compelling** (especially for the well-trained Generation X audience) **when compared with traditional media**. And if past is prologue, advertisers will find it tough to resist the opportunity to nab new eyeballs — that's what they exist to do.
 - ◆ The trends in the evolution of traditional media indicate that there may be **similarities between the evolution of cable television programming and the Internet**. Successful media companies on the Internet will likely be those that build the best brands, “channel” expertise, and drive revenue from advertising and premium pricing models — America Online appears to be very well positioned here (the near-term trick will be for AOL to figure out how to generate positive cash flow, given its recent price changes). But it's important to note that many companies that attempt to use this model will likely fail, and consolidation will likely ensue.
 - ◆ As new media have evolved, there have been several pervasive themes in their development: 1) **New technologies/changes** create new media opportunities and secular media changes; 2) **young visionaries** who understand all dynamics of the media (market, technology, and business) take huge bets and drive the new industries forward; 3) content drivers in new media can vary, but in time focus on the same themes; 4) as new media develop, **massive new franchises/brands and wealth are created**; 5) **advertising pays for a large chunk of the operating costs** for mass media; 6) **new talent/celebrities/brands** drive the success of new media acceptance; and 7) over time, **media properties are consolidated** and the best operations survive.
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A Quick Backgrounder on Ad-Supported Media

New media tend to emerge in patterns. First, early adopters and experimenters try the new stuff; then, if acceptance ensues, thousands of business people flock to join in, creating a gold-rush mentality. Business failures and successes follow, and over time a few powerful franchises develop, such as *The New York Times*, *The Los Angeles Times*, and *The Washington Post* in newspapers; Time Warner and Meredith in magazines; Westinghouse/CBS/Infinity, Clear Channel Communications, and Evergreen Media in radio; ABC, CBS, NBC, and Fox in broadcast television; Cox, Tele-Communications, Inc., and Time Warner in cable-TV; and America Online in online services. Often, many of these companies are key players in multiple media, and major cross-selling/promotion also occurs.

We have studied the past to help us anticipate the future — and project who the winning media companies on the Internet will be — by tracing the evolution of mass media that are largely advertising supported. In the next few pages we quickly discuss the history of various media; a more extensive discussion can be found in Chapter 9.

Advertising Rules

Most of the \$175 billion in annual revenue (according to Veronis, Suhler & Associates) received by American mass media companies is advertising-based. Newspapers, television, and radio are supported by advertising. Magazines and some cable television networks receive more than 50% of revenue from ads, while revenue for companies in the movie, recording, and book businesses is related to direct sales. We note that advertising spending in the U.S. accounts for about 50% of the world's advertising market.

Advertising, in one form or another, has been around for countless years, but its style and delivery mechanisms change over time. Vendors have proven time and again that when a new medium that has the potential to reach the masses develops, they will try to quickly get in the game to find more eyeballs/ears to receive marketing messages — advertising has been essential to the development and proliferation of newspapers, magazines, broadcast radio, broadcast television, and cable television.

The value of advertising is summed up nicely by Agee, Ault, and Emery in their book *Mass Communications*: “Advertising is indelibly woven into the fabric of our soci-

ety. It is credited with raising our standard of living, lowering unit costs of mass-produced goods, providing information, and helping new firms enter the marketplace. Without advertising we would pay far more for most of the mass media that we enjoy.”

History Says the ‘Next’ Medium Always Must Offer Advantages Over the ‘Last’ Medium

Typically, new media have done some key things “better” than older media. For example, newspapers were better than town criers because the information was recorded; magazines were better than newspapers because they focused on national issues (and had cool pictures); radio was better than magazines because it was live and timely; television was better than radio because it was live, timely, and had cool pictures; and we contend that the Internet is better than television because it provides live, timely, viewable, and often storable information and entertainment when users want it, with the powerful addition of interactivity. While Internet video and images aren't nearly as nice as those on TV, if Andy Grove and Intel have their way, they will be soon: At the recent Comdex convention, Mr. Grove demo'ed a full-screen playback of the film “Twister” on a PC with a P6 using MMX technology. But it wasn't so many years ago that we were standing in a small room in San Jose marveling at jerky, postage-stamp-size video-in-a-window on a computer. Oh, that Moore's Law....

Usually, new media evolutions have initially been gaited by the deployment of appropriate “receivers.” The evolution of newspapers was gaited by low literacy levels and high product cost; magazine usage growth was gaited by the same issues, plus high distribution costs; radio and television usage growth was gaited by widespread deployment of high-cost radio and television receivers; cable television usage growth was gaited by the deployment of high-cost coaxial cable; and Internet growth is governed by the high-cost of PCs and the high-cost of high-speed Internet access (although low-speed access is reasonably priced).

Note, however, that one key difference regarding the Internet is that there are something like 165 million PC users worldwide, and many are lacking only a modem and a Web connection. In effect, the receivers (PCs) and infrastructure (phone lines) already exist — they simply need low-cost upgrades and, in time, increased low-cost bandwidth. And if network computers and Web TVs are successful (with

lower relative prices than PCs), these products could also help expand the Internet user base.

For advertisers, each new medium has offered new opportunities — newspapers offered local markets and audiences who were focused on making purchases; magazines offered both a narrower market focus (and thus a more segmented, targeted audience) and larger (even national) audiences; radio delivered real-time information (locally and nationally), replete with the ability to generate powerful creative (the art/design within an advertisement) through sound; and TV added pictures to the sound.

The Internet adds the element of interactivity and the ability to make purchases “in band.” It’s the only medium where a user can see an ad, inquire about the product/service quickly or in detail, make an immediate purchase, and even save time and money.

Common Themes in the Creation of New Media

As new media have evolved, several pervasive themes in their development have been seen:

1) *New technologies/changes create new media opportunities and secular media changes.* For example, the success of newspapers was assisted by the creation of, and improvements to, the printing press; magazines were aided by improvements in transportation and a reduction in postage costs; and radio and television were created by technological inventions. For the Internet, the fundamental technology change was the introduction of the Web’s graphical user interface, Mosaic, to a large base of PC users.

2) *Young visionaries who understand all dynamics of the new media (market, technology, and business) take great leaps and drive the new industries forward.* These visionaries include: Ben Franklin and John Pulitzer in newspapers; Henry Luce in magazines; David Sarnoff in radio; and David Sarnoff, William Paley, and Ted Turner in television. In the online world, early leaders that come to mind include Steve Case of America Online, Marc Andreessen of Netscape, Halsey Minor of CNET, and Jerry Yang and Dave Filo of Yahoo!.

3) *Content drivers in new media can vary, but, in time, they focus on the same themes.* News drove newspapers; education drove magazines; entertainment drove radio and television; movies (HBO) drove cable television; pornography

drove home video; and chat drove online. In time, media offerings cover the gamut: news, weather, sports, entertainment, and so on.

4) *As new media develop, major franchises/brands and wealth are created.* The five largest media companies in the world, Bertelsmann AG (with 1995 annual revenues of \$14 billion), The Walt Disney Co. (\$12 billion), Viacom Inc. (\$12 billion), News Corp. (\$9 billion), and Time Warner Inc. (\$8 billion), have all benefited significantly from the evolution of new media in the past.

5) *Advertising pays for a large chunk of the operating costs for mass media.* But broad-based skepticism about the benefits of advertising have been prevalent in the early days of every mass medium — and there is a lag between the time a medium reaches mass consumption and the point at which advertising revenue ramps dramatically (Figures 1-1 through 1-13). Low costs for consumers are key to the broad acceptance of a new medium — and advertising helps drive down costs.

6) *New talent, celebrities, and brands drive the success of new media acceptance.* For example, in the U.S.: Edgar Allan Poe, Nathaniel Hawthorne, and Margaret Bourke-White helped popularize magazines; Edward R. Murrow and Jack Benny helped radio; and Milton Berle and Ed Sullivan bolstered television viewership. In our view, early Internet talent is prevalent on sites such as Motley Fool, HotWired, CNET, Slate, and NetGuide.

7) *Over time, media properties are consolidated and the best operations survive.* Media tend to be ruled by oligopolies. Scale is important, and being No. 1 in a market is far more lucrative than being No. 2. In newspapers there is typically one leading paper in each major city. Time Inc. magazines receive about one-third of all magazine advertising. In each of the top 50 radio markets, the top three operators control an average 65% of revenues. Further, the top five radio operators in the U.S. control 20% of the \$12 billion-plus industry revenue, and the top 15 control over one-third (34%). In broadcast TV, ABC, CBS, NBC, and Fox rule. In cable television, there is usually one leading brand per category; for example, MTV owns music, ESPN owns sports, and CNN owns news. In the online world, AOL has most of the customers.

In media, a few brands typically lead each category, but a few companies tend to own leading brands across media. We believe that low barriers to entry for generating Internet content initially will allow for many more players to produce content in the same genre. However, given the efficiencies that media buyers derive from purchasing through larger players, the additional power that a strong brand affords them, and the prohibitive cash burn of many of the Internet content providers to date, we expect eventual consolidation of properties and brands for Internet companies as well.

In our view, for now, the companies in the best position to be media consolidators on the Web are America Online and Microsoft — thanks to AOL and Windows, respectively. These companies are in the unique position of being

The Historical Precedent for Media Consolidation

“Media coagulates; it doesn’t disaggregate.”

- Top 25 newspapers account for 88% of all circulation.
 - Only 31 magazines generate more than \$200 million; Time Inc. represents 30% of advertising market.
 - Only four TV networks; two are upstarts.
 - Only 20 real cable network brands; only two are generating in excess of \$1 billion in revenues.
 - Five MSOs with 3 million or more cable customers.
 - All cable original-content brands share common characteristics:
 - Associated/owned by distributors/MSOs
 - Own multiple networks for cross-promotion
 - Offer national and local ad buys
 - Rely on multiple revenue streams; no cable network
- would be profitable relying solely on advertising
- Even when circulation slows, advertising spending increases
 - Entrepreneurial talent with access to cash

Source: America Online.

“dashboards” and offering simplicity and branding to the Web. And they have the opportunity to generate revenue from multiple sources, including advertising, royalties, merchandising, transactions, and access fees.

High and to the Right:

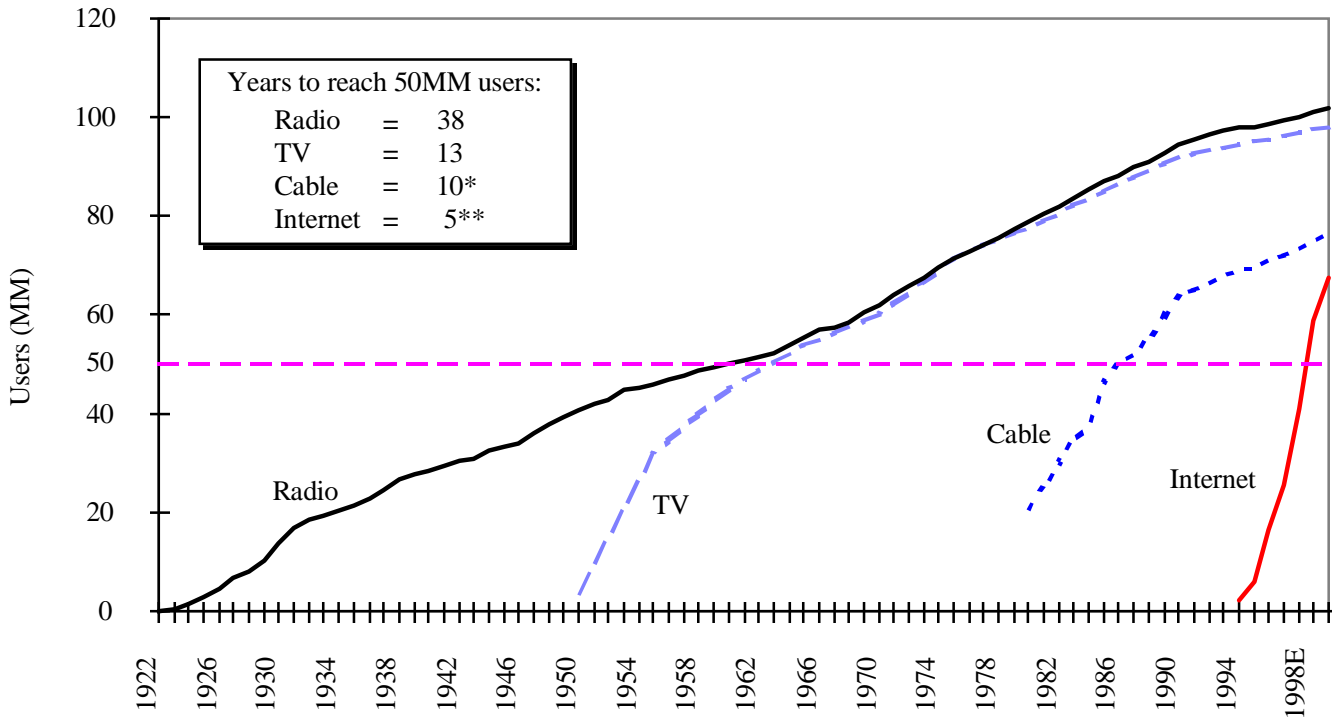
Growth in Advertising Revenue in Media

McCann-Erickson has a wonderful database of info on the growth of advertising revenue in various media. The following charts, which are based on those data, look like stocks we wish we had owned! What can be learned from these charts? Well, advertising can be a very good thing, and it has grown rapidly with media user growth. Indeed, if Internet usage does scale to the masses, McCann-Erickson may need to add a new ad chart to its collection (see our hypothetical pass at this on pages 4 and 29). It is worth noting that, while these charts don’t seem to display growth bumps along the way, such bumps certainly existed! (The data contained in these charts are actual revenue and have not been adjusted for inflation.) In addition, with the exception of cable, advertising growth tended to lag subscriber growth by a wide margin in the early days of evolution of new media. Content came first, followed by subscribers, and only then followed by advertising revenue. Arguably, cable experienced less lag because, by the time it rolled out, advertisers were savvier about the evolution of new media (a positive note for Internet companies). In addition, the measurements and standards for the medium (TV) had already been established and simply had to be applied to the new form. On the flip side, though, the early cable pioneers attest that generating advertising revenue was not nearly as easy as the graphs imply (a sobering note for Internet companies).

Finally, high operating expenses were required to build the infrastructure for radio and television — these builds occurred well before the advertising revenue was generated — not dissimilar to what we see with the Internet today. The good news for the Internet is that the basic infrastructure is in place: PCs, modems, data networking, phone networks, satellites, CATV networks, cash networks, and paging/cellular networks.

Figure 1-1

Adoption Curves for Various Media — The Web Is Ramping Fast



Source: Morgan Stanley Technology Research. E = Morgan Stanley Research Estimate.

* We use the launch of HBO in 1976 as our estimate for the beginning of cable as an entertainment/advertising medium. Though cable technology was developed in the late 1940s, its initial use was primarily for the improvement of reception in remote areas. It was not until HBO began to distribute its pay-TV movie service via satellite in 1976 that the medium became a distinct content and advertising alternative to broadcast television.

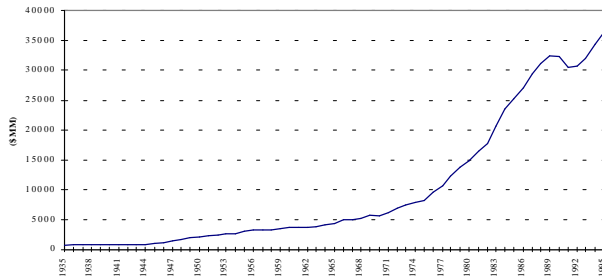
** Morgan Stanley Technology Research Estimate.

Figure 1-1 shows the adoption curves for several key media (radio, TV, cable, and the Internet). Although these numbers are not adjusted for population growth, it is clear to us that the adoption rates for new media have accelerated over time — TV was faster than radio, cable came on even faster

(despite the new infrastructure it required that previous broadcast media did not), and we believe that the Internet has surpassed all of these in its rate of adoption. And when adoption of a new medium has been faster, the flow of advertising revenues has increased more quickly.

U.S. Newspapers

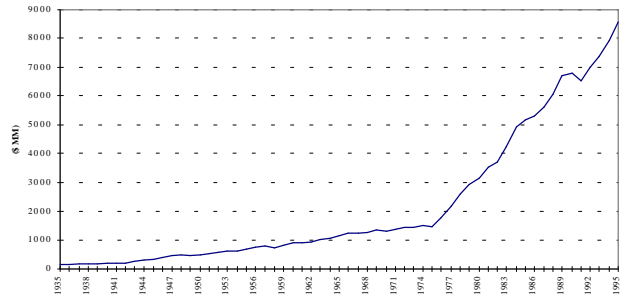
Figure 1-1
U.S. Newspaper Advertising Revenue, 1935–95*



Source: McCann-Erickson.
 * Data not adjusted for inflation.

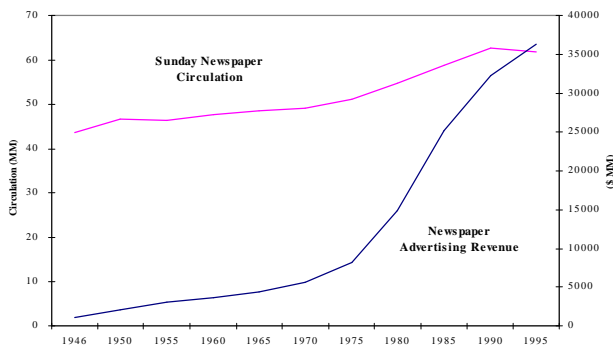
U.S. Magazines

Figure 1-4
U.S. Magazine Advertising Revenue, 1935–95*



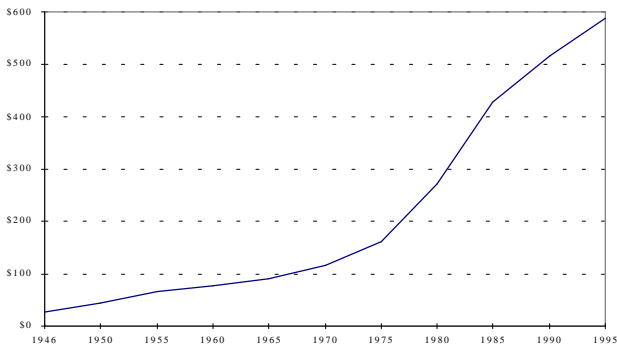
Source: McCann-Erickson.
 * Data not adjusted for inflation.

Figure 1-2
U.S. Sunday Newspaper Circulation Vs. Advertising Revenue, 1946–95*



Source: McCann-Erickson, Newspaper Association of America.
 * Data not adjusted for inflation.

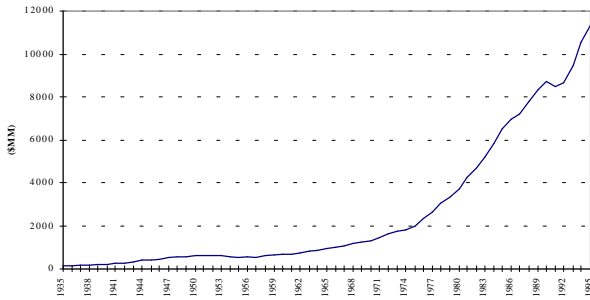
Figure 1-3
U.S. Newspaper Advertising Revenue Per Sunday Newspaper Circulated, 1946–95*



Source: McCann-Erickson, Newspaper Association of America.
 * Data not adjusted for inflation.

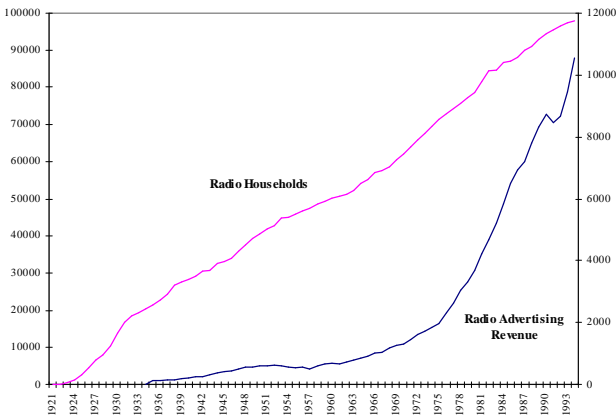
U.S. Radio

Figure 1-5
U.S. Radio Advertising Revenue, 1935–95*



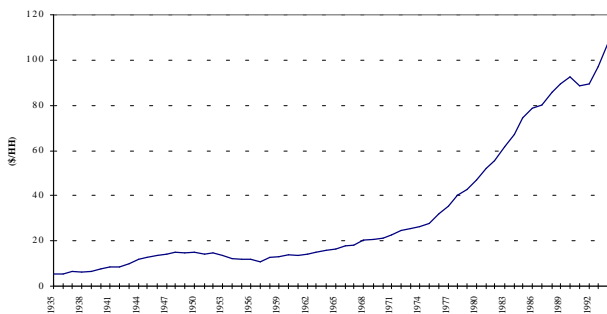
Source: McCann-Erickson.
 * Data not adjusted for inflation.

Figure 1-6
**U.S. Radio Households (1921–95)
 Vs. Advertising Revenue (1935–95)***



Source: McCann-Erickson.
 * Data not adjusted for inflation.

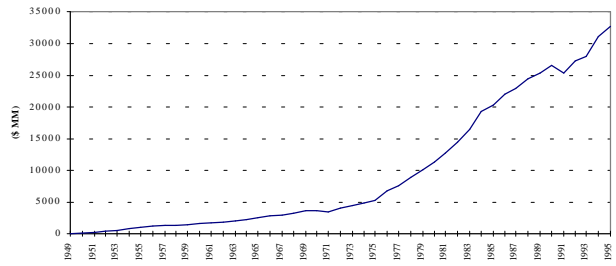
Figure 1-7
**U.S. Radio Advertising Revenue
 Per Household, 1935–95***



Source: McCann-Erickson, TV Dimensions '96.
 * Data not adjusted for inflation.

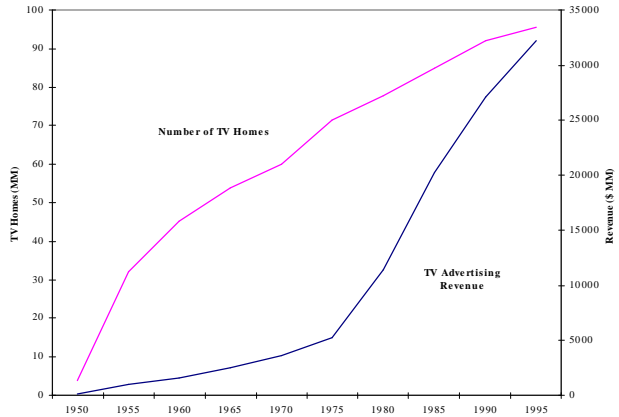
U.S. Broadcast Television

Figure 1-8
U.S. Broadcast Television Advertising Revenue, 1949–95*



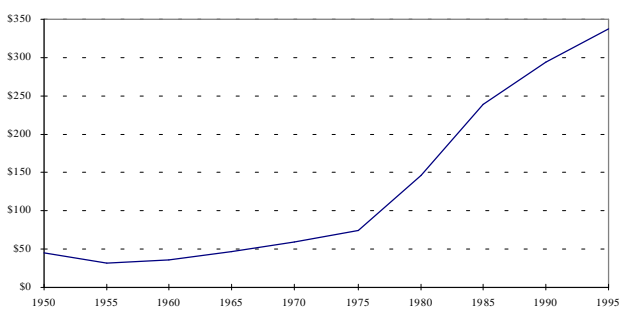
Source: McCann-Erickson.
 * Data not adjusted for inflation.

Figure 1-9
**U.S. Broadcast Television Households
 Vs. Advertising Revenue, 1950–95***



Source: McCann-Erickson, TV Dimensions '96.
 * Data not adjusted for inflation.

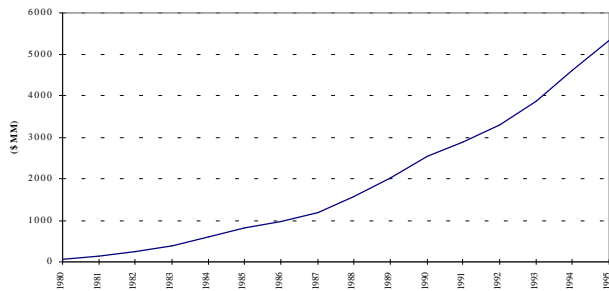
Figure 1-10
**U.S. Broadcast Television Advertising Revenue
 Per Household, 1950–95***



Source: McCann-Erickson, TV Dimensions '96.
 * Data not adjusted for inflation.

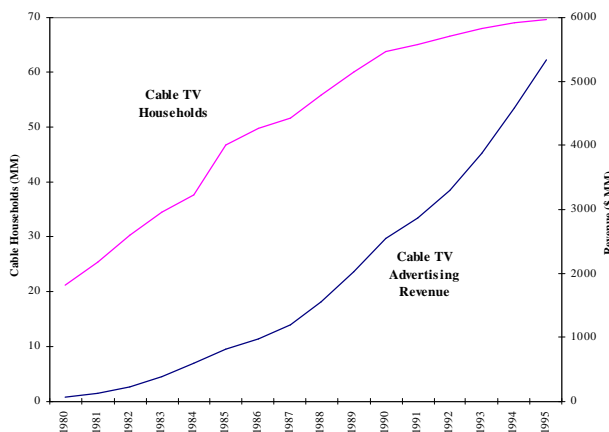
U.S. Cable Television

Figure 1-11
U.S. Cable Television Advertising Revenue, 1980-95*



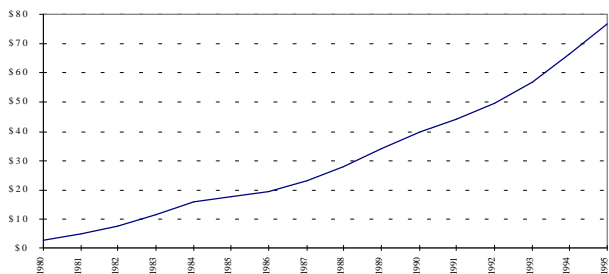
Source: Paul Kagan Associates.
 * Data not adjusted for inflation.

Figure 1-12
U.S. Cable Television Households Vs. Advertising Revenue, 1985-95*



Source: Paul Kagan Associates.
 * Data not adjusted for inflation.

Figure 1-13
U.S. Cable Advertising Revenue Per Subscribing Household, 1980-95*



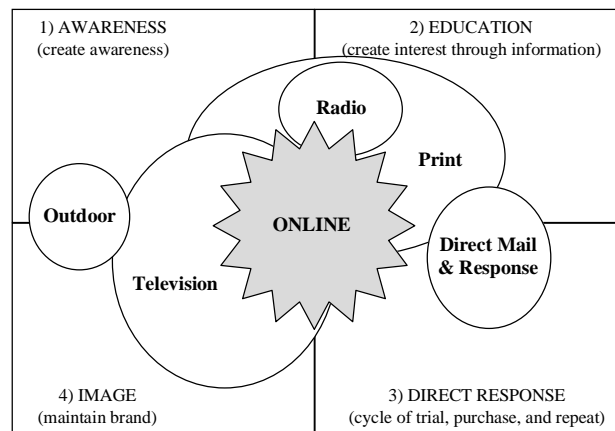
Source: Paul Kagan Associates.
 * Data not adjusted for inflation.

Each Medium has Pros and Cons for Advertisers

Advertisers define objectives for their campaigns and then overlay the particular strengths and weaknesses of each medium in deciding which, and how much of each, medium to buy (Figure 1-14). Television, for example, offers strong image advertising (through its ability to deliver life-like audio and video) and brand awareness (through its extensive reach). However, other media are more effective in educating and disseminating information about a new product (such as print) or generating direct user response (direct mail). Thus, when introducing a major product, an advertiser might choose TV to build awareness and a series of newspaper ads to provide additional product information, details on where and how to purchase the product, any promotions or discounts, and the like. Other media can be used to supplement and reinforce these messages, such as outdoor billboard ads or radio.

To accomplish the particular objectives of each campaign, advertisers must consider the appropriate level of reach (the percentage of an audience exposed to at least one ad impression over a give period of time) and frequency (how often each person or home is exposed to a message). Figure 1-15 charts the effectiveness of traditional media in delivering each. Due to limited Internet penetration (relative to TV, radio, and so forth) and the large and growing number of online “channels,” Internet advertising cannot yet provide the reach of these other media. It can, however, deliver a high degree of frequency, especially on sites with repeat/habitual users.

Figure 1-14
Advertising Objectives of Various Media



Source: Steve Goldberg, Microsoft Advertising Business Unit.

Although Internet advertising is still new, the medium has several qualities that make it an attractive vehicle for advertisers in achieving their objectives (Figure 1-14 and Table 1-1). It integrates many of the positive advertising elements of major media: visual impact (like TV), with a higher degree of attention from the active (versus passive) viewer with each impression; selectivity and segmentation (like radio and magazines, and it enhances these features with interactive capabilities); quick and accurate measurement; and users can be captured at the most opportune moments (when they are ready to purchase goods or services).

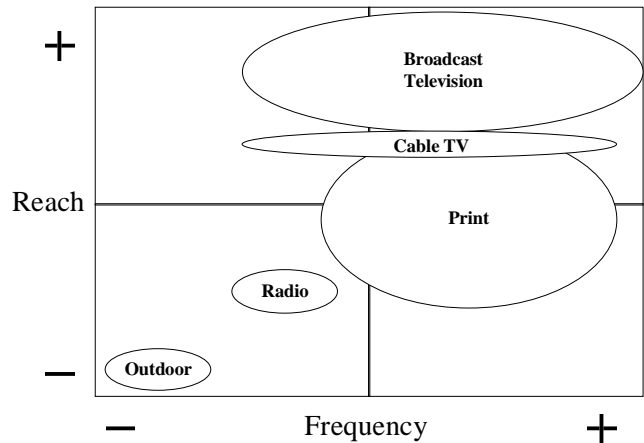
Other advantages for advertisers include: parallel delivery of an ad with the content a user is searching for, like a billboard for a restaurant along a highway (in TV, advertisements are delivered serially with content); continuous and global user access (at no extra cost); the ability to change creative almost immediately; and the opportunity to leverage continuous improvement in Web technology and tools to create compelling, interactive, and tailored ads to increasingly well-defined demographics.

The downside for Internet advertisers relates primarily to the unproven nature of the medium. Everything is in a state of flux. Additionally, the tools, measurements, and standards for the medium have not evolved enough to give advertisers the type of feedback they need to judge the return on their investments. The size of the market is subject to debate, and the means of understanding the reach and frequency of ad delivery are not yet available.

As these tools, methods, and standards mature, and as major advertisers start making sizable commitments to interactive campaigns, the role of advertising agencies, networks, and auditors as intermediaries should also grow. We have already seen the rise of several major players in this area (see our list of the players in the advertising space). We believe these interactive agencies must begin to

Figure 1-15

Reach and Frequency of Traditional Media



Source: Steve Goldberg, Microsoft Advertising Business Unit.

develop and drive real business models for pricing and delivery.

As the Internet grows, there should be ample room for many companies to grow. However, if, and when, we hit a soft patch in either spending or traffic (or both), companies in this young medium may get crunched. Pricing and total dollars spent may be squeezed, significantly affecting companies with business plans that depend on a continued steep ramp in ad spending. This sector is also vulnerable to a downturn in the economy, as such a cycle would cause advertisers to cut back first in secondary media in their ad budgets, including “experiments,” such as Web campaigns.

For now though, all signs look extremely positive for a continued growth in spending. Increasingly, advertisers are coming to realize that Web advertising offers higher awareness of their company, easy methods of information distribution (including speech and video presentations), improved ability to craft company image and brand, an immediate direct line between customers and staff, and reduced costs of performing all of these marketing tasks.

Table 1-1

Selected Advertiser Pros and Cons for the Major Media and the Internet

Medium	Pros for Generating Advertising Revenue	Cons for Generating Advertising Revenue
TV	<ul style="list-style-type: none"> • Intrusive impact — high awareness getter. • Ability to demonstrate product and feature “slice of life” situations. • Very “merchandisable” with media buyers. 	<ul style="list-style-type: none"> • Ratings fragmenting, rising costs, “clutter.” • Heavy “downscale” audience skew. • Time is sold in multi-program packages. Networks often require major up-front commitments. Both limit the advertiser’s flexibility.
Radio	<ul style="list-style-type: none"> • Highly selective by station format. • Allows advertisers to employ time-of-day or time-of-week to exploit timing factors. • Copy can rely on the listener’s mood or imagination. 	<ul style="list-style-type: none"> • Audience surveys are limited in scope, do not provide socio-economic demographics. • Difficult to buy with so many stations to consider. • Copy testing is difficult, few statistical guidelines.
Magazines	<ul style="list-style-type: none"> • Offer unique opportunities to segment markets, demographically and psychographically. • Ads can be studied, reviewed at leisure. High impact can be attained with good graphics and literate, informative copy. 	<ul style="list-style-type: none"> • Reader controls ad exposure, can ignore campaign, especially for new products. • Difficult to exploit “timing” aspects.
Newspapers	<ul style="list-style-type: none"> • High single-day reach opportunity to exploit immediacy, especially on key shopping days. • Reader often shops for specific information when ready to buy. • Portable format. 	<ul style="list-style-type: none"> • Lack of demographic selectivity, despite increased zoning — many markets have only one paper. • High cost for large-size units. • Presumes lack of creative opportunities for “emotional” selling campaigns. • Low-quality reproduction, lack of color.
Internet	<ul style="list-style-type: none"> • Internet advertisements are accessed on demand 24 hours a day, 365 days a year, and costs are the same regardless of audience location. • Accessed primarily because of interest in the content, so market segmentation opportunity is large. • Opportunity to create one-to-one direct marketing relationship with consumer. • Multimedia will increasingly make creative more attractive and compelling. • Distribution costs are low (just technology costs), so the millions of consumers reached cost the same as one. • Advertising and content can be updated, supplemented, or changed at any time, and are therefore always up-to-date. Response (click-through rate) and results (page views) of advertising are immediately measurable. • Ease of logical navigation — you click when and where you want, and spend as much time as desired there. 	<ul style="list-style-type: none"> • No clear standard or language of measurement. • Immature measurement tools and metrics. • Although the variety of ad content format and style that the Internet allows can be considered a positive in some respects, it also makes apples-to-apples comparisons difficult for media buyers. • Difficult to measure size of market, therefore difficult to estimate rating, share, or reach and frequency. • Audience is still small.

Source: *TV Dimensions '96, Morgan Stanley Technology Research.*

Many Media Companies Participate in Multiple Media

In this section, Doug Arthur, Morgan Stanley's publishing analyst, provides a look at the evolution and consolidation of various media companies as new media have been created.

From the days of the carrier pigeon (circa 1849) and the BBC to today's CNN and the bevy of online news operations, media content producers have continuously adapted or migrated to new forms of distribution. Convergence, or the ownership of multiple forms of media content and distribution, is a hot topic on the global media stage. Large content conglomerates are taking shape throughout the world, offering a wide assortment of products — everything from educational textbooks to big-screen movies — over a variety of media, ranging from print to satellite television to online. The same content is typically recycled or reformatted into new forms, with traditional revenue streams funding the start-up costs.

One notable example is Tribune's multimedia strategy in its home market of Chicago. In this market, Tribune started with what is now the city's dominant newspaper, the *Chicago Tribune* (1995 revenues of \$723 million and Sunday circulation of almost 1.1 million), which was founded in 1847. Over time, and before cross-ownership regulation negated such a move, Tribune developed what is now one of the top three TV stations in the market, WGN-TV, and the largest radio station in the market (also called WGN); more recently, Tribune has leveraged its brand name and news-gathering capabilities and developed

CLTV News in Chicago, a 24-hour cable channel that reaches 1.4 million homes. Finally, Tribune owns the local major league baseball team, the Chicago Cubs, which provides a major source of programming for most of its media outlets.

Of course there are numerous examples of unsuccessful migrations across media. Many of these have involved cross-border transactions, in which foreign media companies, in an attempt to enter a new geographic market, invest in a new media as well. One example is Matsushita's failed investment in MCA studios. Other examples include Gannett's attempt to leverage its massive position in the newspaper industry — more than 80 newspapers and *USA Today*, with total circulation north of 2 million — into a syndicated television news program "USA Today on TV." The program, developed in conjunction with GTG Entertainment, never reached the necessary audience levels required for even Gannett's own TV stations to carry it, and the company recorded a charge of more than \$50 million to shut it down.

While a variety of conclusions can be drawn from these few examples, we think simplicity, focus, and mining the nuggets of existing strong franchises and converting them into new or additional media should work — particularly if the core franchise can absorb and fund start-up costs for a lengthy period of time. We believe that Gannett's failure stemmed, in part, from the ambitious nature of a national rollout; in contrast, the built-in economies of scale in its home market have allowed Tribune to more easily cross into other media.

Chapter 2: Internet Advertising — Where the Money Is Today, Where It Might Be Tomorrow

Summary

- ◆ **The biggest advertisers on the Internet were also the biggest recipients of advertising revenue.** And in 3Q96, the **ten highest-grossing revenue sites accounted for 56% of total Web ad revenue.** As one might expect, the most trafficked sites on the Internet generate the highest advertising revenue.
- ◆ **As online media become more established, and more “eyeballs” start moving online, we look for the time spent per person online to also rise significantly.**
- ◆ Jupiter Communications estimates that **\$13 million in Web-based ad revenue was generated in 4Q95, \$24 million in 1Q96, \$43 million in 2Q96, and \$66 million in 3Q96.** That’s an average of 72% sequential growth.
- ◆ **Extrapolating the current advertising spending rate per Web user (of \$9) out to the year 2000** (with an estimated 152 million Internet users) implies that **Web-related advertising spending/revenue could be a \$1.4 billion business in 2000**, up from a current estimated run-rate of \$264 million (implying compounded annual growth of 52%). But, it’s reasonable to assume that advertising spending on a per user basis will rise as the medium grows and becomes better understood, so **that \$1.4 billion number could prove to be quite conservative.** We present other, more aggressive, assumptions in this chapter.
- ◆ **There is an inventory paradox on the Web.** While there is an enormous amount of available inventory on the Web in aggregate, the highest traffic sites have a limited amount of high-traffic inventory. This paradox can govern revenue growth for the Web in aggregate by keeping CPMs low and for the highest traffic sites in particular by keeping CPMs high, but with limited space.
- ◆ This chapter also takes a look at some of the hot online channels.

Advertising — The Big Spenders Spend the Big Bucks

The biggest advertisers in the U.S. are dominated by consumer products companies (Table 2-1). While several of these companies (such as Toyota and General Motors) have begun to dabble in advertising spending on the Internet, most Internet-based spending is generated by technology-oriented companies (such as Microsoft, Netscape, and AT&T).

Internet Advertising Spending — Oh, We Would Love to Extrapolate the Current Trends!

In 1995, the time spent using consumer online or Internet access services averaged about seven hours per person per year, according to Veronis, Suhler and Associates. Looking ahead, as online media become more established and as more “eyeballs” start moving online, we look for the time

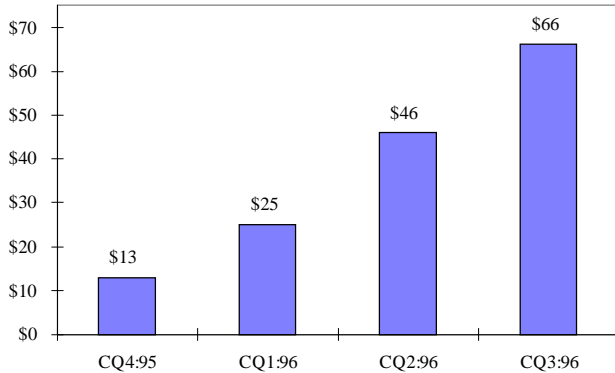
Table 2-1

U.S. Advertising Spending Leaders, 1995

Rank	Advertiser	Total U.S. Ad Spending (\$MM)
1	Procter & Gamble	\$2,777
2	Phillip Morris	2,577
3	General Motors	2,047
4	Time Warner	1,307
5	Walt Disney	1,296
6	Sears, Roebuck	1,226
7	Chrysler	1,222
8	PepsiCo	1,197
9	Johnson & Johnson	1,173
10	Ford Motor	1,149
11	AT&T Corp.	1,064
12	Warner-Lambert	979
13	Grand Metropolitan	951
14	McDonald's	880
15	Unilever NV	858
16	Kellogg	740
17	Toyota	733
18	Sony	674
19	Viacom	647
20	American Home Products	634

Source: Advertising Age.

Figure 2-1

Internet Advertising Revenue Growth by Quarter

Source: Jupiter Communications.

It took years for measuring techniques and standards to mature or evolve in other media, and although it may not take quite as long in the case of the Internet (nothing does), these techniques and standards are nonetheless still in the larval stages. One thing, however, seems certain — the Internet as a medium and an advertising vehicle is growing in significance. Though the number of eyeballs required to make it a profitable, viable medium for ad-based companies has not yet reached critical mass, it is getting there quickly. Jupiter Communications estimates that \$13 million in Web-based ad revenue was generated in 4Q95, \$25 million in 1Q96, \$46 million in 2Q96, and \$66 million in 3Q96 (Figure 2-1). That's an average of 72% sequential growth. (Though Jupiter's absolute estimates are inflated by 10% or more in comparison with the actual reported revenues of some companies, its methodology has been consistent over time and we believe it offers the best estimates of market size and growth currently available).

Internet advertising should experience seasonality similar to that observed in traditional media (as discussed in Chapter 3), where 1Q and 3Q are typically weaker quarters. The Jupiter results for 3Q96 showed a sequential increase of 43%, down from the 84% increase from 1Q to 2Q. We believe that this is in part due to the sluggishness of summer media buying, and that revenue growth will pick up again in the seasonally strong 4Q.

Anecdotally, Internet advertisers are confirming strong results. We believe that by mid-1997 (2Q and 3Q), appreciation of the potential size of the Internet advertising market opportunity will become more clear and will hit the mainstream.

Interestingly, in 4Q96, "sold out" became a common comment among the hottest Web publishers. As in all media, there is a finite amount of available/good inventory to sell to advertisers. And like the real-estate mantra of "location, location, location," advertisers want to be where the traffic is.

While the Internet appears to be the land of unlimited advertising space, as the hundreds of thousands of Web sites out there mean there are hundreds of thousands of pages, the traffic/eyeballs tends to fall off quickly as one clicks deeper into a Web site.

So, the hottest sites find themselves running out of "hot," highly trafficked inventory to sell. And they are moving quickly to create more areas or sites that they hope will also become high-traffic areas.

The good news? CPMs (or cost-per-thousand impressions delivered — the industry defines an impression as simply one "media exposure" to an ad) for the hot areas are stable, and even rising in some instances. Due to rising traffic at hot Web sites, advertiser buying patterns, and business seasonality, inventory is becoming more difficult for Web publishers to manage. In general, we believe that, over time (thanks in part to the ability to provide targeted delivery of ads), CPMs at the best sites will continue to experience upward price pressure.

Advertising Growth Variables/Metrics for Web Publishers

- Traffic growth (site visits and page views)
- Available inventory
- Advertising sell-through of inventory
- CPM (cost-per-impression)
- Number of new advertisers
- Market share (and loyalty of customer base)
- Migration of total advertising spending to new media

Web Ad Growth Forecasting — Fun with Numbers

Estimates of Web ad revenue in the year 2000 range from \$1.7 billion to as high as \$5 billion. In any case, the point is simple: Web ad revenue is likely to become a big number, and quickly. Using the high end of these estimates (\$5 billion), along with our estimate of about 150 million Internet users by the turn of the century, implies an average amount of advertising spent per online user of \$33 — this compares with 1995 domestic annual advertising spending of about \$340 per broadcast TV household, \$83 per cable TV household, \$116 per radio household, and \$586 per level of Sunday newspaper circulation (Table 2-2).

So... if the past levels of advertising spending per eyeball for other media are prologue, then advertising on the Internet could be one big honkin' business opportunity!

Note the following data points: As we have mentioned, the current annual advertising revenue run rate on the Web is \$264 million, and our average estimate for the current number of Web users is 28 million — this implies that, on average, \$9 in advertising spending is targeted at each user on an annual basis. The same math for AOL (a \$28 million advertising run rate, divided by 7 million users) implies that, on average, AOL generates \$4 in annual advertising revenue per customer.

If we extrapolate the current advertising spending rate per Web user (of \$9) out to the year 2000 (with 152 million Internet users), Web-related advertising spending/revenue could be a \$1.4 billion business in 2000, up from a current

estimated revenue run rate of \$264 million (implying annual growth of 52%). But it's reasonable to assume that advertising spending on a per user basis will rise as the medium grows and becomes better understood, so this \$1.4 billion estimate could prove to be quite conservative. If, indeed, the Internet becomes a mass medium, these powerful advertising-related revenue growth assumptions are very reasonable and beatable, in our opinion.

Let's tweak the numbers a bit (Figure 2-2 and Table 2-3). If we assume there are 153 million Internet users in 2000, and we ramp our advertising-spending-per-user estimate to \$25, this implies a \$3.8 billion business opportunity; and if we ramp to \$50, it implies \$7.6 billion. Clearly time will tell which scenario plays out, but our spreadsheet speaks clearly — Internet advertising spending should ramp fast!

Table 2-2

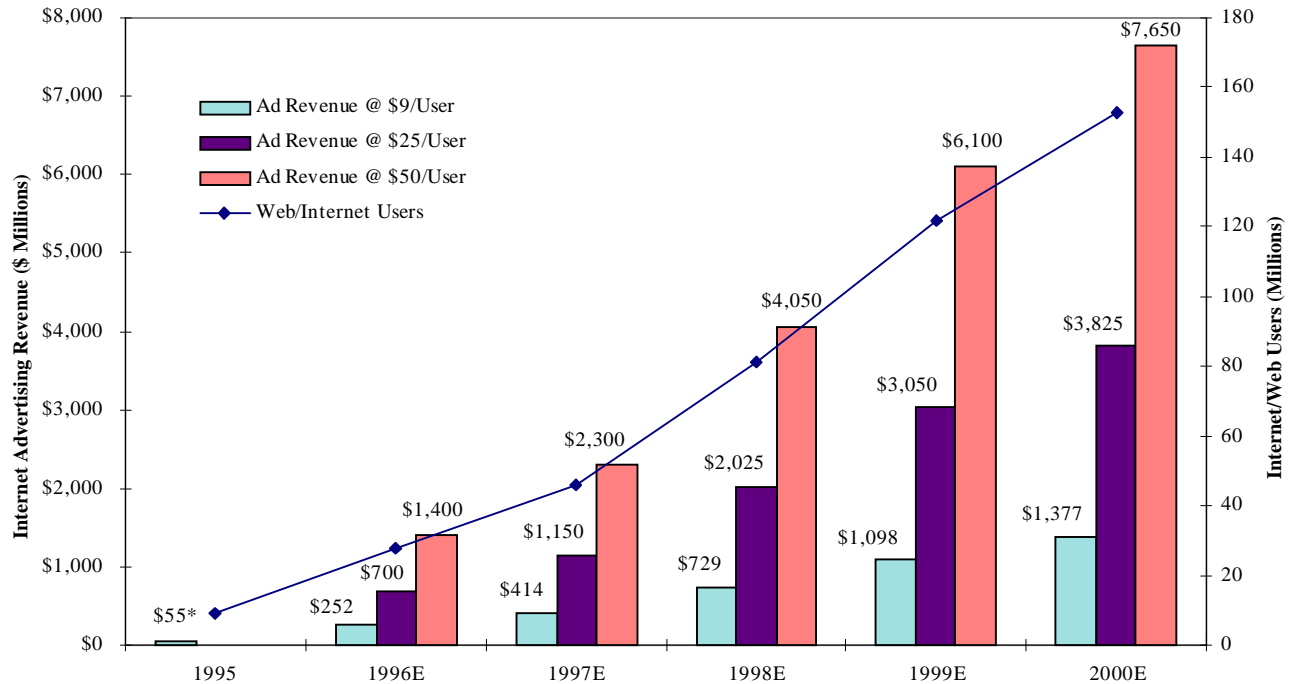
1995 U.S. Spending per Household For Various Media

Medium	1995 Advertising Spending (\$MM)	No. of Households (MM)	Advertising Spending/ Household (\$)
Broadcast TV	\$32,270	95	\$340
Radio	11,338	98	116
Cable	5,324	64	83
Newspapers	36,317	62*	586
Total	\$85,249	319	\$1,125
Average	21,312	80	281

* Newspaper Households are actually Sunday circulation.

Sources: 1995 Advertising Revenue - McCann-Erickson, Households - TV Dimensions '96, Newspaper Association of America, Paul Kagan Associates, Morgan Stanley Technology Research

Figure 2-2

Estimated Web Users vs. Advertising Revenue Using Various Steady-State Assumptions, 1995–2000E

Source: Morgan Stanley Technology Research.

* 1995 contains actual revenue, as reported by Jupiter Communications.

E = Morgan Stanley Research Estimate.

Table 2-3

Estimated Web Users vs. Advertising Revenue, Using Various Steady-State Assumptions, 1995–2000E

(\$ Million)	1995	1996E	1997E	1998E	1999E	2000E
Estimated Worldwide Web Users (MM)	9	28	46	81	122	153
Annual Advertising Spending per User Assumption (\$)						
\$50	--	\$1,400	\$2,300	\$4,050	\$6,100	\$7,650
25	--	700	1,150	2,025	3,050	3,825
9	55*	252	414	729	1,098	1,377

Source: Morgan Stanley Technology Research. Note: Steady-state assumptions are used for directional purposes only — it's likely that if Web advertising is well accepted, spending will likely rise steadily over time.

* 1995 contains actual revenue, as reported by Jupiter Communications.

E = Morgan Stanley Research Estimate.

Table 2-4

Top 20 Web Advertisers and Publishers by Estimated 3Q96 Spending/Revenue

Rank	Web Advertisers	3Q96 Spending (000's\$)	YTD Spending (000's\$)	YTD Rank	Rank	Web Publishers	3Q96 Revenue (000's\$)	YTD Revenue (000's\$)	YTD Rank
1	Microsoft	\$2,901	\$5,819	1	1	Netscape	\$8,203	\$17,867	1
2	AT&T	2,088	3,823	3	2	Yahoo!	5,561	11,251	2
3	Netscape	1,879	4,052	2	3	Infoseek	4,909	10,694	3
4	Excite	1,539	3,390	5	4	Excite*	3,630	7,271	5
5	Infoseek	1,512	3,285	6	5	Lycos	3,425	7,548	4
6	IBM	1,484	3,571	4	6	CNET	3,045	6,221	6
7	McKinley Group	1,381	2,849	7	7	WebCrawler*	2,908	5,068	8
8	Lycos	1,300	2,595	9	8	ZD Net	2,235	5,418	7
9	Yahoo!	1,250	2,590	10	9	Magellan*	1,823	2,936	13
10	Nynex	1,241	2,790	8	10	ESPNET SportsZone	1,705	4,148	9
11	SportsLine USA	793	1,463	14	11	Pathfinder	1,548	3,613	10
12	Amazon.com	643	986	18	12	CMP TechWeb	1,532	3,381	12
13	Toyota	602	1,471	13	13	Wall Street Journal Interactive	1,387	2,121	17
14	CNET	592	2,146	11	14	USA TODAY	1,354	2,238	16
15	NewsPage (Individual)	579	1,332	15	15	NewsPage (Individual)	1,347	3,492	11
16	Sprint	541	1,162	16	16	CNN Interactive	1,238	2,713	14
17	Travelocity	540	941	20	17	HotWired	795	2,261	15
18	Digital Equipment Corp.	491	1,636	12	18	Jumbo!	668	1,287	18
19	Ziff-Davis	488	877	23	19	Playboy	588	1,246	19
20	Procter & Gamble	480	969	19	20	HomeArts Network	473	797	23

Source: Jupiter Communications.

* Excite acquired Magellan in 3Q96, making the combined 3Q revenue estimate for both sites \$5.5 million, effectively ranking the combined company third. On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler.

(Note: Jupiter's estimates are calculated using the rate cards supplied by each site and extrapolating with an estimate of the number of banners each delivered. This does not take into account discounts, barter, and other factors, which are fairly prevalent, and can overestimate true revenue. For example, CNET reported Internet advertising revenue of \$2.7 million in 3Q96, 10% lower than Jupiter's \$3.0 million estimate, and Excite reported Internet advertising revenue, including Magellan, of \$4.0 million, 38% below Jupiter's combined estimate of \$5.5 million).

The State of Web Advertising

A handful of companies are winning with advertising revenue on the Web, but these same companies tend to also spend lots of money to advertise on the Web.

Currently, as with other media, Web advertising is rather top-heavy (Figure 2-3). According to Jupiter Communications, more than 900 sites were selling advertising on the Web in 3Q96 and thousands of companies were displaying ad banners (the rise of ad networks, a phenomenon discussed later, allows many more sites to "trade" ad space without actually selling to advertisers). However, the majority of ad spending and revenue is concentrated among a few advertisers and the top sites (Table 2-4). In 3Q96, the ten highest-grossing revenue sites accounted for 57% of total Web ad revenue. In addition, many of the biggest Web advertisers are also the biggest recipients of Web advertising revenue.

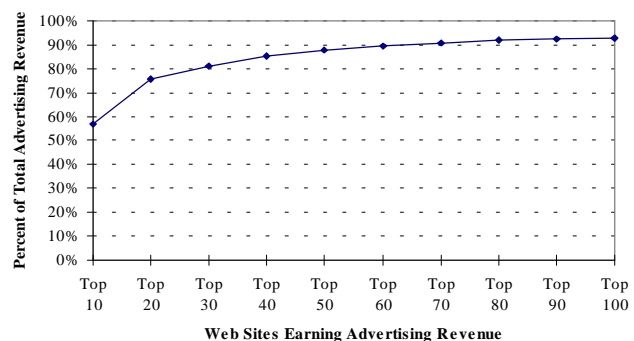
Jupiter used published rate-card rates to arrive at its revenue estimates and compared its data with publicly available information and the ad-supported sites themselves to arrive

at its estimates. Skeptics argue that it's not uncommon (in fact, it's often typical) for rate card prices to be discounted. Jupiter's revenue estimates may thus be high, but they do have directional significance.

Of the top ten revenue-generating sites (shown with estimated 1Q, 2Q, and 3Q revenue data in Figure 2-4 and Table 2-5), five are search engines (Infoseek, Lycos, Yahoo!,

Figure 2-3

Concentration of Ad Revenue on the Web, 3Q96



Source: Jupiter Communications.

Excite, and Magellan) and one, Netscape, is an aggregator of these search engines as well as the home page of the browser that holds an estimated 70%-plus market share in that space.

As we have noted, there is some discrepancy between the estimates reported by Jupiter Communications and the actual advertising revenue realized. Reported online advertising revenue and average daily page views for the four search engines are shown in Figures 2-5 and 2-6 and Tables 2-6 and 2-7. Though slightly different, these metrics echo the directional significance of the Jupiter estimates — online advertising revenue and its key drivers have continued to display rapid growth.

Table 2-5

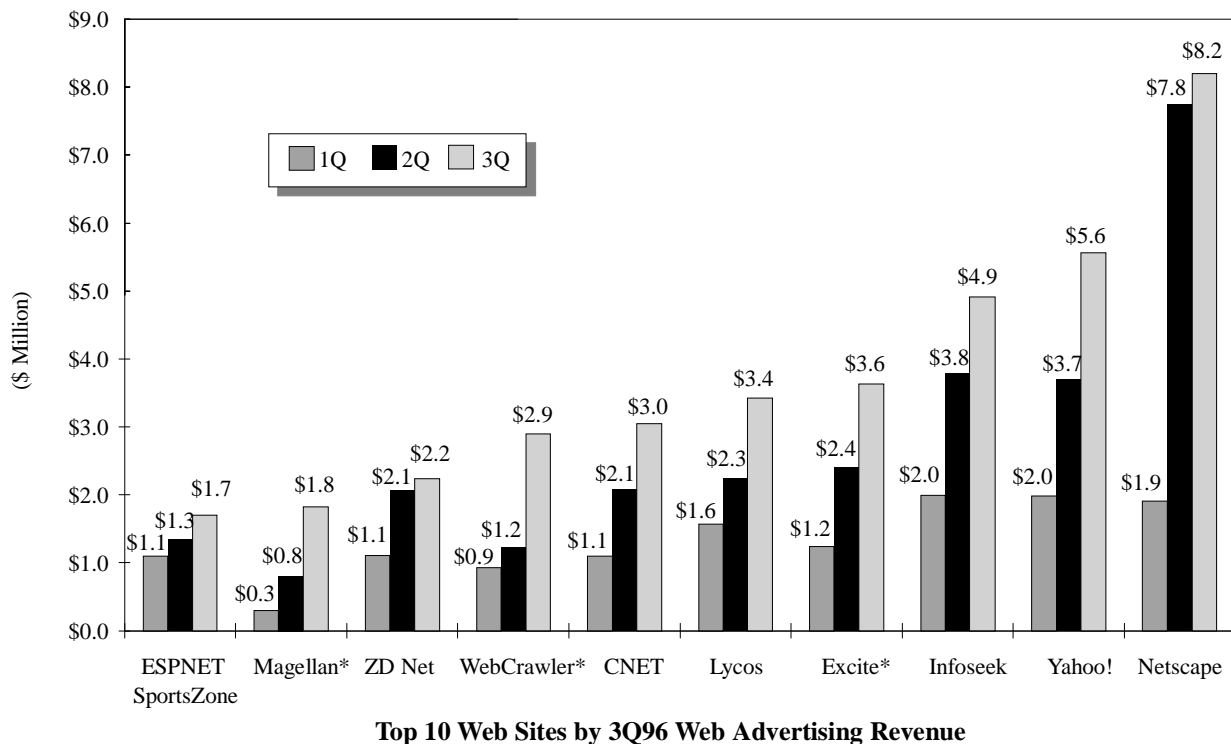
**1996 Year-to-Date Quarterly Web Advertising Revenue for the Top 10 Sites
(Ranked by Estimated 3Q96 Revenue)**

(\$ Million)	1Q	2Q	3Q
Netscape	\$1.9	\$7.8	\$8.2
Yahoo!	2.0	3.7	5.6
Infoseek	2.0	3.8	4.9
Excite*	1.2	2.4	3.6
Lycos	1.6	2.3	3.4
CNET	1.1	2.1	3.0
WebCrawler*	0.9	1.2	2.9
ZD Net	1.1	2.1	2.2
Magellan*	0.3	0.8	1.8
ESPNET SportsZone	1.1	1.3	1.7

Source: Jupiter Communications. * Excite acquired Magellan in 3Q96, making the combined 3Q revenue estimate for both sites \$5.5 million, effectively ranking the combined company third. On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler.

Figure 2-4

**1996 Year-to-Date Quarterly Web Advertising Revenue for the Top 10 Sites
(Ranked by Estimated 3Q96 Revenue)**



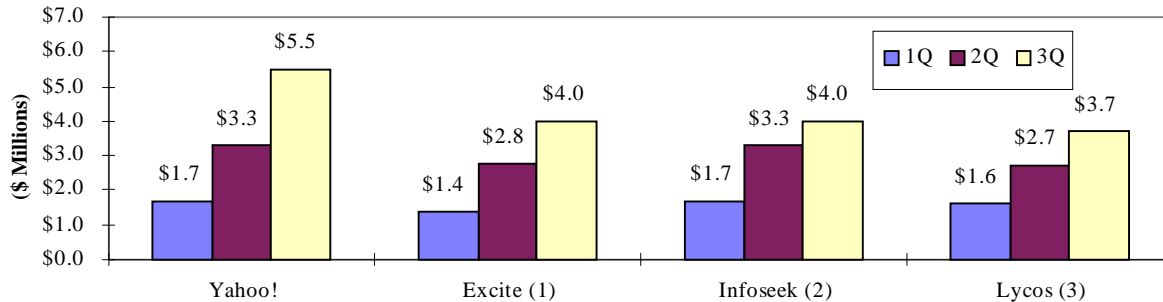
Source: Jupiter Communications.

* Excite acquired Magellan in 3Q96, making the combined 3Q revenue estimate for both sites \$5.5 million, effectively ranking the combined company third. On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler.

(Note: Jupiter's estimates are calculated using the rate cards supplied by each site and extrapolating with an estimate of the number of banners each delivered. This does not take into account discounts, barter, and other factors, which are fairly prevalent, and can overestimate true revenue. For example, CNET reported Internet advertising revenue of \$2.7 million in 3Q96, 10% lower than Jupiter's \$3.0 million estimate, and Excite reported Internet advertising revenue, including Magellan, of \$4.0 million, 38% below Jupiter's combined estimate of \$5.5 million).

Figure 2-5

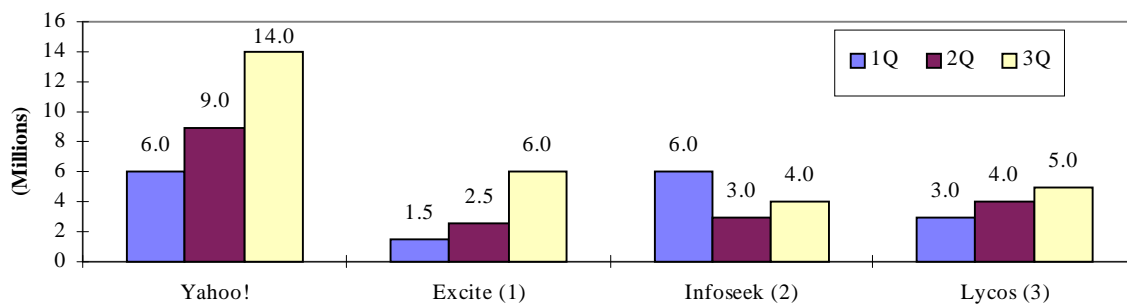
Online Advertising Revenue for Four Leading Search Engines



Source: Morgan Stanley Technology Research.

Figure 2-6

Average Daily Page Views for Four Leading Search Engines at End of Quarter



Source: Morgan Stanley Technology Research.

Table 2-6

Online Advertising Revenue for Four Leading Search Engines

(\$ Millions)	1Q	2Q	3Q
Yahoo!	\$1.7	\$3.3	\$5.5
Excite (1)	1.4	2.8	4.0
Infoseek (2)	1.7	3.3	4.0
Lycos (3)	1.6	2.7	3.7

Source: Morgan Stanley Technology Research.

Table 2-7

Average Daily Page Views for Four Leading Search Engines at End of Quarter

(Millions)	1Q	2Q	3Q
Yahoo!	6.0	9.0	14.0
Excite (1)	1.5	2.5	6.0
Infoseek (2)	6.0	3.0	4.0
Lycos (3)	3.0	4.0	5.0

Source: Morgan Stanley Technology Research.

(1) On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler. The combined sites in the new Excite network have an unduplicated reach of 44.1, according to PC Meter. In addition, Excite acquired Magellan in 3Q96. Magellan is included in Excite's 3Q revenue estimate and in its reporting of 3Q page views.

(2) Infoseek was the only search engine on the Netscape search page until April 11, 1996.

(3) Fiscal year end for Lycos is in July, so 1Q figures end in April, 2Q in July, and 3Q in October.

Table 2-8

Web Ad Spending by Industry Category, 3Q96

Industry Category	Share
Web Related	32%
Computer Related	22
Consumer Goods	13
Telecommunications	9
Other Services	6
Publishing & Media	6
Auto & Accessories	5
Financial Services Insurance & Real Estate	5
Travel	2

Source: Jupiter Communications.

The current concentration of advertising revenue among a small group of sites could diminish a bit with the creation of additional quality sites and an improved Internet advertising infrastructure (which includes ad networks, measurement/tracking software and tools, well-defined standards, advertising sales channels, and the host of elements that comprise the traditional advertising purchase and delivery infrastructure).

Traditional media advertising revenue also tends to be somewhat concentrated, but there are several characteristics of the Internet that we believe could erode the oligopolistic nature of traditional media, such as the low barriers to entry, the reduced cost of publishing or broadcasting (no print, paper, or other distribution costs), and the resulting proliferation of many targeted special-interest and segmented sites. Advertisers may be able to gain greater reach by spreading their buying across a large number of sites.

Conversely, we believe that the mega-cyber channels will begin to emerge in 1997 and that Web site consolidation will ensue. So the strong will become stronger and the weaker will fail, while the super low-cost niche players that can provide advertisers with very good targeted marketing will also do well.

So Far, Web Advertisers Tend to Be Technology Firms

The Internet has yet to make inroads with lots of the big traditional advertisers. In 3Q, 54% of Web advertising spending came from Web- and computer-related companies (Table 2-8). The list of top advertisers is lacking in the major ad spenders one finds in traditional media. In fact, using *Advertising Age's* list of top 100 advertisers, Jupiter's study ranked only 11 of the top traditional media buyers among the top 50 Web advertisers. Cracking the top 50 list

Table 2-9

Web Publishing Revenue by Industry Category, 3Q96

Industry Category	Share
Search Engines & Directories	40%
Computers & Related Interests	18
Entry Portals	14
News Media	12
General Interests	8
Sports/Men's Interests	4
Other Content Sites	30
Other Listings	10

Source: Jupiter Communications.

didn't take much, either — a company would only need to have spent \$72,000.

The Higher the Traffic, the Higher the Revenue

Since most companies with advertising-bearing Web sites generate ad revenue as a function of page views (each page downloaded by a user is counted as one page view), the high-revenue sites are some of the most highly visited on

Table 2-10

Top 25 Web Sites Based on Reach, September 1996

(Based on 10,000 Home Sample of Total Consumer Audience)

Rank	Site
1	Netscape (40.4) (home.netscape.com)
2	Yahoo! (39.3) (www.yahoo.com)
3	America Online (39.0) (www.aol.com)
4	WebCrawler (29.2) (www.webcrawler.com)*
5	Excite (19.2) (excite.com)*
6	Microsoft (www.microsoft.com)
7	InfoSeek (infoseek.com)
8	Lycos (www.lycos.com)
9	Microsoft Network (www.msn.com)
10	Digital Equipment Corp. (AltaVista) (www.digital.com)
11	GeoCities (www.geocities.com)
12	Global Network Navigator (gnn.com)
13	Prodigy (www.prodigy.com)
14	CompuServe (world.compuserve.com)
15	Magellan (www.mckinley.com)
16	ZD Net (www.zdnet.com)
17	Netcom (www.netcom.com)
18	Earthlink (www.earthlink.net)
19	CRIS (www.cris.com)
20	AT&T Toll-Free Directory (att.net)
21	Pathfinder (pathfinder.com)
22	Real Audio (www.realaudio.com)
23	Angelfire (angelfire.com)
24	Amateurs (amateurs.com)
25	M.I.T. (web.mit.edu)

Source: PC Meter. * On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler. The combined sites in the new Excite network have an unduplicated reach of 44.1, according to PC Meter. In addition, Excite acquired Magellan in 3Q96 and began including Magellan in its reporting of page views as of September 1, 1996. Numbers in parentheses in top five positions indicate total reach.

the Web. Plain and simple, more eyeballs mean more dollars.

PC Meter tracks consumer traffic on the Web, via software it has installed on PCs in 10,000 homes, and ranks the top sites based on reach. The reach of a Web site is defined as the percentage of the total available audience in a given time period that makes a request at that site.

According to its September survey, the most popular Web sites based on reach (Table 2-10) were Netscape (with a reach of 40.4), Yahoo! (39.3), America Online (39.0), WebCrawler (29.4), and Excite (19.2). Things change quickly, though — on November 25, 1996, Excite became

AOL's exclusive Internet search service and acquired WebCrawler. This made the combined unduplicated reach (reach based on the set of unique users which have visited either site) of the new Excite network 44.1 (including WebCrawler).

In addition, PC Meter tracks the popularity of various Web sites on a segment-by-segment basis (Tables 2-11 through 2-15). PC Meter data are strictly a consumer measurement. Also, these data only measure reach per individual site, so companies like CNET and HotWired, which have several sites with different purposes, are accounted for as several domains, making these data an inaccurate measurement of these companies' true aggregate reach.

Table 2-11

Top Search Engines Based on Reach, September 1996

(Based on 10,000 Home Sample of Total Consumer Audience)

Rank	Site
1	Yahoo! (yahoo.com)
2	WebCrawler (webcrawler.com)*
3	Excite (excite.com)*
4	InfoSeek (infoseek.com)
5	Lycos (lycos.com)
6	Digital (AltaVista) (digital.com)
7	Magellan (mckinley.com)
8	SEARCH.COM (www.search.com)
9	Deja News (dejanews.com)
10	Hot Bot (hotbot.com)

Source: PC Meter. * On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler.

Table 2-12

Top Online Networks Based on Reach, September 1996

(Based on 10,000 Home Sample of Total Consumer Audience)

Rank	Site
1	America Online (www.aol.com)
2	Microsoft Network (www.msn.com)
3	Prodigy (www.prodigy.com)
4	CompuServe (world.compuserve.com)
5	Wow! (wow.com)*

Source: PC Meter. * CompuServe announced in November that it will discontinue Wow! on January 31, 1997.

Table 2-13

Top Internet Information Providers* Based on Reach, September 1996

(Based on 10,000 Home Sample of Total Consumer Audience)

Rank	Site
1	Netscape (home.netscape.com)
2	GeoCities (www.geocities.com)
3	RealAudio (www.realaudio.com)
4	Angelfire (angelfire.com)
5	Tripod (www.tripod.com)
6	MapQuest (www.mapquest.com)
7	PSIWeb (inter.net)
8	Timecast (prognest.com)
9	InfiNet (www.infinet.com)
10	Adultcheck (adultcheck.com)

Source: PC Meter.

* Internet information providers are companies/sites that provide users with value-added services (e.g., home pages, content screening, etc.).

Table 2-14

Top Internet Access Providers Based on Reach, September 1996

(Based on 10,000 Home Sample of Total Consumer Audience)

Rank	Site
1	Global Network Navigator (gnn.com)
2	Netcom (www.netcom.com)
3	Earthlink (www.earthlink.net)
4	CRIS (www.cris.com)
5	AT&T (att.net)
6	WebCom (webcom.com)
7	PrimeNet (www.primenet.com)
8	Best (www.best.com)
9	Concentric Network (www.concentric.net)
10	Sprynet (www.sprynet.com)

Source: PC Meter.

Table 2-15
Top News, Info, Entertainment Based on Reach, September 1996

(Based on 10,000 Home Sample of Total Consumer Audience)

Rank	Site
1	ZD Net (www.zdnet.com)
2	Pathfinder (pathfinder.com)
3	CNET (www.cnet.com)
4	ESPNET SportsZone (espnet.sportszone.com)
5	The Weather Channel (weather.com)
6	Disney (www.disney.com)
7	CNN (cnn.com)
8	MSNBC (www.msnbc.com)
9	USA Today (www.usatoday.com)
10	Intellicast (www.intellicast.com)
11	Macromedia (www.macromedia.com)
12	SportsLine USA (www.sportsline.com)
13	United Media (www.unitedmedia.com)
14	NFL (www.nfl.com)
15	NBC (nbc.com)
16	Iguide (www.iguide.com)
17	PC Magazine (www.pcmag.com)
18	NEWS.COM (www.news.com)
19	Nando Times (www.nando.net)
20	Discovery Channel Online (www.discovery.com)

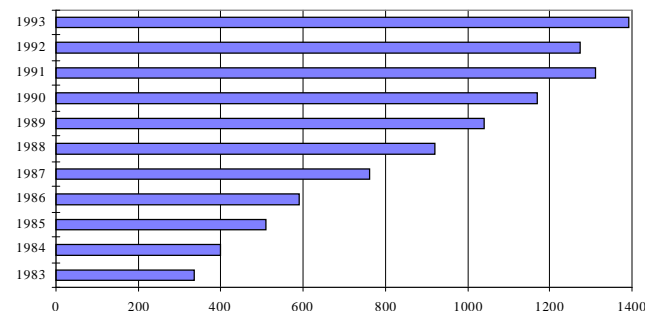
Source: PC Meter.

And Then There's Barter

Since most Web sites are unprofitable and advertising revenue is still small, these companies often form relationships, advertising on one another's sites and gaining "ad revenue" (as well as expense). This practice is known as barter.

There is a great deal of ad bartering that takes place between Web companies, and it is no coincidence that there is noticeable overlap between top ad advertisers and publishers. Netscape, which "charged" the major search engines (Yahoo!, Infoseek, Lycos, Magellan, and Excite) \$5 million to be placed on Netscape's Net Search page, in reality received \$2 million apiece from each company but received

Figure 2-7
10-Year Evolution of TV Barter Revenue (\$MM)



Source: TV Dimensions '96.

\$3 million in advertising placement from each site. It is important to be aware of how ad revenue statistics are compiled, as each study and each site may report differently in this respect.

Barter is not a new phenomenon, of course, and is relatively common in other media. Figure 2-7 demonstrates the steady increase in barter revenue in the TV industry.

A Summary of How the Ad-Math is Done on the Web

The importance of measuring page views accurately becomes very clear in the context of the advertising business model. Advertisers pay an agreed-upon multiple of the number of "guaranteed" impressions delivered. This limits the site's responsibility for ad delivery, and the ad revenue generated is simply the product of the traffic (and subsequent pages downloaded) times the multiple, which is generally priced in terms of the cost per thousand impressions (CPM). Internet CPMs range as high as Riddler's \$250 and NewsPage's \$200 CPM down to average CPMs at sites like Discovery Channel Online (\$50) to lower CPMs at sites like the search engines, where CPMs can range from \$12 to \$20 (Table 2-16). Generally, CPMs seem to average on the order of \$30, resulting in a per unit cost of \$0.03 per impression delivered.

The wide price spread suggests that the Web functions both as a mass medium and a direct-marketing vehicle, and that context, audience, technology, and results all play a part in determining what price an advertiser will pay.

Table 2-16
Selected CPMs from Various Media

Web/Online Site	CPM	Web/Online Site	CPM
Riddler	\$250	ESPNET SportsZone	\$35
Individual Inc.'s NewsPage	\$200	DOWNLOAD.COM	\$30
HotWired	\$150	Netscape	\$30
NEWS.COM	\$100	SEARCH.COM	\$30
CNET.COM	\$75	SHAREWARE.COM	\$30
GAMECENTER.COM	\$75	Yahoo!	\$23
America Online	\$38	PointCast Network (PCN)	\$3
General Web/Online	CPM	General Web/Online	CPM
Targeted content sites	\$45-260	Other search engines	\$12-18
High traffic sites	\$35-65		
Traditional Medium	CPM	Traditional Medium	CPM
Magazines -- niche	\$70 - 150	Television	\$13
Magazines -- general	\$25 - 50	Radio	\$5

Source: Morgan Stanley Technology Research.

If past is prologue, as the medium evolves (as in the cable analogy), we believe a few well-branded sites in a very broad range of categories (such as news, entertainment, and sports) will come to dominate, and these sites will be able to charge a premium for ad space. Note, however, that there are some fundamental differences between Internet publishing/programming and cable programming, and the Internet's lack of barriers to entry may prevent, to some degree, the same narrowing we saw in cable (cable stations with little viewership are entirely too expensive to support, but Web sites are not). There is, therefore, an almost unlimited amount of content (and therefore inventory) available for advertiser purchase on the Internet, in contrast with the limited amount of inventory available in radio and on TV. This Internet inventory glut may therefore heat up the competition for ad dollars (which, as it increases, lowers ad rates). The ability of premium sites to command pricing should play a key role in setting the acceptable boundaries for CPM, and ultimately, revenue.

There is an inventory paradox on the Web. While there is tons of available inventory on the Web in aggregate, the highest traffic sites have a limited amount of high traffic inventory. This paradox can govern revenue growth for the Web in aggregate by keeping CPMs low and govern revenue

growth for the highest traffic sites by keeping CPMs high, but for limited space.

And Now a Look at Some of the Hot Areas by Channel/Category . . .

In thinking about who the future "contenders" to dominate each channel may be (according to our cable analogy; see Chapter 3), we thought the best place to start would be to look at some of today's top sites.

A Web Ad Revenue Cut . . .

We take a pass at the current annualized revenue run-rates of the top site in several major categories (ranked by Jupiter Communications' 3Q96 revenue estimate) in Figure 2-8. The revenue run-rate is derived by annualizing Jupiter Communications' 3Q96 revenue estimate for each site. There are several leading sites in each category of content on the Web. In sports, there's ESPNNet SportsZone, in technology news, CNET, and in financial news, the Wall Street Journal Interactive. For search engines, Yahoo! currently leads on a revenue and page view per day basis, though Excite's late November announcement that it would become the exclusive search engine for AOL (and its 3Q acquisition of Magellan) has altered the competitive landscape in this category to some degree.

Figure 2-8

1996 Web Advertising Revenue for Today's Top Publishers by Channel/Category (by Estimated 3Q96 Revenue)

Channel/Category	No. 1 Web Site	Annualized Revenue Run-Rate (1), (\$ Millions)
Browser	Netscape	\$33
Search Engine*	Yahoo!	\$22
General News	USA Today	\$14
Technology News	CNET	\$12
Sports	ESPNNet SportsZone	\$7
General Interest	Pathfinder	\$6
Financial News	Wall Street Journal Interactive	\$6
Special Interest	Playboy	\$2

Source: Jupiter Communications.

(1) based on annualized 3Q96 Internet advertising revenue estimate from Jupiter Communications for each site.

* On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler, significantly altering the competitive landscape in this channel.

An America Online Traffic Cut

America Online has over 7 million subscribers, putting it in the position of delivering more effective “page views” than any other site by a long shot. Though each screen that AOL users see is not the technical equivalent of a Web page, for advertisers it is virtually the same vehicle and delivers an ad impression in an equivalent fashion. We therefore think it useful to extrapolate AOL subscriber usage and take a pass at the number of pages AOL can deliver for advertisers.

Figure 2-9 shows the estimated number of pages AOL delivered per day in November across its highest-traffic chan-

nels. These estimates are based on America Online research, which found that, on average, users view each page for 30 seconds. Page view estimates are then extrapolated from the amount of use for each channel. Some channels, based on the nature of the content, have longer or shorter average viewing times per page and are adjusted accordingly. Figure 2-10 shows similar estimates of amount of use across broad categories (chat, e-mail, Internet, etc.), though this does not apply as directly to activities such as e-mail.

These data suggest to us that America Online drives more traffic than most comparable Web sites in each content channel.

Figure 2-9

November 1996 Estimated U.S. Daily Page Views Delivered by America Online for Selected Content Channels (1)

Channel/Category	Estimated Page Views per Day (Millions)
Today's News	10
Personal Finance	8
Computers and Software	6
AOL Programming	5
Lifestyles and Interests	5
Games	5
Sports	4
Entertainment	4
Kids Only	3

Source: America Online

Figure 2-10

November 1996 Estimated Daily Page Views Delivered by America Online by Broad Category (1)

Broad Category	Estimated Page Views per Day (Millions)
Content	65
People Connection	56
E-Mail	45
Internet	35
Main Menu	32
Member Services	7

Source: America Online

(1) America Online estimates that, on average, users view each page for 30 seconds. Page view estimates are then extrapolated from hours of use for each channel. Some channels, based on the nature of the content, have longer or shorter average viewing times per page and are adjusted accordingly.

And Another, More Random, Web Cut Based on Traffic

We have included yet another pass at some of the top sites using a third-party estimate of the best sites based on Web traffic and research. Web21 (www.100hot.com) is an on-line service that ranks the top sites based on estimates of traffic flows to strategic points on the Internet and on the logs (server traffic records) from these sites. Web21 then

validates these rankings by conducting phone and e-mail interviews, and modifies them where appropriate. We have included the Web21 rankings for each category in Table 2-17 to provide yet another guide to the most popular sites in each category (these rankings are for September traffic, which Web21 takes several weeks to analyze and post; the October data were not available at the time this report was printed).

Table 2-17
Web21's September 'Hot' Web Sites, by "Channel"/Category

Top 25 General Sites

1	Yahoo!	www.yahoo.com
2	America Online/WebCrawler*	www.aol.com
3	PathFinder, and Time/Warner (CNN)	www.pathfinder.com
4	ESPN Net SportsZone, Mr. Showbiz, and The NBA Web site	espnet.sportszone.com
5	Excite, Magellan and City.Net	www.excite.com
6	AltaVista Software, AltaVista Search Engine	www.altavista.software.digital.com
7	HappyPuppy	www.happypuppy.com
8	RealAudio and TimeCast	www.realaudio.com
9	Ziff Davis and HotFiles	www.zdnet.com
10	Lycos	www.lycos.com
11	CNET, SEARCH.COM, NEWS.COM	www.cnet.com
12	Sony, Sony Music, Sony Interactive Entertainment	www.sony.com
13	WebChat Broadcasting System	www.wbs.net
14	www.windows95.com	www.windows95.com
15	USA Today	www.usatoday.com
16	Sportsline	www.sportsline.com
17	Sun Microsystems and Sun's Java Site	www.sun.com
18	Silicon Graphics, Inc. and Reality Studios	www.sgi.com
19	Angelfire	www.angelfire.com
20	The Internet Movie Database and the UK Edition	www.imdb.com
21	www.nba.com	www.nba.com
22	Infoseek Search	www.infoseek.com
23	SHAREWARE.COM	www.shareware.com
24	Tripod	www.tripod.com
25	United Media	www.unitedmedia.com

* On November 25, 1996, Excite became AOL's exclusive Internet search service and acquired WebCrawler, altering significantly the competitive landscape for this channel.

Auto Sites

1	Dealernet	www.dealernet.com
2	Ford	www.ford.com
3	Chrysler Corp.	www.chryslercorp.com
4	General Motors	www.gm.com
5	Toyota	www.toyota.com
6	The Virtual Car Lot	www.cardealer.com
7	Chrysler Cars	www.chryslercars.com
8	Jensen Cars	hugh.pharmacol.su.oz.au/jensen.html
9	The Mahindra Jeep	www.mahindra.com
10	Austin Healey	www.stupi.se/Rec/home_of_the_Healeys

Table 2-17 (continued)

Web21's September 'Hot' Web Sites, by "Channel"/Category**Business Sites**

1	Stephen Merrill Associates	www.specsci.com/sma_books/links.html
2	Classified Gateway	www.sfgate.com/classifieds
3	iMall Business	www.imall2000.com/index.html
4	Web Connection, home pages for business	www.vero.com/web/top.htm
5	Terraport's Business Network	localweb.terraport.net/rythm/biz.htm
6	Small Business Source	www.sddt.com/~columbus/Pages/sbiz.html
7	Business Listings	www.cob.asu.edu/misc/rscs.html#bus
8	Total Business and Financial Consultants, Inc.	www.totallinc.com/index.html
9	Small Business Express	www.gnn.com/gnn/bus/index.html
10	The Better Business Bureau	www.bbb.org/

Chat Sites

1	Alpha World	www.worlds.net/products/alphaworld/index.html
2	CyberSight Real-Time Chat Session	www.cybersight.com/cgi-bin/cs/ch/chat
3	PowWow	www.tribal.com/powwow
4	Webchat Broadcasting System	www.wbs.net
5	World's Chat	www.worlds.net/products/wchat/index.html
6	13 Engines	www.wbs.net/webchat3..so?cmd-doorway:13engines
7	Acme Chat	www.peak.acmeweb.com/webchat/
8	Acme Create A Room	chat.acmeweb.com/cgi-bin/ics-make-conf-room.cgi
9	Alter-Zone New Chat Forum	www.alter-zone.com/
10	Aftonbladet Chat (svenska)	chat.aftonbladet.se/

College Sites

1	MIT	web.mit.edu
2	Univ. of Illinois	www.uiuc.edu
3	Carnegie-Mellon Univ	www.cmu.edu
4	Caltech	www.caltech.edu
5	UNC - Chapel Hill	www.unc.edu
6	Univ. of Michigan	www.umich.edu
7	Stanford Univ	www.stanford.edu
8	Univ. of Washington	www.washington.edu
9	UC Berkeley	www.berkeley.edu
10	Ohio-State Univ	www.ohio-state.edu

Game Sites

1	HappyPuppy	www.happypuppy.com
2	Games Domain	www.gamesdomain.com
3	Jumbo	www.Jumbo.com
4	Electronic Arts	www.ea.com
5	Sony Interactive and Psygnosis	www.sepc.sony.com
6	IGN: Imagine Games Network Next Generation online	www.imaginegames.com
7	Spectrum Holobyte - MicroProse	www.holobyte.com
8	id Software Quake	www.idsoftware.com
9	LucasArts Entertainment	www.lucasarts.com
10	Westwood Studios Monopoly	www.westwood.com

Table 2-17 (continued)

Web21's September 'Hot' Web Sites, by "Channel"/Category**ISPs***

1	ANS	www.ans.com
2	AT&T Global Switched Digital Services	www.att.com/business/gds
3	MCI	www.mci.com
4	MFS Communications	www.mfs.net
5	NASA	www.nasa.gov
6	SprintLink	www.sprint.net
7	UUNET	www.uu.net/
8	GTE	www.gte.com/
9	NTT	www.ntt.jp/
10	Telstra	www.telstra.net.au/

* These sites are essentially home pages to which each ISP defaults.

Kids' Sites

1	Lego	www.lego.com
2	Bubble information	www.bubbles.org/pbfa2.htm
3	Students for Exploration of Space	www.seds.org
4	Headbone Interactive	www.headbone.com
5	Cloud 9 Interactive MARVEL Comics	www.cloud9int.com
6	younger kids	www.mtlake.com/cyberkids
7	teens	www.mtlake.com/cyberteens
8	SeaWorld/Busch Gardens	www.bev.net/education/SeaWorld/infobook.html
9	UT Kids' Science	loki.ur.utk.edu/ut2kids/science.html
10	Berit's Best Sites for Children	www.cochran.com/theosite/ksites.html

Online Sites

1	PointCast	www.pointcast.com
2	AOL	www.aol.com
3	Pathfinder	www.pathfinder.com
4	CNN	www.cnn.com
5	CompuServe	world.compuserve.com
6	Sony Online	www.sony.com
7	Warner Bros	www.warnerbros.com
8	RealAudio	www.realaudio.com
9	Prodigy	www.prodigy.com
10	USAToday	www.usatoday.com

Shopping Sites

1	Internet Shopping Network	www.internet.net/
2	Hollywood Shopping Network	www.hollywoodnetwork.com/
3	Los Angeles Mall Online	www.lamall.com/html/index.html
4	The IGC CyberMall	www.igc.net/cybermall
5	Boston Shopper	www.bostonshopper.com/
6	World Wide Collector's Digest	www.wgcd.com/index.html
7	The Internet Mall	www.internet-mall.com/
8	ArtCo Shopping Mall	www.artco.com/
9	The CyberTown Shopping Mall	www.cybertown.com/shopping.html
10	Branch Mall	www.branch.com/

Table 2-17 (continued)

Web21's September 'Hot' Web Sites, by "Channel"/Category**Sports Sites**

1	ESPN SportsZone	espn.sportszone.com
2	NBA.com	www.nba.com
3	FINAL.SCOM	www finals.com
4	Welcome to Sportsline USA	www.sportsline.com
5	Euro96	www.euro96.com
6	SOCCERNET	www.soccernet.com
7	Everything Golf on the WWW	www.golfweb.com
8	Instant Sports	www.instantsports.com
9	Eurosoccer	www.eurosoccer.com
10	The Championships, Wimbledon	www.wimbledon.org

Technology Sites

1	Netscape Communications	www.netscape.com
2	Microsoft Corp	www.microsoft.com
3	IBM	www.ibm.com
4	CNET	www.cnet.com
5	Ziff-Davis	www.zdnet.com
6	Apple	www.apple.com
7	Hewlett-Packard	www.hp.com
8	Windows95	www.windows95.com
9	W3 Consortium	www.w3.org
10	Novell	www.novell.com

Source: Web21 (www.100hot.com).

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