

Online Ad Networks

Disruption – and Opportunity – for Media Businesses



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NORTHWESTERN
UNIVERSITY

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Introduction

The Media Management Center at Northwestern University has a well-deserved, longstanding reputation for providing media executives with actionable guidance on content and revenue strategies for newspapers, magazines, television and online media. As we have expanded our work with digital platforms (from the World Wide Web to mobile phones), we have been struck by the significant differences between traditional media and the newer interactive platforms. This report focuses on what may be the most fundamental difference: the ability to separate content publishing from advertising delivery.

Traditional media typically use a vertically integrated model: One company creates the content, sells the advertising, puts it all together into a package such as a newspaper edition or a TV news show, and distributes the package using its own distribution channel. Digital platforms are different. For one thing, content creators don't control the distribution channels. In some ways, this is a great advantage, because it means digital content is accessible to anyone with access to an Internet-connected device. At the same time, this difference explains why making money via online content is proving so difficult.

A thousand online ad impressions could be worth 50 cents – or they could be worth 50 dollars. For a publisher, the difference may well lie in how well you manage your relationship with advertising networks.

In the late 1990s, I gained firsthand experience dealing with the digital revenue challenge when I served as the first new media director for the Miami Herald Publishing Co. That was when I first encountered online advertising networks, new firms that sought to sell and place ads from national advertisers on multiple Web sites. In those days, it was a challenge to persuade local advertisers to buy Internet ads, so my advertising manager and I were thrilled when the first generation of ad networks began sending us requests for proposals. But we learned quickly that these networks wanted to buy ad impressions as cheaply as possible. If we could figure out how to sell online advertising to local businesses, we would do better. Local advertisers who respected our company would pay us a lot more than we'd receive from these networks.

What I didn't fully realize until last year was the extent to which online advertising has evolved since those early days – nor did I appreciate all the implications of new technologies on the future of advertising in other media beyond the Web. A few of the indicators that caught my attention:

- The number of online ad networks was growing rapidly, and they were extending their reach;

- AOL, which most of us thought of as a consumer online service and then a Web portal, shifted its business strategy to focus on networked advertising – acquiring a suite of networks and technologies and becoming the top online ad company based on its reach among Internet users;
- A Deutsche Bank report estimated that newspapers were generating online ad revenue of \$9.29 per 1,000 page views, while Yahoo! was earning only \$1.01 per 1,000 page views;
- Newspaper companies formed an alliance with Yahoo!, a central element of which was to enable newspapers to sell behaviorally targeted advertising to local-market users visiting newspaper Web sites;
- New technologies began to transform the television platform by enabling the same capabilities we now associate with the Web: serving different ads to different consumers watching the same program, and offering advertisers the promise of being able to buy specific audience segments across multiple programs rather than having to buy the entire audience for a specific program.

These developments led the Center to commission this research report exploring the implications of online ad networks for publishers and content creators. Mike Silver, one of the true pioneers in interactive media, took on the assignment to write the report. He did much of the research but was unable to complete the project before deciding to accept a job as executive director for the Newspaper Consortium working with Yahoo! To finish the project, we recruited Scott Anderson, who, like Mike, had a long history with digital media and with the Tribune Co.

Since our research began, the downturn in the U.S. economy has shaken the foundations of the media landscape, reducing demand for online advertising and, consequently, driving down prices. These economic realities make this report all the more important. If you are responsible for digital revenue, here's a headline to contemplate: A thousand online ad impressions could be worth 50 cents – or they could be worth 50 dollars. For a publisher, the difference may well lie in how well you manage your relationship with advertising networks.

If you want more copies of this report, they can be downloaded at:
www.mediamanagementcenter.org/research/adnetworks.asp.

At the same Web address, if you are interested in reading more about online ad networks, we have assembled a “custom search” of more than 150 articles and reports that the authors consulted during their research. This report is full of facts, analysis and forward-looking insights for leaders of companies that produce content for digital platforms and want to maximize their online revenue. We hope you find it useful.

Rich Gordon
Director of New Communities
Media Management Center

Table of Contents

Page 5	Executive Summary
Page 7	Ad Networks: Setting the Stage
Page 9	The Network Landscape
Page 11	The Rise of the Networks
Page 15	Targeting: Beyond Demographics
Page 21	The Publisher-Network Relationship
Page 25	New Network Opportunities
Page 29	Emerging Frontiers: Technology, Privacy, TV
Page 33	Navigating the Networks: What Publishers Should Do
Page 39	Appendix 1: Online Advertising Glossary
Page 43	Appendix 2: About the Authors and Publisher

Executive Summary

Advertising networks are increasingly defining the future of the online content business. Once just a tool for filling unsold banner ad inventory at low prices, networks have grown in size, variety, complexity – and, for publishers, importance. Networks are selling and delivering a growing share of Internet advertising – generating real revenue for content sites, but also threatening to drive down ad prices. Overseeing ad network relationships has become a critical competency for publishers.

As important as ad networks have become, it is likely they will grow in influence as digital technologies continue to evolve. Digital ad networks are spreading beyond the Web to mobile platforms and even to television. As their influence grows, they are generating new questions about user privacy and driving disruptive changes in the business model supporting online content.

Powered by technologies that enable ads to be served dynamically based on previous consumer behavior and real-time feedback, networks are helping make online advertising more measurable, accountable and personalized. But these capabilities can often benefit advertisers more than publishers. Among four publishers studied for the Interactive Advertising Bureau, the average revenue from ad networks (measured in CPMs, or cost per thousand impressions) was one-sixteenth the revenue generated by ads sold by the publisher’s sales staff.

A driving force in the growth of online ad networks is their capacity to target advertising based on individual users’ behavior rather than content topics or a site’s overall demographics. Ad networks enable publishers to play in this potentially profitable arena, pooling their audiences with others to achieve the scale required for successful behavioral targeting. However, being part of a network can require publishers to cede user knowledge to the networks, which track people across many sites. Behavioral targeting also has raised concern among consumer advocates and government regulators who think the networks haven’t given users enough control over the use of data about their online usage patterns.

For publishers, managing network relationships effectively is becoming a competitive differentiator. New technologies also are creating opportunities for publishers to form – not just join – ad networks. Among the name brands that have recently launched their own online ad networks are Martha Stewart, Forbes and CBS.

This report provides rich context for understanding the impact of online ad networks as well as practical advice for how publishers can and should more actively manage

network relationships. Among the suggestions for publishers:

- Devote staff time and technology investment to tracking and optimizing your advertising revenue and your use of networks;
- Pay more attention to your ad inventory, understanding which ad positions are worth the most and which ones you should sell yourself rather than turn them over to a network;
- Understand your core advertisers – and serve them better than the networks can. You'll generate higher prices selling ads directly than by relying on networks, and you may have opportunities to help them (and your business) by creating networks of your own;
- Consider partnerships that leverage complementary strengths, such as the Yahoo!-newspaper partnership that promises to generate new revenue for both Yahoo! and the hundreds of participating newspapers.

Ad Networks: Setting the Stage

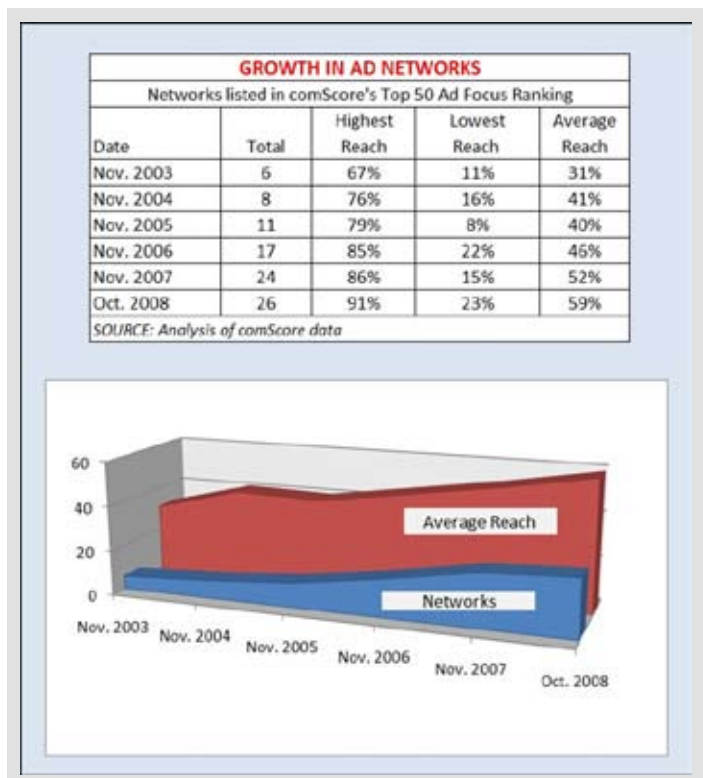
Online advertising networks are full of contradictions.

They're an essential source of revenue for thousands of tiny Web sites – and yet also a sign of the clout of giant Internet companies. They're all about building scale, even as they bring targeted ad messages down to the level of the individual user. Although they've given almost every page on a publisher's site some monetizable value, they're often blamed for undermining the revenue of quality content sites.

Networks are giving established media like newspapers, magazines, TV stations and their Web sites another product to sell, while enabling just about anyone with a Web site to gain easy access to revenue. They can eliminate the need for small start-up publishers to employ their own sales forces, while requiring new levels of sales and operational complexity for bigger organizations.

Increasingly, ad networks are defining the future of the online content business. In a survey of seven major online publishers, the Interactive Advertising Bureau (IAB) found that the share of ad inventory delivered by networks rose from 5 percent in 2006 to 30 percent in 2007. And for many marketers interested in reaching the largest possible online audience, networks have become the first option. This trend shows up clearly on comScore's Ad Focus list of the top 50 online advertising vehicles:

- In 2003, only six ad networks made the top-50 list, reaching an average of 31 percent of U.S. online users.
- Today, networks dominate the list. Just over half of the top 50 are networks (26), with the average reach at 59 percent.
- The top network reaches nine in 10 Internet users, and even the smallest of these 26 networks reaches a quarter of the online audience.



The implications for publishers are enormous. While ad networks are a boon for marketers – making it possible to reach vast audiences through a single network buy – they often generate just a fraction of the price that a site might earn by selling ads through its own sales force. The IAB study last year found that ad networks generated just six to 11 percent of the revenue per ad impression of directly sold banner ads. The IAB report, written by consultants Bain & Co., warned that publishers were in danger of harming their premium brands and “risking severe price erosion” by creating so much inventory and giving up so much to intermediaries. For publishers, Bain said, managing network relationships properly will be critical to business success. (See “Navigating the Networks: What Publishers Should Do,” p. 33.)

Ad networks also have significant implications for online users. Because ad networks follow behavior across multiple sites, they can end up having more information about users’ habits than any one site can gather. This realization has aroused the interest of legislators and regulators, as Congress and the Federal Trade Commission have begun looking into the practices of online ad networks. Critics say ad networks are improperly gathering information about users’ online behavior and are not making it easy or obvious for consumers to opt out. (See “Emerging Frontiers: Technology, Privacy, TV,” p. 29.)

On the most fundamental level, ad networks can disrupt the business model for ad-supported content. Traditionally, publishers made money by assembling and distributing a product – a newspaper, magazine or broadcast program – and selling the ads that accompanied the content. The growth of ad networks suggests that the model for making money online will be, or at least can be, different: assemble an audience across multiple sites, collect information about users’ online behavior and apply that knowledge to deliver the most lucrative ads to each user. (See “Targeting: Beyond Demographics,” p. 15.)

Beyond the implications for Web publishing, there is evidence that the ad-network model will transform other media, especially television. With traditional broadcast technology, the companies that controlled the spectrum (the networks and their affiliates) also controlled the sale and distribution of advertising. New technologies, including digital video recorders (such as TiVo), digital broadcasting and on-demand cable, are starting to allow advertisers to deliver different ads to different users watching the same program – the same capability that’s driving the growth and influence of ad networks on the Web.

The Network Landscape

Advertising networks are a hot topic in online media today, but they aren't a new concept. The aggregation of advertising inventory from multiple organizations into an easy-to-buy package with superior reach has long been a key to the success of broadcasting (networks made TV the nation's biggest advertising medium) and has helped stem erosion in newspaper revenue (the Newspaper National Network has generated new ad revenue by selling advertisers into multiple print markets).

Online ad networks were originally viewed by advertisers and their agencies as an alternative to advertising on the big portals. That has changed, especially after a string of high-profile acquisitions over the past two years. AOL's collection of ad networks – including advertising.com, Tacoda and Quigo – reached 91 percent of online users in December, adding nearly 60 million users on affiliate sites to AOL's own reach, according to comScore. Yahoo!, which acquired technology leader Blue Lithium and is building a network with a consortium of local newspapers, touches 87 percent of Internet users, or about 20 million more than it would have without its networks. Microsoft, Google and a few other independents also run massive ad networks.

Powered by technologies that enable ads to be served dynamically based on previous consumer behavior and real-time feedback, networks are helping make advertising measurable, accountable and personalized. There are hundreds of online ad networks, some with narrow content focus (for instance, the Jumpstart network of automotive sites) and others aimed at touching the largest number of consumers possible (such as the massive Advertising.com, now owned by AOL).

New networks and new technologies keep entering into the market.

- Cox Enterprises recently bought Adify, a company which provides the tools to publishers to create networks of their own.
- Four major newspaper groups funded the creation of QuadrantONE, a network aimed at attracting more premium-price advertising to newspaper Web sites.
- Local-market-focused Centro recently acquired Real Cities, a newspaper-focused network, from McClatchy.
- As dozens of new networks compete for distribution from publishers, start-ups such as the Rubicon Project are building solutions to help publishers manage them.
- And a number of established media companies have formed their own networks – Turner, Martha Stewart and Forbes, among them.

What’s behind the growth and expansion of networks?

For one thing, too much advertising inventory. Unsold ad space on a Web site is a powerful incentive to join a network or start one. And since some networks attract ads at rock-bottom prices, the presence of low-revenue “remnant” networks stimulates publishers’ interest in new networks that can command higher prices.

Too little ad inventory can also result in the creation of networks. For a site that has a healthy advertising base of its own, creating a network can provide a new revenue opportunity by placing ads on other sites. And some new networks – such as the ones that bring ad links directly into articles – are seeking to create valuable ad positions that otherwise wouldn’t exist.

Other factors driving the growth of ad networks:

- New interactive formats: Blogs, podcasts, RSS feeds, widgets, mobile and video all present new opportunities for new types of ads in different formats than conventional text-based Web sites. Different technology infrastructures often demand specialized solutions to deliver the personalization and measurement features that advertisers expect from interactive advertising.
- Marketing as science: With measurability taking center stage in planning and executing media campaigns, there’s an escalating demand for solutions that promise superior returns on advertising investment. Technology solutions that help deliver advertising to more precise targets and measure its effectiveness are continually welcome.
- Investment potential: The hunger for advertising innovation spurs the funding of start-up companies that can pioneer interesting technology twists or new marketing concepts. Most may be unsuccessful, but a lucky few will fetch a high price in an eventual sale to a larger Web company that can incorporate the smaller firm’s technology, people or customers into its own suite of offerings.

The Rise of the Networks

Until a few years ago, unsold ad inventory on a Web site was pretty easy to spot: that’s where the “house ads” promoting the site’s own content and products were. Through the Internet bust of the early 2000s, a visitor to a typical local news Web site might have seen one or two house ads per page. The reasons: Local advertisers were slow to come online, national advertisers focused mostly on the biggest sites, and early networks such as Real Cities that focused on representing specific sites didn’t sell enough ads to fill all the holes.

What changed was the acceptance of networks that delivered large volumes of low-priced advertising, often for omnipresent direct-response advertisers such as classmates.com and University of Phoenix. These networks sell in enormous volumes and can cut deals with sites that virtually guarantee that almost any standard-size ad spot can be filled.

In 2006, only about 5 percent of available publisher site inventory was being handed over to networks to sell. By 2007, that exploded sixfold on sites studied for the IAB. Growing awareness by national marketers that the Internet had become a viable advertising medium helped fuel growth in networks and an abundance of ads looking for a home.

These “horizontal” networks – often labeled as “remnant networks” by publishers – are now brokering tons of ad impressions from revenue-hungry sites. A site may opt out of certain types of advertising (such as from competitors or key clients). Participation is easy: a site just signs a contract and configures its ad-serving software to fill unsold space with ads automatically fed by the network. Although the rates are substantially less than an ad sold locally or a national ad delivered by a media buyer such as Chicago-based Centro, they provide a steady stream of revenue.

The upshot: almost any Web page can now attract at least a little bit of revenue. But it often is only a little bit. Ad revenue (measured in CPMs, or cost per thousand impressions) is much smaller from network ads – at least, those from the horizontal or “remnant” networks – than from a publisher’s own sales. Four publishers studied by Bain & Co. for the IAB averaged only \$0.85 CPM from the networks versus \$13.35 CPM from their own ads in 2007 – or one-sixteenth the average price. And despite turning over 25 percent of inventory to the networks, income

LOCAL V. REMNANT NETWORK			
<i>CPMs at selected sites for locally sold vs. network delivered ads.</i>			
Company	Direct	Network	Ratio
A	\$15.30	\$0.90	17-1
B	\$7.50	\$0.80	9-1
C	\$6.10	\$1.10	6-1
D	\$24.50	\$0.60	41-1
Average	\$13.35	\$0.85	16-1
Notes:			
Ad inventory given to networks: ~ 25%			
Revenue from ad networks: < 2%			
SOURCE: Bain/IAB			

from those ads comprised less than 2 percent of all revenue, said the [IAB/Bain Digital Pricing Benchmarking Study](#) released in late summer 2008.

“Our industry is at an important juncture and now is the time for publishers to adopt strategic approaches to the use of ad networks who themselves have become critical players in the digital ecosystem,” said Sherrill Mane, the IAB’s senior vice president, industry services. (See “Navigating the Networks: What Publishers Should Do,” p. 33.)

As networks have matured, more national advertisers have made them a part of their ad buys. They remain more popular with direct-response advertisers than with brand advertisers, who often are more concerned with delivering their brand’s message within a trusted site and adjacent to appropriate content. But because they are easy to buy and can deliver large audiences at low costs, they have become a reliable tool for many advertisers and agencies.

Here’s how the horizontal or remnant networks work: Publishers make available their excess (known as “remnant”) inventory to the networks, who typically pay on a cost-per-thousand impression basis for the ads they run in those slots. In many cases, advertisers pay the network on a “performance” basis, that is, only when a user clicks on an ad, makes an inquiry about a product, etc. A network’s ability to widen the gap between those two models – say, to drive higher click-throughs through bold creative or improved targeting – is where they make their profits.

The largest (and cheapest) networks generally sell on a “blind” basis, with the specific sites upon which an ad will appear unknown to the advertiser. But a growing number of specialty networks now make their affiliate lists public. There’s an ongoing push-pull over just how blind some networks are or should be – with advertisers generally craving “transparency” (wanting to know what sites will display their ads) and publishers often resisting the disclosure that their sites can be bought more cheaply than by going through their own direct sales staffs.

Some sites won’t deal with networks, contending that they are merely back doors for advertisers to buy their sites at a discount and undermine the economics of content-rich sites by commoditizing their ad space. In March 2008, for instance, ESPN announced that it would stop using networks to fill unsold inventory. Still, ad networks play an increasingly important role for most sites and new ideas are coming to market that better serve specific publisher needs.

Behind the growth of ad networks is increasingly sophisticated software that in a fraction of a second can simultaneously serve millions of ads, each customized to a specific set of attributes associated with the consumer, the publisher and/or the advertiser.

This happens after a mind-boggling, split-second communication loop between multiple Web and ad servers operated by publishers, multiple ad networks and advertisers themselves. In the process:

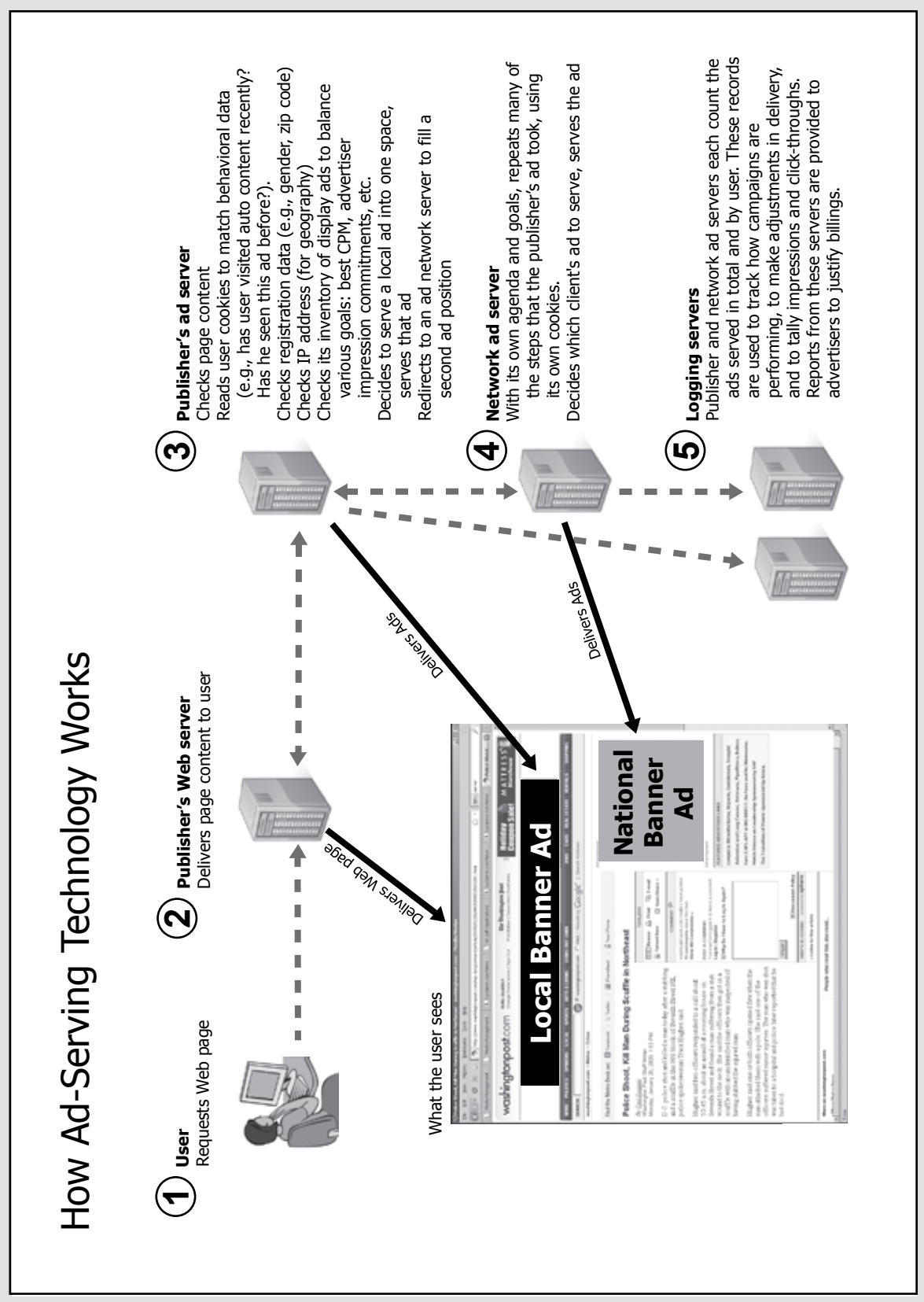
- “Cookies” on the user’s computer are read (enabling servers to tell, for instance: What ads have been seen in the past hour, day or week? What sites have been visited? Is this the first time on this site today? Is there any demographic information stored?) and updated.
- The content and/or the page being looked at is assessed to identify its subject matter.
- The user’s IP address is examined to figure out what city she is in; what page she was looking at right before; and what kind of browser she’s using.
- The servers determine whether there is enough information to target a particular ad, based on the user’s behaviors, history and demographics, or whether to hand off to a lower-CPM network because there isn’t enough targeting information to justify a higher-CPM ad.
- The servers also check on ad inventory and which ads have the highest priority to be used because a campaign is falling behind its delivery schedule, or time is running out, or supply and demand are out of kilter and CPMs are rising or falling.
- Appropriate ads are served.
- Invisible digital “beacons” that track ads and transmit other page and user information to third parties are served.
- Finally, each ad server logs which ad was displayed and whether the user clicked – and then updates the user’s cookies to reflect that.

(See p. 14 for a graphic representation of this process.)

Ad servers often do all of this simultaneously for multiple ads on a page. “The decision-making process is real-time and very dynamic,” says Sharon Mandell, a newspaper technology veteran who now heads technology for BlackArrow, a start-up that is building ad insertion software for video media. “You have technology to really drive value in ways you couldn’t in more static media like print or linear television.”

In that whole technology process, the publisher’s goal is simple: make the most possible money from an ad. The network has the very same goal – for itself. And the advertiser, naturally, wants to reach a potential customer for the lowest cost possible.

Both buyer and seller want to optimize performance – with the advertiser seeking the best assortment of ad positions for its money and the publisher seeking to get the highest CPMs for the ads served on its pages. Through techniques that are increasingly automated – but in some important ways still use human intervention – the buyer’s systems are continuously monitoring a campaign’s performance and funneling ads to the sites (and places within a site) that deliver the highest return on investment. Meanwhile, the seller’s systems are seeking to display ads that offer the best financial returns for the site.

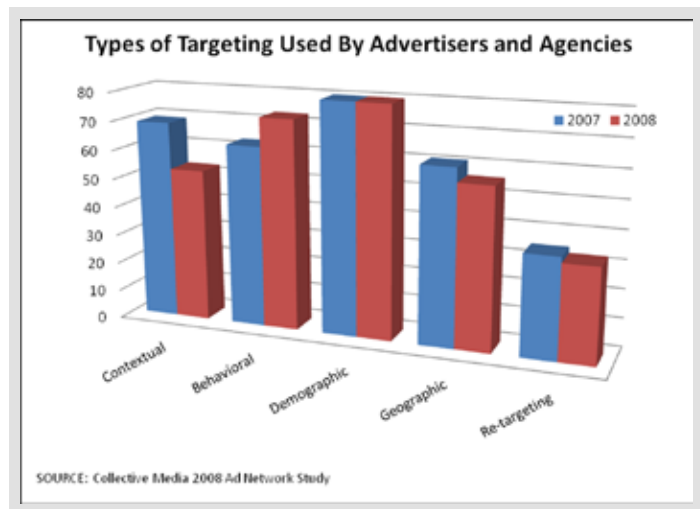


Targeting: Beyond Demographics

The growing impact of ad networks is due in large part to the way Web technologies allow the assembly of massive amounts of data about content and consumer behavior. This data can make traditional media’s demographic approach to ad sales and targeting – e.g., “18-49s who live in Ohio’s major markets” – seem quaint.

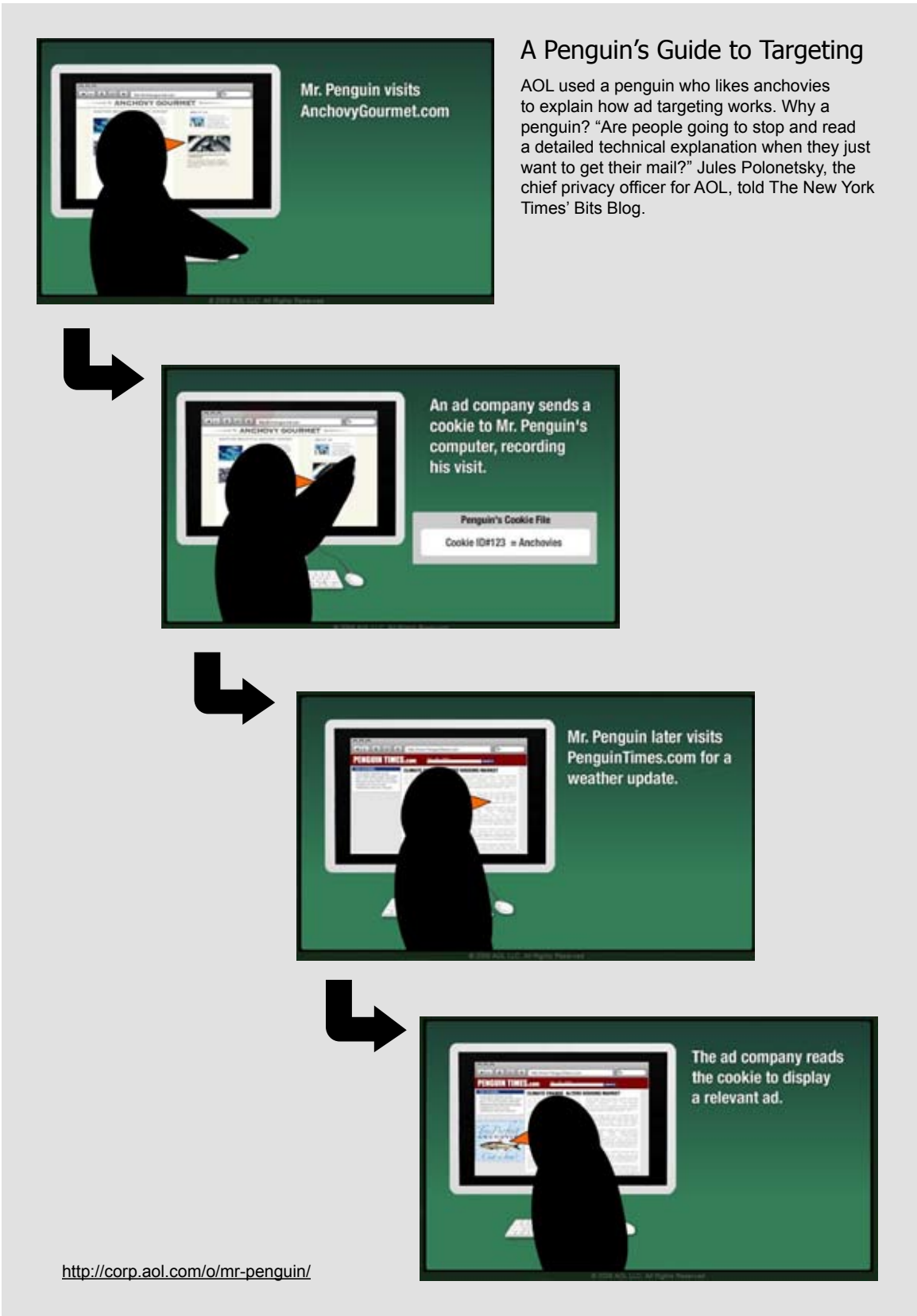
Networks can target consumers in multiple ways – contextually (based on the content being consumed); behaviorally (based on recent online activity or habits); demographically (age, gender, income, etc.); geographically (city/state/region/country); and through “re-targeting” (making a repeat pitch to someone who reacted to an earlier ad).

Contextual targeting can be based on a Web site’s structure: for instance, travel ads can be sold on the travel section of the site. But some ad-serving tools go much further. The software can analyze the text content of a page and instantaneously serve up a relevant ad – a fact most obvious to consumers who see sponsored text links adjacent to similarly themed articles on the thousands of editorially driven sites that are part of Google’s AdSense network.



Behavioral targeting may be less obvious to consumers. For instance, you might poke around an automotive or travel site and later get served an ad on a news site for a specific car or hotel based on your previous surfing behavior elsewhere. Behavioral targeting uses a digital consumer’s past online behavior on a site or across a network to determine which ads and/or types of ads to deliver. Those behaviors might include seeing and/or clicking on ads; consuming specific content or categories of content; searching on specific topics; or filling out a form to download something. What powers behavioral targeting is constantly updated history information stored in local hard-drive cookies.

Behavioral targeting is increasingly important in online advertising (up 16 percent from 2007 to 2008, according to Collective Media). By 2011, eMarketer projects that



behavioral advertising will approach 12 percent of all U.S. online advertising – nearly \$4 billion per year. For news sites, behavioral targeting has the potential to substantially raise online revenues.

While modern print newspapers and local TV newscasts have commanded premium pricing from advertisers because of their large audiences of higher-income consumers, online news pages are often perceived as less attractive to advertisers than more specialized content environments. That's where publishers hope behavioral targeting will provide an antidote. Ralph Terkowitz, a longtime Washington Post executive who now invests in media start-ups, argues that the economic value of the individual article has been turned upside down on the Web. In print, big stories with broad appeal would boost circulation and thereby allow papers to charge more for advertising. But with CPM-based pricing, a Web page featuring a big story with broad appeal may be less valuable to an advertiser than a page of specialized content that attracts an audience likely to click on its ad.

“Those high-frequency, low-specificity pages like the blockbuster story have a lower CPM because they have less predictability for the advertiser. So you have a real transition for a traditional publisher,” says Terkowitz. “What used to be their most valuable content on a per-page basis may now be their least valuable. Without behavioral targeting, those pages are substantially less valuable. With behavioral targeting, you have the potential to be as valuable.”

Advocates of behavioral targeting say that the key to making these pages more valuable is getting advertisers to focus not on their content, but on the individual readers they deliver. If behavioral targeting enables the total audience for a news page to be parsed into segments advertisers care about – people likely to buy SUVs, people likely to buy hybrids, people likely to vacation in the Caribbean – they can be sold at the higher CPMs associated with those behaviors rather than the lower CPMs of all-purpose news. And the mass appeal of a big story again becomes an asset, because the site now has a larger audience to parse into segments.

Some key sub-categories of behavioral targeting:

- **Re-Targeting:** Connecting again with a user who shows sales potential, such as someone who clicked on an ad previously or was somehow exposed to the advertiser's brand, content or message. Example: someone who clicked through an ad to Amazon.com, but didn't buy anything.
- **Cluster:** Targets users whom the network determine belong to a cluster, or segment, based on behavior (think Hockey Moms, Technology Mavens and Active Gamers), based on the sites or content that have been visited, frequency and duration of visits, etc. Can be used in combination with other strategies, including demographic and geographic.
- **Custom Business Rules:** Advertiser mixes and matches clusters and behaviors and makes up custom segments.

- **Predictive Attributes:** Uses proprietary algorithms to predict behavior of those in a cluster or segment.

An individual site can do some degree of behavioral targeting on its own, such as targeting a homebuilder's ad to a reader on a news page who previously visited the site's new homes section. Some larger local newspaper sites and group owners have these capabilities, although few are using them today for more than a handful of local customers.

The bigger opportunities, though, require a larger audience than a typical newspaper, station or magazine site can muster. The smaller the site's audience, the tougher it is to parse it into narrowly targeted segments. So as advertisers become more enamored of behavioral targeting, networks become more important to them – both as a source of more data about consumer behavior and a wider and more diverse set of environments to deliver ads based on that data.

In theory, that's good for a small or mid-size Web site, because it might now have the opportunity to serve an advertiser that otherwise would find it too small to buy or possibly even know that it exists. But there are risks as well. By participating in a behavioral targeting network, a site can enable the network to know more about its users than the site does. Without appropriate technology and attention by management, sites that participate in networks can let those networks extract most of the available ad revenue from their user base.

Other forms of targeting include demographic, geographic and site-specific. This targeting is based on characteristics such as zip code, age, gender and income (known as ZAGI in the trade); residence and/or current location; and other lifestyle traits that can be tracked, determined, inferred or modeled.

Geography can be determined in a number of ways: for instance, by reading a user's Internet IP address; through information provided by a user during contests, registration, etc.; based on geography of a publication, such as a daily newspaper; or interpreting terms used in a search, such as zip code or city name. A national retailer might use geographic targeting to accommodate different pricing structures, inventory or seasonal focus in different markets.

Site-specific targeting gives an advertiser the ability to select and target specific sites or subsections. "By enabling advertisers to target a specific ad to a specific site, they can precisely communicate with people who will likely be most interested in their product or service," Google says in explaining why it offers this option in AdWords.

Imagine a company that wants to advertise lip balm. Each targeting approach could be used to reach consumers most likely to be interested in the product:

- Contextual targeting to deliver ads on stories about cosmetics, skin care or downhill skiing;

- Behavioral targeting to reach users who have visited outdoor activity sites, or searched the Web using the term “dry lips” in the last 30 days;
- Geographic and site-specific targeting to place ads on sites in cold cities in January (StarTribune.com) or in sunny, dry places in July (LasVegas.com).

Pricing Models for Online Ads and Networks

CPM MODEL

CPM: Cost per 1,000 ad impressions. (Roman numeral M for 1,000). Preferred pricing method for publishers because it is predictable.

eCPM: “Effective CPM” is a measure used by publishers to translate non-CPM models – such as per-click, per-action, flat sponsorship fees – into a comparative cost-per-thousand figure. Example: In 100,000 ad impressions, a CPC ad was clicked 100 times at \$5 per click. Revenue (\$500) / Impressions (100,000) / 1,000 = \$5 eCPM. Some publishers also calculate an eCPM after deducting cost of sales, commissions, etc.

PERFORMANCE-BASED MODELS

CPC/PPC: Cost per click or pay per click. Revenue is generated only when a user clicks on the ad. Preferred by many advertisers.

CPA/PPA: Cost per action or pay per action. Revenue paid when a user completes an action such as a download, registration, contest entry or newsletter signup.

CPL: Cost per lead. Revenue for the publisher only when a clickthrough generates a lead for the advertiser, such as filling out a form at a car dealer specifying the model of car being sought and providing contact information.

CPE: Cost per engagement. Like CPA, with a twist. Advertiser pays only when a user engages with an ad. Example: A user rolls over a Flash ad and watches a video ad that begins with the rollover.

NOTES

Performance-based advertising, such as CPC and CPA, surpassed CPM as the top model in 2006, according to IAB data. In the first half of 2008, performance-based advertising had a 52 percent share. CPM pricing had 44 percent and hybrid sales (a combination of the two) had 4 percent. Full figures are available from www.iab.net/media/file/IAB_PWC_2008_6m.pdf.

Networks might buy inventory from publishers on a CPM basis but get paid on a performance-based model by an advertiser.

The Publisher-Network Relationship

As users visit sites, their browsers collect markers – cookies and “beacons” – that sites, marketers and networks apply to keep track of a user’s exposure to their services and messages. The user may not be able to be identified by name but can be recognized by previous behavior. The markers can be used to trigger another action on a future visit – to any site in the network.

For example, a retailer may be able to identify users who were previously exposed to an ad – or those who have already visited its online store. Working with an ad network, the retailer can deliver different ads based on the user’s previous exposure or online activity. An advertiser can cap the frequency of its advertising to any single individual across all of the sites that are running the ad, or even change the copy for an individual who has already seen the ad multiple times and hasn’t clicked on it.

Consider a hypothetical local Web site that has a robust content section on regional snowmobiling but is in most other ways a typical local news site. It’s able to sell advertising on those pages to local businesses interested in reaching snowmobile enthusiasts – and it is likely to be able to sell those ads at prices (perhaps a \$12-\$30 CPM) that are 10 to 100 times what a national advertiser would pay for delivery of a large, relatively undifferentiated online audience. This is also a higher CPM than it gets in its general news or general sports pages, which usually have lots of unsold inventory even when ad space in the snowmobile section is tight.

The local site’s snowmobiling audience is probably too small by itself for a national advertiser to be worth the time and trouble to arrange for an ad buy – especially when it can reach snowmobilers through a network or large national site devoted to winter recreation. By joining a network, the local site may be able to get some of those national ads, although at a much lower CPM than it can sell directly to local advertisers. But if it has inventory it has been unable to sell to local advertisers, it can still make at least some money by working with a network. And if it’s a targeted network, it will receive a higher CPM than that from a remnant network.

Relationship Models

Simple arbitrage: Network buys inventory from a publisher and resells at a higher rate to advertisers, often using behavioral targeting to generate higher prices than a single publisher can charge.

Arbitrage (price model): Network buys inventory from a publisher on a CPM basis, then sells the space to advertisers based on cost per click (CPC), cost per acquisition (CPA) or cost per lead (CPL).

Revenue share: Publisher sets aside certain inventory for the network, which pays the publisher a share of the revenue it receives for selling the space.

Rep firm: Network sells advertising on behalf of a publisher in return for a commission on the sale.

On the down side, as a byproduct of allowing the network to serve ads on its snowmobiling pages, the local site has enabled the network to identify its snowmobile audience. The network could use that data to target them no matter what network site they visit, providing yet another reason for big national advertisers to avoid dealing with smaller sites. Even worse, the site itself may not have the skills to track snowmobile enthusiasts on behalf of its own local advertisers and thereby use behavioral targeting to boost the revenue potential of its news and sports inventory.

Publishers that are affiliates of networks also face the possibility that they may not be as highly prized as affiliates as they'd like to be. Networks and their media-buying clients are constantly monitoring performance of individual ads and individual sites, shaping and reshaping their campaigns with a speed not possible today in any other medium. It's called optimization – and both advertisers and publishers are using increasingly sophisticated optimization tools.

Sticking with our snowmobiling theme, consider the hypothetical case of a national recreational vehicle retailer that has placed premium-priced advertising with several key sites that cater to enthusiasts but wants to increase its reach to holiday gift-givers with a low-cost buy through a general-purpose ad network that sites use to fill up their remnant inventory.

For starters, it would probably do some basic geo-targeting, asking the network to serve different ads to different people depending on where they live. Geo-targeting can be accomplished without knowing the user's identity by translating the IP address of the user's computer. Wisconsinites get snowmobile ads; Texans get ads for ATVs. Colorado residents may get both.

Once some of the basic targeting criteria are established and the campaign begins running, the optimization begins. The performance for each size and creative message is likely to be tracked separately. If, for example banner ads are generating more click-throughs for snowmobiles and tall vertical ("skyscraper") ads are working better for ATVs, the mix will be adjusted to reflect those results.

Tweaking and tinkering with creative to optimize results on individual sites is growing. Perhaps the Colorado site will get more snowmobile ads than ATV ads during the morning if that's the way the clicks are falling. Or its weather pages may get more snowmobiles and its music pages more ATVs, or its news pages more snowmobile banners and its business pages more snowmobile skyscrapers.

Or maybe it will be eliminated from this campaign entirely if other sites prove to be more effective at producing click-throughs. A network's willingness to remove poor performers from an advertiser's campaign is considered by some media buyers to be an element of good customer service.

In the near term, the publisher is unlikely to notice the ad is gone – if it ever even noticed the ad was there. The volume of network advertising, the automated nature

of its delivery and the rapid turnover of individual campaigns combine to make advertising virtual wallpaper to site managers – until the network begins sending smaller monthly checks or seeks to renegotiate the site’s revenue share downward.

Publishers, too, can adopt optimization strategies – and these strategies are likely to become increasingly important as networks proliferate and sites become affiliated with multiple networks. (This is an area where the IAB/Bain report recommended more attention.) In filling the tagged spots on a page designated for advertising, the ad-serving software is usually programmed with a set of rules designed to maximize revenue. Ads that are sold with delivery guarantees (X number of impressions promised in a certain period of time) take precedence over ads sold on a space-available basis. Ads yielding high CPMs are given higher priority than low CPMs.

More sophisticated yield-management software and services for publishers are emerging, with companies such as The Rubicon Project, PubMatic and YieldBuild helping publishers filter the noise, complexity and breadth of ad network options in the chase for maximum CPMs. Most importantly, they do on-the-fly “multivariate” testing on ads – seeing which combination of networks, ads and ad positions yields the highest revenue. They also have reporting suites so publishers can more closely monitor performance.

Self-managing and optimizing ad networks is a process that “blends the automated sophistication of a hamster on a treadmill with the operational simplicity of a Rubik’s Cube,” interactive media consultant Doug Wintz wrote on [iMedia Connection](#). Optimization software, Wintz wrote, allows “publishers to retire the hamster, throw away the Rubik’s Cube and keep resources onshore.”

Following the Money

Trying to pin down real-world prices to compare different types of online ad networks is difficult. Competitive and contractual issues all along the food chain are the obvious reason there seems to be a paucity of specific comparative data. But here are some basic rules of thumb:

- ▶ The highest prices are generated by a publisher’s own sales force, selling directly to advertisers with a strong (and often longstanding) relationship with the publisher. A good example: ads on local newspaper sites, sold to local businesses. These ads can bring CPMs of \$10 and up – 5, 10 and even 30+ times as much as networks.
- ▶ The lowest prices are paid by the horizontal or “remnant” networks – generally less than \$1 CPM.
- ▶ Vertical networks tend to outperform horizontal networks.
- ▶ Behavioral targeting can give network CPMs a 2-3x or greater lift. Collective Media’s CEO cites 5x.
- ▶ Premium inventory reserved for networks and rep firms easily trumps remnant CPMs.
- ▶ Using exchanges, a careful, deliberate mix of networks and aggressive yield management can help raise network and local CPMs.
- ▶ General network text ads on section and story-level pages seem to be in line with general display ads, with CPMs in the \$0.50-\$1.10 range.
- ▶ On premium pages such as Travel and Entertainment, those ads might ramp up to \$2 to \$3.
- ▶ Text ads on search results pages can be dramatically more profitable – on average in the mid-teens, according to one publisher interviewed.
- ▶ Video ads can command \$25-\$50 CPMs, but with a still-insignificant number of streams on most sites, this is not a major revenue source for most publishers.

Ad Network at a Glance



Yahoo! Publisher Network

- ▶ Began as a “content match” network to rival Google’s groundbreaking AdSense.
- ▶ Serves text ads on thousands of publisher sites from tiny to enormous, based on the context of the content and, with recent enhancements, “insights from users’ geographic and behavioral profiles.”
- ▶ Morphing into a one-stop display ad solution for publishers that handles their ad operations and reporting, and targets, bids and serves ads from the publishers on the home site, Yahoo! and other sites in the network. Advertisers and agencies have access to similar tools on the platform.
- ▶ A network of particularly keen interest to newspaper publishers, in that a large number have aligned themselves with it and will not only be participating in the content network and its sibling bidding exchange network, but also using its tools to sell and serve their own display ads.
- ▶ A new set of tools (known as APT) is rolling out first to members of that 800-paper Newspaper Consortium, which includes such companies as MediaNews, Hearst, Belo, McClatchy and Scripps.
- ▶ APT’s behavioral and demographic targeting capabilities, fueled by the habits and demographics of Yahoo!’s huge audience, are of great interest to publishers, with hopes that they will lead to more – and more lucrative – sales.
- ▶ Consortium members can use the APT tools to sell on their sites, Yahoo!’s sites, and others in the network. The network also acts as an exchange, through Yahoo!’s RightMedia, letting publishers and advertisers bid for space and ads.

The drive toward commoditization inherent in big networks hasn’t squelched the desire for publishers to reassert the importance of site quality and adjacent content in making an ad produce results for an advertiser. The Online Publishers Association, an organization of Web sites affiliated mostly with print and TV brands, recently released research offering evidence that ads on its member sites score significantly higher than network-delivered ads in key measurements of consumer appeal and intent to purchase. The [OPA research](#) also found “considerable” erosion of effectiveness of ads from ad networks in recent months.

New Network Opportunities

The desire to push ad prices higher has awakened publisher interest in building or joining networks that are organized around content affinity. By offering more advertisers more transparency about where their ads are running, more prominent positions within the sites and purportedly more appealing audiences, these networks aim at achieving premium pricing. Two examples of this movement are Cox Enterprises' acquisition of Adify, whose software lets publishers create and manage their own networks, and automotive-focused publisher Hachette Filipacchi's purchase of JumpStart, an auto-focused vertical ad network.

"These networks are not about remnant, unsold inventory," says Joelle Gropper Kaufman, vice president at Adify.

"Placing an auto ad on content about cars has a higher probability of getting a higher engagement because that's what the consumer is interested in," Kaufman says, arguing that content networks offer more value than either broad-reach, low-CPM networks or their more behaviorally targeted cousins. "Behavioral targeting will say 'Oh, that's a car consumer and we'll target them on a pregnancy site,' except when you're on a pregnancy site you're usually not looking for a car."

"People have a higher affiliation with a brand that advertises on niche sites that meet their interests. The problem is there isn't an advertiser on earth who has the time and money to find, contract, engage with and measure the 500 niche sites that they need for any particular campaign," Kaufman says.

One of the most prominent examples of a vertical content network is Glam Media, which has put together hundreds of fashion and lifestyle Web sites and blogs that collectively reach about 75 million users worldwide, two thirds of them in the U.S. Glam started out as the site glam.com, but morphed into a network that mixes company-owned sites with affiliates as a way to build heft with advertisers.

Glam executive vice president Scott Schiller stresses the importance of size. "At a million to two million [users per month], you earn a seat in the dining room. At five million, you earn the appetizer. When you get above 10 million, you get a little dinner too. But you don't get invited to the whole meal until you really get into the top 100 or top 50 sites (as measured by Web ratings firms) and that happens at the 10 to 15 million level."

Among the name brands that have launched their own networks are Martha Stewart and Forbes. Even some local newspaper site managers are evaluating concepts for creating local networks that turn small competitors into affiliates. CBS earlier this year

launched a local network in markets where it owns local TV affiliates. It is powered by Syndigo and syndicates content widgets, with ads, to local blogs and sites that choose to participate in return for a revenue share. Lifetime, the cable network and operator of mylifetime.com, joined with Glam to build an online network that could serve as an outlet for online advertising sold in tandem with TV sales. “Our primary goal was for us to have like inventory to expand our reach when we have these kinds of cross-platform deals,” says Jason Revzon, the former Lifetime development executive who spearheaded the deal.

The ability of well-established media companies to sell online ads in their core markets was also a key driver in the deals struck between Yahoo! and 30 newspaper-owning companies that comprise about a third of U.S. newspaper circulation. Members of The Newspaper Consortium have access to Yahoo!’s targeting tools and will be able to sell ads reaching local users on Yahoo!. The deal benefits both the newspapers (which typically attract just 10 to 30 percent of local Internet users each month and can now offer local advertisers exposure to 80 percent of users through Yahoo!) and Yahoo! (which doesn’t have dedicated local ad sales staffs to call on local businesses).

“Yahoo! has more inventory than they know what to do with. We certainly know what we can do with it,” says Rusty Coats, who piloted Media General’s implementation of the Consortium program and now heads the interactive group at Scripps Newspapers.

For Yahoo!, the deal has the potential to increase the value of undifferentiated national inventory by turning it into higher-priced local inventory sold by the newspapers’ local sales teams. “Finally, someone comes up with a business model to take advantage of the fact that the local inventory is overpriced and the sales force can be put to work selling inventory that is underpriced,” says Dave Morgan, the former newspaper industry lawyer who helped shape the online advertising world as the founder of Real Media in 1995 and Tacoda Systems in 2001.

For the newspapers, the deal brings the ability to offer more reach and more targeting in key categories like local automotive. Coats notes that previous efforts by many newspapers to do behavioral targeting were unsuccessful because they lacked Yahoo!’s strong reach within a market. “That makes behavioral targeting actually work, because you actually do have scale.”

Most of the newspaper sites in the Consortium are also affiliated with quadrantONE, a new network owned by Gannett, Tribune, Hearst and New York Times. QuadrantONE’s aim is to enable advertisers to easily buy premium positions on newspaper Web sites. The new network has asked its affiliates to reserve inventory on its sites for quadrantONE’s use that typically wouldn’t be available to lower-CPM networks.

Offering a “frictionless” buy across many newspaper markets is one of quadrantONE’s advantages and differentiators, CEO Andy Ellenthal said. “Historically, it’s been a pain for national advertisers to buy online newspapers. You’ve got to go to Hearst, then Media General, then Lee if you want a handful of markets, or go to a broker,” he said.

“We can do highly promotional advertising that is relevant to that specific market with one media buy. For a pressed-for-time, harried 25-year-old media planner, that’s a pretty strong value proposition.”

For affiliates of both, Ellenthal posits that Yahoo! is an apple to quadrantONE’s orange.

Working with Yahoo! offers publishers access to an ad production platform, along with scale and reach via access to Yahoo! customers’ eyeballs (sell to them on Yahoo! and the local site at a premium) and behaviors (for targeting).

“There’s the potential I guess one day for Yahoo! to be selling newspaper (site) inventory as a premium, but of all the things I’m worried about, that’s not one of them anytime soon,” Ellenthal said.

Others are less optimistic about the opportunity for quadrantONE, questioning whether the difficulties in selling online newspaper sites to national advertisers is a function of the absence of a network or reflects the perceived low value of the sites to advertisers. Among the skeptics when quadrantONE launched was industry analyst Ken Doctor. “The new network may get bigger... as other news chains join as affiliates, but it could still be sub-scale. Importantly, there is no clamor from the ad buyers – to whom power in the marketplace is plainly moving from ad sellers – for a new, local network. “

There are other national networks focusing on selling local news sites to advertisers. The National Newspaper Network, which has bolted an online operation onto its print capabilities, also positions itself as an ad network and Real Cities represented newspaper sites to national ad buyers for many years.

Centro, the media-buying firm that recently acquired Real Cities from McClatchy, has been a key driver of bringing national money into newspaper sites. Founder Shawn Riegsecker – the 2008 winner of the Newspaper Association of America’s “advertising person of the year” award – says that newspaper

Ad Network at a Glance



YuMe Network

- ▶ A pure-play video network that claims to represent 400 sites with 500 million monthly video streams.
- ▶ Recently launched behavioral targeting based on video consumption habits, search history and browsing habits. Also targets ads by category or channel, e.g., sports, technology, health, lifestyle.
- ▶ October 2008 reach was 130 million unique visitors – 68 percent of the US audience, according to comScore.
- ▶ That scale is what differentiates it, YuMe President Jayant Kadambi says. “[T]he dirty little secret about behavioral targeting and video is the networks are not large enough generally speaking until now to get a target that proves a meaningful reach to the advertiser. We believe we have that now,” he told [MediaPost](#).
- ▶ Publishers and sites in the network include Microsoft; NBC Direct; blip.tv; and Expert Village.
- ▶ Serves ads before, during and after videos; as interactive “overlays” on videos; and in branded players.
- ▶ Also offers a video ad-serving platform for publishers (called the “Adaptive Campaign Engine”), letting them optimize local, third-party and syndicated sales.
- ▶ Competitors include Broadband Enterprises, BrightRoll and VideoEgg.

hopes of dramatically escalating rates from national advertisers through networks are probably unrealistic in a highly competitive market like the Web.

Riegsecker's advice to publishers: Price their sites realistically, participate in multiple networks and "implement a network yield optimization strategy or find a partner to help do it for you."

That is how Centro came to trump Real Cities, not vice versa, said Doctor, who was at Knight Ridder when Real Cities was conceived and launched. Underlying technology that can maximize returns and efficiency ultimately beat out a business affiliation. Bottom line: Centro's technology was superior. "Technology is one of the key reasons, I believe, why it's Centro taking over Real Cities, rather than the other way around," Doctor wrote at [Content Bridges](#).

Morgan, the Tacoda founder, agrees that traditional publishers need to focus on what the markets want, rather than merely the pricing they think they deserve. "Better, simpler, cheaper advertising. That's what the market wants," Morgan says. "Better: they want something they can't get elsewhere. Simpler: it has to be something easier to use. Cheaper: It has to cost less than the alternative. It may be 16-cent CPMs or \$16 CPMs, but it has to be cost effective."

Morgan believes there is room for new ad networks carrying premium pricing in exchange for sophisticated capabilities. But he's somewhat skeptical about whether ad networks formed around existing media enterprises can perform as well as pure plays that aren't tied to an ongoing legacy business that still needs focus and attention. "The problem is these people are launching these networks as sidecars to what they see as their core business rather than the primary business they should be in. That's always going to hamstring them."

Emerging Frontiers: Technology, Privacy, TV

As technology pushes the Web in new directions, new networks are forming to take advantage of the changes. Companies such as Third Screen Media are selling ads on mobile devices, and many networks have their sights set on the emerging market for interactive video advertising. Simultaneously, marketers are getting smarter about their targets.

One important frontier in the development of networked behavioral targeting is the acquisition of deeper information about consumer behavior – especially the ability to identify consumers who are in the market for particular goods or services – by using additional information sources, such as external databases not related to online behavior.

The classic opportunity is the consumer who has decided to buy a new vehicle but not yet locked in a specific model. Reaching this consumer at this stage of the buying cycle is highly valuable to a car manufacturer and is the bread-and-butter of general-purpose auto sites, which can serve automakers' ads to their users while they are on their sites.

Portals or sites that have automotive sections can also redeploy data about their users' automotive search patterns to target ads in other areas of their site: automakers can tag users who have visited their own sites and target ads to them through network buys.

Into this picture have stepped new firms such as NebuAd, which has begun signing agreements with Internet ISPs to bring data capture to new levels. By working with ISPs that bring Internet service into the home, they can capture a detailed profile of a consumer's entire Web behavior by recording all of his activity – including the sites visited, ads clicked on and search terms entered.

If ISP-based tracking is widely deployed, marketers will have the ability to use networks to target ads to individuals based on a much richer set of data – including identifying consumers who visited the sites of competitors and other sites with whom they have no direct ties.

“The result,” claims a NebuAd promotion, “is behavioral advertising on a vast scale with a level of relevance that drives significantly improved response and engagement rates across all categories of advertisements.”

It also drives some privacy advocates to raise their level of alarm.

“Consumers do not expect their ISP to be copying their Internet communications and selling them to third parties,” Ari Schwartz, vice president of the Center for Democracy

and Technology, said in a news release. His organization is suggesting that the technique could violate federal and state wiretap laws.

NebuAd takes pains to point out that individual users are tracked only by their behaviors and remain anonymous to NebuAd and its partners. The company says it “adheres to the core principles of transparency and choice,” by being upfront about its services and allowing consumers to opt out of its information collection and ad-targeting by visiting the company’s Web site and having a cookie placed on their computer.

NebuAd’s opt-out policy was scolded at a Congressional hearing this summer about privacy and online advertising. As CNET reported after NebuAd CEO Robert Dykes appeared before a Congressional committee in mid-July:

Texas Rep. Gene Green called NebuAd’s opt-out procedures “contemptible.” To Pennsylvania Rep. Mike Doyle, the practice “goes against everything the country’s been founded on.” Michigan Rep. Bart Stupak wondered: “Why do I have to opt out? Why should the burden be on the American consumer?”...

“[U]nder questioning from Markey, Dykes refused to answer whether he thought an opt-in standard should be applied. “I really must protest... I think you’re forcing me into a ‘Have you stopped beating your wife recently?’” he said. (Markey replied, to laughter: “No, no, no, it’s ‘Have you stopped beating the consumer?’ is the question.”)

Dykes left NebuAd in September and moved to Verifone as senior vice president and chief financial officer. The company, and six ISPs who tried its technology, now face a class-action lawsuit alleging invasion of privacy. The lawyers who filed the suit were those who challenged Facebook on another high-profile privacy issue – its “Beacon” ad program, according to MediaPost.

On the eve of a new administration taking office and predictions that behavioral targeting could become the top privacy issue for Congress, a collection of ad network interest groups announced in early January it was forming an alliance to “self-regulate.” The move was met with skepticism. “This is a transparent attempt to head off any meaningful consumer safeguards for online advertising,” Jeff Chester, executive director of the Center for Digital Democracy, told AdAge.com.

In February, the Federal Trade Commission, in issuing revised “online advertising behavior principles”), endorsed industry self-regulation but declared that “significant work” remains to be done related to privacy protection and behavioral advertising.

“Industry needs to do a better job of meaningful, rigorous self-regulation, or it will certainly invite legislation by Congress and a more regulatory approach by our Commission,” FTC Commissioner Jon Leibowitz said in an FTC announcement. “Put simply, this could be the last clear chance to show that self-regulation can – and will – effectively protect consumers’ privacy in a dynamic online.”

Ad networks also stand to become more important because of the gradual blurring of the lines between Web and television – and the fact that cable operators are also major ISPs.

As NebuAd’s business plan indicates, cable operators already have the ability to discern a vast amount of information about consumer behavior by tracking Web usage. And as companies such as BlackArrow make advertising in video streams more flexible, it’s an easy leap to believe that ads you see adjacent to television programming will soon be behaviorally targeted. Your visit to a Lexus Web site could prompt an Infinity ad in the middle of a television program.

“We’re starting to bring to the video world dynamic capabilities and targeting,” says BlackArrow CTO Mandell. She notes that video consumption is moving away from a broadcast model toward a viewer-controlled experience on platforms as diverse as Web sites, cell phones, cable-on-demand services and digital video recorders like TiVo. “We allow people to sell advertising across multiple platforms through a single interface” and package the video ads in a style appropriate to the distribution channel, Mandell said.

This type of system will enable ad networks to span multiple media, cross-pollinating behavioral data and dynamic ad serving capabilities, and upping the ante for individual media owners who want to be able to provide flexibility and accountability to advertisers. It’s not much of a leap to believe that privacy issues and concerns will grow as well, as targeting reaches across more and more platforms.

Multiplatform networks likely will shake up existing distribution arrangements –

Ad Network at a Glance



Gay Ad Network

- ▶ One of a number of high-profile upstart horizontal networks that use outsourced technology and a mélange of like-focused sites and audiences to gain reach and attract advertisers.
- ▶ Uses Cox-owned Adify’s “Build Your Own Network” platform for managing the network, in good company with other traditional companies creating vertical networks, such as Martha Stewart, Forbes, Time Warner, NBC Universal and Reuters.
- ▶ About 90 newspaper, blog, social networking and special interest publishers are in the network, including Rosie O’Donnell’s Rosie.com, WashingtonBlade.com, ChicagoFreePress.com and GayWheels.com.
- ▶ Launched in August, 2007, with about two dozen publishers.
- ▶ Reached 4.1 million global users in November – up fourfold from April – with 116 million ad impressions, according to quantcast.com.
- ▶ The company says its advertisers include Air New Zealand, Canadian Tourism Commission, Focus Features, Just for Men, Paramount Pictures, and Bridgestone.
- ▶ In April 2008, became the top gay-focused network based on comScore’s count of unique users, overtaking Logo Online and industry pioneer PlanetOut (at which Gay Ad Network founder Mark Elderkin had once served as president).
- ▶ “Our strength is that we represent a variety of individual publishers whereas our competitors represent only the sites they own,” Elderkin told VentureBeat.
- ▶ Can target on content, demographics, and geography.

notably between distributors like cable operators and traditional content providers such as TV networks and stations. Television advertising spots that can be tweaked, targeted and tracked to individual users and integrated with data and campaign management that also spans Web sites and phones are likely to command a significant premium over broadcast advertising that doesn't have those capabilities. It's hard to see how broadcasters, who don't have independent access to set-top boxes and other household devices that are vital to the targeting loop, can compete without either cutting new sorts of deals with cable operators to enable targeting or finding new ways to exploit the capabilities of their broadcast signals.

That may have particular impact on local newscasts, which derive a substantial portion of revenue from advertisers like local car dealers that presumably could benefit from targeting their ads more toward likely near-term buyers. In previous generations of media, local stations joined national networks because they offered national advertising and expensive-to-produce content. In the future, local broadcasters may need to align with new types of networks – fueled by more sophisticated technology and marketing capabilities – to help them stay in the game.

Navigating the Networks: What Publishers Should Do

When it comes to strategies for protecting your media company – but also benefitting – from ad networks, the overarching advice is simple: Take active and aggressive charge of your own destiny. You can add to the bottom line by systematically focusing on yield and rate card management; being highly selective about which networks you work with and on the business terms at the outset; working with a blend of network types; guarding your brands and data; and applying technology effectively.

Here are some specific steps to consider:

1. Know your site

Inventory availability may rise and fall on a daily basis, but a site manager needs to know in specific detail how the site generates ad revenue in order to map out a smart network strategy. Lots of unsold inventory in spots that aren't likely to be of much interest to a site's core advertisers argues for joining a network that specializes in remnant sales or behavioral targeting. Conversely, tight inventory in key advertising areas may build the case for joining (or starting) a network that enables your staff to sell into other sites. A comprehensive section-by-section analysis of page views and a unit-by-unit analysis of what ads you're serving now are essential to building the models that will help you determine where you need help from networks and what kind of networks they should be.

2. Know your advertising customers

First, realistically assess your advertising market and your staff's capacity to sell and service online ads. If you don't want to manage a sales force, the decision to sign up with one or more networks is probably a no-brainer. But the evidence suggests that you can maximize your revenue by selling as much of your inventory as possible to advertisers with whom you have a direct selling relationship. Hone in on exactly what you want to sell on your own and to whom. Those advertisers you can offer significant and unique opportunities should not be empowered to buy your site cheaper through a network. In fact, if you truly understand your core advertising base better than anyone else, you can position yourself to help them achieve their goals through Internet marketing – not necessarily just on your site. These core customers might be receptive to expanding their reach through a network that you lead or sell into. In the case of local advertisers, you may have an opportunity to serve as their “local digital agency,” offering Internet marketing services such as search engine optimization and search engine marketing. Focus on measurement and anticipate needs of advertisers. If an ad isn't getting results, help the advertiser improve creative or try targeting rather than just ceding to a non-renewal.

3. Actively manage your ad inventory

Make yield and rate management part of your culture. Some specific steps to take:

- Dedicate staff to focus on the myriad metrics related to ad networks, rates and inventory.
- Invest in yield management procedures and tools (see box on pages 36-37) that ensure you get the maximum price for ads across your entire site.
- Stay true to your rate card and adjust it regularly based on actual sell-through, rate and yield data.
- Communicate with the content staff about topic areas in which additional inventory could lead to more revenue.
- Differentiate your ad offerings and create premium advertising opportunities – positions or sponsorships available only to those who pay high prices. Jupiter Research counsels that you “create solutions, not inventory.”
- Sell audiences and their behaviors – not just pages or sections.

4. Know your brand

Recognize that protecting and managing your inventory is, in part, a strategy to protect the value of your brand. The brand and the value of your branded environment are effective differentiators for ad sales. OPA studies have found that ads on branded content sites “raise awareness, message association, brand favorability and purchase intent more than portals and networks.” The Interactive Advertising Bureau has warned that the glut of inventory turned over to ad networks ultimately risks “devaluing the premium nature” of brands.

5. Know the players

With so many networks, it’s hard to evaluate them all. Unless you have a lot of time and resources, you’ll probably want to choose among a limited set of options – and get a grasp on which ones would fill which of your needs. While you may ultimately decide that you need several kinds of networks, it is probably not helpful to think of all networks as merely low-end providers competing for the same space. At the high end, participate in networks that do the best job of targeting – and therefore deliver the highest prices. Be cautious about joining remnant networks because, even if they generate revenue you would otherwise not receive, participation in these networks can give them information about your users that they can take better advantage of than you can. Networks that generate higher prices usually expect more of their affiliates, such as demanding a certain level of inventory availability or allowing the network to disclose to advertisers that their ads will appear on the specific site or even in a specific location.

Looking at the network choices made by sites similar to yours will help focus your research. Don’t be shy about asking the networks you’re interested in to explain in

detail not just their proposed payouts, but how much flexibility and transparency they provide you and their advertisers. If you have the scale and technology to do so, don't rely on just one network; apply tools from companies such as PubMatic and Rubicon to ensure that you serve the network ads that generate the most revenue.

6. Consider partnerships

Partnerships can be extremely helpful in maximizing your ad revenue. Some examples:

- Publishers as diverse as Martha Stewart, Forbes, and Turner have formed vertical networks as a weapon against commoditization caused by the remnant networks.
- Several newspaper companies have formed quadrantONE to market premium-priced ad positions on hundreds of newspaper sites.
- Newspapers and Yahoo! have built a relationship to sell and serve ads based on complementary strengths (Yahoo!'s reach and newspapers' local sales forces).

7. Acquire staff expertise and tools

If you're serious about networks as a revenue source, you'll probably need to invest in the people and processes that optimize your opportunities. For starters, you'll probably want to designate someone to monitor your current network affiliations, field calls from networks offering new opportunities and handle periodic renegotiations with your current suppliers. Make sure that point person is very familiar with the systems your site uses to serve ads (and the people who run those systems) and is knowledgeable about the role that technology can play in optimizing revenue. Your ad serving software is likely to include at least rudimentary tools for serving the highest-value ad at any given time, and new software solutions promise to enable sites to manage multiple networks to get a maximum revenue yield.

Ad Network at a Glance



ADSDAQ

- ▶ It's like a stock exchange for online ads. Publishers set minimum CPMs they'll take for ads (the "ask"); agencies and advertisers target content topics and set maximums they will pay (the "bid").
- ▶ Hands off to other networks of the publisher's choosing if the "ask" price isn't met within the exchange.
- ▶ Had 69 percent reach in October, with 113 million unique visitors, comScore says. It ranked 21st of the top 50 ad-focused sites.
- ▶ In October, 8,000 sellers placed inventory on the exchange (up from 2,500 in October 2007). Did six billion transactions compared to 1.6 billion the previous October. Bid prices were up 25 percent.
- ▶ Gets kudos from the IAB chair who had caused a stir by warning ads were being sold like "pork bellies." Wenda Harris Millard told AdAge: "I like the opportunity to fairly value inventory. Their pricing schematic fairly values in that open marketplace this inventory in a way that not all but many ad networks do not." (She serves on the board of ADSDAQ's parent).
- ▶ Belo and Denver Newspaper Agency are among the publishers that participate; agencies include agency.com and Universal McCann.
- ▶ Competitors include Microsoft's AdECN and Yahoo!'s RightMedia.

8. Develop a network negotiating strategy

With knowledge of your site, your customer base and your options, you can map out a plan for relationships with one or more networks. Only large sites will have much leverage in stimulating a robust negotiation over deal terms – but all sites can benefit from a clear point of view of what they have to offer and what they expect to get out of a deal. That means knowing how much space you’ll offer to a remnant network. Discussions with a premium network are likely to revolve around how much inventory you’re willing to commit and what your minimum price expectations are for accepting an ad.

Tribune Interactive Focuses on “Yield Management”

More aggressive “yield management” by publishers is one of the recommendations from the Interactive Advertising Bureau to guard against price and brand devaluation caused by excess inventory and over-reliance on ad networks.

“Publishers must become more disciplined in managing ad inventory and deploy improved methods and tools to enhance yield management,” the IAB said in a [release about the report](#) in late August.

At least one publisher is far ahead on that advice. Chicago-based Tribune Interactive (TI) is soon heading into the third year of an aggressive yield management program for its network of sites.

The program has translated into millions of dollars in additional revenue since its early 2007 implementation, said Mark Rose, director of sales strategy for TI, whose network includes news sites such as latimes.com, chicagotribune.com and baltimoresun.com and television sites in nearly 30 markets.

TI’s yield management software uses data from the company’s systems for ordering and managing online ads. The software displays – by section, site and type of ad unit – the number of impressions likely to be delivered and the amount of unsold inventory. It also calculates the effective CPMs and sell-through rates for the previous four weeks and projects these figures for the next three months. (See sample.)

“It lets you know where you have room to negotiate and where you are tight, to comply with the rate card,” Rose said.

Yield Metrics by Site and Section Source: DFP/ADS Database for eCPM and Sell-Through calculations, does not include zero-dollar line items, use CPM for directional purposes only

Section Pricing/Sell-Through View		Data from Last 4 Weeks		
Site:		728x90	300x250	160x600
Site-Section	eCPM	\$ 10.63	\$ 4.80	\$ 5.50
Site-Section	Sell-Through 68%		4%	100%
			16%	
Site-Section	eCPM	\$ 10.48	\$ 13.41	\$ 9.03
Site-Section	Sell-Through 34%		36%	43%
			14%	
Site-Section	eCPM	\$ 10.75	\$ 13.44	\$ 26.00
Site-Section	Sell-Through 27%		11%	35%
			44%	
Site-Section	eCPM	\$ 13.77	\$ 12.10	\$ 7.61
Site-Section	Sell-Through 35%		23%	65%
			13%	
Site-Section	eCPM	\$ 11.63	\$ 10.46	\$ 6.07
Site-Section	Sell-Through 29%		18%	38%
			19%	
Site-Section	eCPM	\$ 10.09	\$ 14.04	\$ 8.77
Site-Section	Sell-Through 40%		46%	40%
			18%	
Site-Section	eCPM	\$ 10.38	\$ 15.15	\$ 10.79
Site-Section	Sell-Through 55%		54%	78%
			62%	

Sample of Tribune Interactive’s yield management dashboard. Site and section names were erased for confidentiality reasons.

9. Inspect the goods

Especially a low-cost remnant networks, you'd be wise to visit some of its affiliate sites and take a careful look at the content of the national ads and the user experience. Make multiple visits and make note of ads you wouldn't want to see on your site. You may find particular advertisers you wouldn't want the network to deliver – either because they are inappropriate for your site or are part of the core group of advertisers you reach on your own. You may find some ad styles that you believe engender user confusion or frustration, such as those that misleadingly appear to be system error messages or use other forms of trickery to induce a click through. Use your findings to have a spirited

TI has three employees focused full-time on yield management and ad network management.

High-demand, high-CPM sections, such as travel and business, and inventory on the first screen of a site's pages have particularly benefited from greater visibility and awareness about yield data.

Rose said the program was created in late 2006 after significant inventory issues bubbled up. "We were highly sold out and prices weren't what they should have been. With rate cards, "there was little in the way of rules around it. There were ridiculous prices on rate cards and we'd always sell at a lower rate."

Now, Rose said, rate cards are adjusted quarterly, based on actual data from the previous quarter.

Alison Scholly, former vice president of Chicago Tribune Interactive, saw the yield management and rate card program as a "rate integrity exercise" and says the data helped the sales force be more aggressive and successful.

"It gives people confidence to sell and get a better deal," she said. "People realized they could be getting more for the product and were enthused. They made more with less work on each buy."

TI's yield management system has had an interesting side benefit: Helping the editorial department shape its house promotions.

"Sales will give us a read on what inventory we're 'underperforming' in (e.g., premium sections or topics in need of more traffic) and we'll look for ways to address those concerns," said Clark Bender, executive producer for Chicago Tribune Interactive. "Sometimes it's promotion; sometimes it's judicious use of social media resources (like Digg); sometimes it's making sure we put stories in relevant sections."

The data is "pretty useful" for newsroom staff, Bender said, but there is still a sensitivity to church-state pressure. "Non-managers tend to be more freaked out by this sense of business-driven pressure, I think, although it's obviously a sensitive issue."

For those publishers ready to embark on a yield management program, Rose has some advice: It's not just about firing up hardware and software. "It's about executing and making it how you operate."

Tribune Interactive Focuses on "Yield Management"

conversation with your proposed ad network partner. Make sure you know what, if any, ability you have to bar specific advertisers from appearing on your site and what, if any, ability you have to opt out of a specific campaign on an ad hoc basis. And be especially cautious if the network seems to be violating what it says are its own standards.

10. Don't forget promotion

For many sites, the biggest change when first joining a network is that “real ads” start taking the place of the house ads that used to fill the ad spots. That's good for the bottom line, at least in the short run. But make sure you're allocating enough of your own inventory to drive audience to key areas where you need the traffic. Otherwise, you may be serving the needs of discount-hungry network advertisers but undermining your own potential to build and sustain a higher overall revenue profile.

11. Keep up with the trends

Someone on your staff should follow the latest developments in online advertising. Free resources include [Interactive Advertising Bureau](#), [MediaPost](#), [Online Publishers Association](#), [AdAge](#), [MikeOnAds.com](#), [iMediaConnection](#), [ClickZ.com](#) and [adotas.com](#). [Borrell Associates](#) is a particularly good source of information on trends in local Internet advertising. Borrell's recent reports warn that banner ads will diminish in importance in the next five years, while more money will go to video and search.

Appendix 1: Online Advertising Glossary

AD SERVER: While generally perceived as one physical server, typically a collection of servers and software applications determines what ad should be delivered, serves the ad, and tracks impressions and click-throughs. The ad servers also manage cookies on visitor's computer.

AUCTION-MODEL BIDDING or BIDDED MARKETPLACE: Publishers, agencies and advertisers get to bid on space and ads. Used by exchange networks and by text networks such as Google and Yahoo!

BANNER: Common type of horizontal ad (468 pixels wide by 60 pixels high) that usually runs near the top of a page. Sometimes the term “banner” is generically used for all kinds of graphical display ads.

BEACON: A piece of code on a Web page, invisible to the user, that is used to target and track ads when “fired.” Beacons are also used to help measure site traffic and visits.

CONVERSION RATE: Percentage of users who took desired action, such as signing up for a newsletter or product demo.

COOKIE: A string of text that a Web server stores on a user's computer to track various activities and other data a visitor may volunteer (such as the zip code entered on a weather site). Each visitor is given a unique ID for tracking purposes.

CLICK-THROUGH: A user clicking on an ad.

CUBE or RECTANGLE: Common, desirable type of ad unit, typically with prominent play near or above the “fold” on a page (the point at which you have to scroll down).

CTR: Click-through rate. Number of times a user clicked on an ad divided by the total impressions the ad received.

IAB: Interactive Advertising Bureau. An association of media and technology companies that recommends standards and practices for online advertising and ad serving.

IFRAME: A small window within a Web page that can display content from another server without obvious indications. Used to render ads.

IMPRESSION: One exposure to an ad.

INTERSTITIAL: A large ad, typically a full page, that is displayed as a user moves from one page to another. The ad remains visible for a set amount of time unless a user clicks to close or bypass it. Considered less intrusive than pop-ups and pop-unders. Tends to draw high network CPMs. Similar ads that appear before the first page viewed on a site are known as splash pages.

IP ADDRESS: The numeric Internet address of your computer (e.g, 192.180.10.1). Portions of that network address, assigned to you by your Internet provider, can be parsed to determine your general geographic location (city or region).

LEADERBOARD: Common, desirable, horizontal ad unit (728 pixels wide by 90 pixels high), usually displayed near the top of a page. Wider and deeper than a banner, which shares similar placement.

PAGE VIEW: A single view of a Web page.

POP-UP / POP-UNDER: Ads that appear in a separate, usually smaller, new window either on top of the page, or under it (to persist and be seen later when the user closes the active browser window). Derided as intrusive and annoying by many consumers. Most modern Web browsers – and add-ins such as search toolbars – have settings that can block them.

REDIRECT: Code that fully or partially sends a visitor to another server for information. Ads are often rendered in iframes by redirects to network and advertiser servers.

ROADBLOCK: Buying all the ad inventory on a page for a set period of time.

RICH MEDIA: Using animation and interaction, with Flash, video, Java, etc., to convey an ad message.

ROS: Run of Site. Ads run across many pages of a site without targeting.

RON: Run of Network. Ads run across an ad network, or across a media company's own collection of sites.

SHARE OF VOICE: Percentage of exposure an advertiser has in a category over a given time. If Ford had ads on 10 out of 20 available slots in the Sports section over 24 hours, its share of voice would have been 50%.

SPLASH PAGE: See interstitial.

SKYSCRAPER: Tall, vertical ad unit (similar in shape to a skyscraper building). IAB standards list two skyscraper sizes: 160x600 pixels and 120x600 pixels.

THIRD-PARTY AD SERVING: Using an ad-serving platform other than the publisher's to select, target, render and count ads.

UNIQUE USER/VISITOR: A user who has visited a site or network one or more times in a certain time frame. Generally determined by IP address. A unique visitor can make multiple visits and be served multiple pages. Visits in shorter durations are known as sessions.

VISITS: Number of times a user has visited a site or network in a certain time frame.

YIELD MANAGEMENT: Using various tools and techniques (ad placement and size, projecting supply and demand, adjusting inventory, targeting, capping ad exposures, etc.) to get maximum revenue (yield) from advertising.

Appendix 2: About the Authors and Publisher

Scott Anderson has spent half of his 30-year journalism career in interactive media, starting as the founding interactive content editor at the South Florida Sun-Sentinel, followed by a decade leading online content initiatives as Tribune Interactive in Chicago. He's long been a journalist as comfortable working with the business side as the news side and for many years has been actively involved in product strategy, innovation and development. He was founder of the respected industry weblog Online News Squared and has been very active in the American Society of Newspaper Editors, Online News Association and Investigative Reporters and Editors.

Michael A. Silver is executive director of The Newspaper Consortium, an organization of 32 newspaper-owning companies that have banded together in a relationship with Yahoo. Silver worked for more than two decades at Tribune Company, beginning with a job as general manager of an early online advertising-supported business in 1985. His career at Tribune included a variety of editorial, marketing and business development positions in the company's publishing, broadcasting and corporate divisions. He is a graduate of the University of Pennsylvania, the Columbia School of Journalism and the Stanford Business School. Silver's contributions to this article were made prior to joining The Newspaper Consortium and this article does not necessarily represent the Consortium's official point of view.

Rich Gordon is associate professor and director of digital innovation at the Medill School of Journalism, where he launched and has overseen the school's graduate program in new media journalism. For the Media Management Center, he serves as director of new communities and writes regularly for the Readership.org Web site. Before joining Northwestern, he spent two decades working as a reporter and editor for newspapers in Virginia and Florida. From 1995 to 1999, Rich was the first director of new media for the Miami Herald Publishing Co., responsible for launching the company's English- and Spanish-language news sites.

The Media Management Center at Northwestern University addresses the most complex issues and needs of media organizations worldwide through executive and graduate education, research, and industry partnerships. It is affiliated with two Northwestern University Schools that are both world-class in their fields: the Kellogg School of Management and the Medill School, which teaches journalism and integrated marketing. The Media Management Center helps develop and spread solutions and best practices in areas such as innovation, customer insight, workforce practices,

organizational change, marketing, branding, sales force productivity, finance, strategic planning, negotiations, ethics, leadership, and editorial excellence.

The Media Management Center's executive education programs bring insight and knowledge to media executives in newspaper, magazine, broadcast and new media platforms. Center faculty also conducts the Media Management Major for graduate students in the Kellogg School of Management, examining the platforms of the media industry from business model and content basics to marketing and strategy formulation and implementation.

The Center conducts original and applied research and works in partnership with media companies and organizations. Among its recent partners are Hearst Media, Inc., the Berlinske Institute and the National Association of Broadcasters.

