The Inside Edge: Using Macromedia Flash in Online Advertising

New Standards and Tools
Moving the Industry Forward

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The Inside Edge on Rich Media Partnership Series

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Solbright, Inc. _ 212 Fifth Avenue _ New York, NY 10010 USA _ Voice +1 212.696.9300 _ Fax +1 212.696.9476

Contents

Introduction

With increasing competition for viewer's time and attention, online advertisers and creative agencies are developing more sophisticated and highly targeted campaigns than ever before. This paper explores the effectiveness of using rich media, such as Macromedia Flash, in online advertising and addresses the unique challenges and solutions for implementation in this industry.

During the past few years, established corporations, up-and-coming e-tailers, and information portals have embraced the web, creating numerous business models, processes, and "best practices" to attract users, gain market share, and sustain the profitability of their e-ventures. Among these, online advertising has been one of the most promising and challenging. Key issues include user acceptance, creative initiatives, production costs, performance tracking, and return on investment (ROI).

Unlike other advertising mediums, the web is interactive and user-driven. Most users approach the web with tunnel vision, having a clear goal in mind and blocking out all extraneous information. This, combined with the advertiser's expectation of comprehensive, real-time campaign statistics, makes the traditional measures for advertising, such as projected demographics and audience surveys, virtually obsolete. In the world of online advertising, the ability to measure campaign performance is critical to increasing advertising revenues. Understanding how to implement these performance measures for a particular ad technology is critical to publisher acceptance of the technology.

Beyond Basic Banner Measurements

During the early years of online advertising, basic GIF or JPEG banner ads were often novel enough to capture a viewer's attention and drive a clickthrough to the advertiser's site. Because development and publisher support for these types of ads were relatively cheap, advertisers and publishers were willing to experiment with random placements, varying cost models, and inconsistent performance reports.

As the novelty of online ads (and the web itself) wore off, the clickthrough rate started to plummet from an unusually high spike in the mid 1990's to an average of 2% in 1998, and is now closer to a more normal average (for

direct mail campaigns) of 0.2%. Several recent online ad campaigns have enjoyed much higher clickthrough rates, and marked improvement in overall brand recognition.

The increased success rate for these online campaigns is due to the effective use of rich media technologies, like Macromedia Flash, along with targeted and well researched ad placement, compelling creative execution, and comprehensive performance-tracking metrics. Rich media ads not only grab the user's attention, but also foster strong brand associations and incite response to any call-to-action.

It is surprising, then, that the use of rich media technologies is still limited to a relatively small number of online advertising campaigns. The industry buzz on the reasons for the slow adoption has included:

➢ Fragmented industry support for rich media technologies and difficulty of deployment

➢ High development costs and lack of standards for creating ads that incorporate specific rich media technologies

➢ The need to support narrowband connections (28K and 56K dialup)

➢ Difficulties in implementing ROI tracking for all types of rich media through standalone and network ad serving systems

➢ Lack of understanding about how to effectively integrate online advertising with other elements in the overall advertising strategy

The Reality of the Rich Media Value Proposition

While online advertising does present unique challenges for rich media, its value is clear. For advertisers, rich media makes it possible to create ads with intriguing dialog, cinematic suspense, and riveting cliffhangers. These ads can grab the user's attention, tell a compelling story, and generate an emotional response in a way that is not possible with standard banner ads.

For web users, well-targeted and creative rich media ads can provide extra value, delivering relevant information or a stimulating diversion without making them lose the primary focus or goal of their web visit. Emphasizing this point in a recent report issued by FAC/Equities (Rich Media, Rich Opportunity), author John Bowen forecasts that, "in addition to helping generate business, the real value of rich media will come in its ability to enhance the customer experience by making it more engaging and effective."

DISCREPANCIES IN CLICKTHROUGH DATA

The 1999 eAdvertiser report (Vol II) states that advertisers and web site publishers often record different levels of clickthroughs for a given campaign, causing friction between the two.

The cause can vary. For example, a user may click on an ad, but cancel the action due to an overloaded ISP or a slow loading destination site. This would register as a click for the publisher, but not for the advertiser. In addition, if response time is slow, a user may also click on an ad several times, registering as multiple clicks for the publisher, and only a single click for the advertiser.

Here is a reality check on the frequently cited concerns about using rich media technologies in online advertising:

➢ Many ad networks and independent sites already support established rich media technologies and are willing to consider newer technologies when significant advertising dollars are involved. The *Engage AdKnowledge Online Advertising Report* (3Q2000) shows that the number of sites accepting rich media like Macromedia Flash continues to grow.

➢ Rich media technology vendors take an active role in understanding industry issues and have been actively working with developers and publishers to provide standards, development toolkits, and training.

➢ Based on ROI metrics (brand awareness and clickthrough rates), rich media ads are more cost-effective for advertisers than standard banner ads. Focusing on direct response clickthroughs alone, one recent ClickZ article concluded that rich media ads performing twice as well as a standard ads cost only 8% more to produce and deploy.

➢ While high-bandwidth cable modems and DSL are gaining popularity in US households, many rich media technologies can deliver powerfully captivating ads in file sizes of 12K or less, making them ideal for users who are accessing the web from 28K or 56K dial-up lines.

➢ Many rich media technologies make it possible go beyond clickthrough performance tracking, enabling in-banner transactions and reporting on how the user interacts with the ad.

Macromedia Flash: Breaking New Ground

MACROMEDIA FLASH

➢ Over 500,000 web developers actively use Macromedia Flash.

➢ 96.4 % of web users have the Macromedia Flash Player installed.

➢ Macromedia Flash is the leading rich media format for advertisers, used twice as often as any other rich media format.

➢ Macromedia Flash delivers ads quickly over narrowband connections, with files sizes as small as 12K. It also delivers ads instantaneously over broadband connections.

Macromedia Flash is one such technology that delivers the rich media value proposition with ease. By taking advantage of vector graphics that compact into small download files, Macromedia Flash produces a number of dazzling effects over narrowband connections like 56K modem lines just as easily as over broadband connections like cable modems, DSL, and T-1 lines.

Because Macromedia Flash enables so much creative freedom without compromising the user experience, and it is a relatively easy technology to master, over 500,000 web developers are actively using Macromedia Flash as a standard web development tool today. In addition, Macromedia Flash allows advertisers to "think outside the box," extending their message beyond the purchased advertising space as far as it needs to go. For example, a recent Macromedia ad published on WebMonkey (www.webmonkey.com), expands well beyond the standard advertising space, displaying appropriate content based on user choices (see Figure 1).

Like other rich media technologies, however, Macromedia Flash has faced a number of challenges in being accepted in online advertising. To address

such issues as compliance with existing standards for ad sizes and performance metrics, cache busting, and discrete detection of plug-ins, Macromedia has been working with key players in the online advertising industry to address how web publishers and ad networks can best process compiled SWF files and need to install the Macromedia Flash Player.

BIG DESIGNS FOR SMALL SPACES

The Macromedia Flash ad to the right shows how to provide web users with a wealth of information without needing bigger ad space or compromising good design principles.

By effectively using layers and user input (menu selection), this ad allows the user to get relevant information without being distracted by clutter.

To date, Macromedia has seen a banner interaction rate of 17%!

Figure 1: Thinking Outside the Box with Macromedia Flash

Industry Collaboration Fosters New Standards

Because the web is a relatively new medium with a high-tech image and global user base, it has a unique set of performance expectations. Standards for online advertising have been slow to evolve and be widely adopted. The issues that could be easily resolved, such as standardized ad models, have been addressed through industry coalitions such as the Internet Advertising Bureau (IAB) and Future of Advertising Stockholders (FAST).

Beyond ad models, both advertisers and web publishers need standards for preparing and processing each rich media technology that are compatible with each unique ad serving technology. To address these issues for ads created with Macromedia Flash, a number of industry leaders have joined together to form the Macromedia Flash Advertising Alliance (MFAA).

The purpose of the MFAA is to effectively collaborate on best practices for deploying Macromedia Flash ads in order to reduce the overall time and costs involved in rich media advertising. Among the initial MFAA initiatives is the development of the Macromedia Flash *Rich Media Tracking Kit*, which provides a viable solution for handling the performance tracking issue that has been adopted by the major ad serving networks.

Read further to get a better understanding of how the online advertising works, and what needs to be done during the development of a Macromedia Flash creative to ensure that publishers can process the ad with minimal rework.

Online Advertising Dynamics

The success of an online ad campaign involves more than flawless execution of a creative idea, it also entails intense coordination among the diverse groups of web users, buyers (advertisers and agencies), sellers (web publishers), and the technology and infrastructure companies that support them. The key to doing this effectively is comprehensive industry standards that facilitate advertising on the web.

A March 1999 poll of *USA Today* readers found that while Internet users accept web advertising in much the same way that they accept TV or radio advertising (necessary to keep the medium free), they do not want to be inconvenienced by it. The ad must download quickly and not add any visual clutter to the page. A more recent Millward Brown study (11/2000) also found that users expect online ads to be relevant, informative, and interactive. Ideally, the ad will be in sync with the site's demographics, content, and design style, enhancing the site rather than detracting from it.

While rich media technologies like Macromedia Flash can effectively deliver high-powered ads over both narrowband and broadband connections, there a number of workflow issues specific to the online industry that must be addressed in order for Macromedia Flash to be as broadly adopted within this industry as it has been within the development community. This section provides insight into the diverse groups involved and the coordination that must happen among them to make online advertising work. Figure 2 provides a high-level overview of the advertising industry.
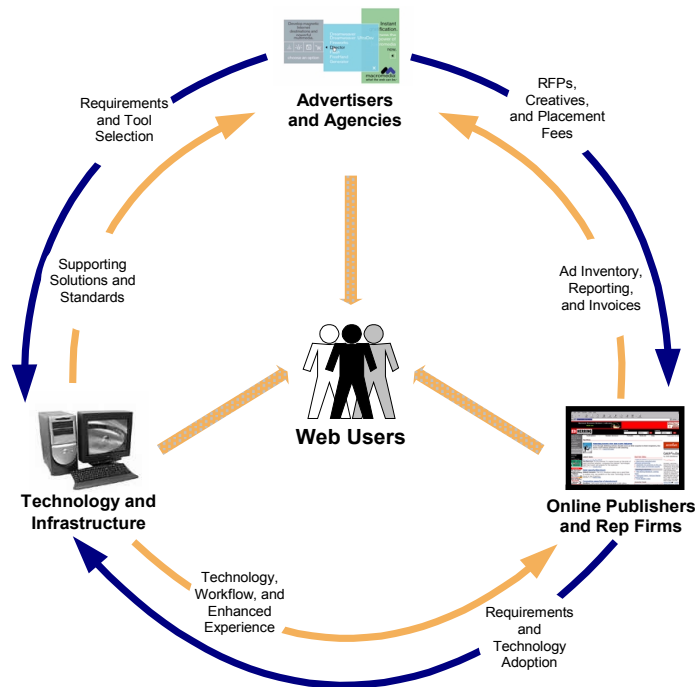
Figure 2: Online Advertising Process

Web users want relevant information, engaging entertainment, and free and uninterrupted access to content. Buyers (advertisers and their agencies) want effective ads and the assurance that their advertising dollars are well spent. Sellers (web publishers) want to maximize advertising revenues with minimal production overhead. Technology and infrastructure companies want standards for ad models, data collection, performance reporting, and systems integration.

Goal Oriented Users

According to the eAdvertising Report (Volume II, November 1999), published by eMarketer for Advertising Age, most people use the web to obtain specific information, so "anything that gets in the way can easily be seen as an intrusion." However, ads that are either relevant to the information search or are entertaining are seen as value-added.

User Goals

➢ View target web sites without connectivity or browser performance problems.

➢ Navigate through the target web site without getting distracted or lost by irrelevant and unwelcome links to other sites.

User Challenges

➢ Keeping up with the latest software and browser releases.

➢ Achieving goals quickly, even when the connection is over a 28K or 56K dial-up line.

➢ Avoiding distractions, like irrelevant ads and scams.

Solutions to User Challenges

➢ Buyers need to ensure that site demographics and site content are consistent with campaign objectives.

➢ Buyers should incorporate in-banner actions (like email, printing, and transactions) whenever possible.

➢ Infrastructure and technology companies need to incorporate available and relevant plug-ins in all new versions of popular web browsers.

➢ Buyers need to incorporate discrete detection of browser plug-ins and supply an alternate version of the ad if the plug-in is not present.

➢ Sellers need to ensure that ad files are relatively small and download quickly.

Buyers and ROI

Buyers are the advertisers (and the agencies acting on the advertisers' behalf) that are developing online advertising campaigns. For buyers, getting the most current information about a site's viewership is critical to making the appropriate buy for the campaign to reach the target audience. Creative execution makes all the difference in the success of the ad, but the costs can be high.

For example, a study on Narrowband Creative (Jupiter Communications, 02/2000) compared the anticipated media costs for a campaign promising to deliver one million impressions. In the study, a complex Java ad cost approximately eight times more than a standard GIF or JPEG banner ad, while a high-end Macromedia Flash ad cost only five times as much. Macromedia has found that the average development costs are often only two-to-three times as much as for the standard banner ad. Design costs may go down further as new tools for developing and deploying Macromedia Flash ads, like Macromedia's Rich Media Tracking Kit, become available.

To justify any of these development costs, advertisers have wanted to see an immediate return on their investment, and typically rich media ads do drive higher clickthroughs. But Jupiter cautions against considering only the short-term view. They suggest that rich media is ideally suited for building long-term brand associations that foster a loyal customer base, similar to television commercials. And with Macromedia Flash, it is possible to create the 15-30 second commercial for a fraction of the cost.

Buyer Goals

➢ Develop integrated advertising campaigns that increase brand awareness, consumer loyalty, and follow through on any call-to-action.

➢ Encourage publisher acceptance of appropriate and cost-effective technologies for online advertising.

➢ Identify and incorporate tracking metrics and performance reports to evaluate the effectiveness of campaigns.

➢ Optimize creatives mid-campaign, if necessary, to improve campaign results.

Buyer Challenges

➢ Taking advantage of the latest technologies while keeping creative costs down.

➢ Getting meaningful and accurate information about the site's demographics.

➢ Producing a single creative that can run on multiple sites with little or no rework.

➢ Receiving performance reports from multiple sites at the same time and in the same format to make it easy to assess the performance of the campaign.

Solutions to Buyer Challenges

➢ Technology vendors and infrastructure companies need to educate buyers and sellers about the best practices for implementing various rich media technologies.

➢ To help distribute development costs, buyers should leverage established rich media technologies, and make the online advertising part of the overall advertising strategy.

➢ Sellers need to support popular rich media technologies.

> ➢ Technology vendors and infrastructure companies need to make it easy to deploy a single ad on multiple web sites without incurring rework costs.

> ➢ Infrastructure companies need to supply ad management, reporting, and workflow automation systems that help buyers and sellers organize and deliver information to appropriate parties and reduce the likelihood of human error in the campaign production process.

Sellers and Revenue

Sellers are the ad networks, rep firms, independent web sites, and affiliated networks of sites that offer advertising space on the web to generate some or all of their revenue. In order to attract and retain customers, sellers need to ensure that ads meet customer expectations. Specifically, sellers need to ensure that ads have minimal impact on site performance.

In order to attract buyers, sellers must provide detailed information about their user demographics, supported ad models and media types, and accurate and robust performance reporting. The seller's production staff must perform rigorous tests on the ads to ensure they conform to site standards and will be accepted by the site's ad serving technology. The seller's production staff must also ensure that all appropriate contract information is transferred to the ad server, and that the ad is configured correctly for accurate performance tracking.

Seller Goals
> ➢ Maximize the sale of premium ad inventory while minimizing operational costs.

> ➢ Never compromise the user's experience.

Seller Challenges
> ➢ Supporting a variety of ad technologies without needing to hire an army of rich media specialists.

> ➢ Publicizing site requirements for supported ad models.

> ➢ Receiving creatives that meet production specifications on time.

> ➢ Setting up the campaign in the ad server in a timely and accurate manner.

Solutions for Sellers Challenges

➢ Sellers need to understand the realities of supporting various rich media technologies, including various performance tracking requirements.

➢ Sellers need to make it easy for advertisers to understand unique site requirements for implementing specific media types on online ads.

➢ Technology vendors need to be aware of various standards for online advertising, and actively participate in their evolution and adoption.

➢ Infrastructure companies need to supply ad management, reporting, and workflow automation systems that help to organize and deliver information to appropriate parties, simplify the processing of rich media ads, and reduce the likelihood of human error.

Technology Vendors and Infrastructure Companies

Technology and infrastructure companies comprise the many vendors that make the development, production, and management of online ad campaigns possible, including:

➢ Rich media companies like Macromedia

➢ Ad serving companies like Engage, RealMedia, and DoubleClick

➢ Ad management and workflow automation companies like Solbright

➢ Site measurement and Internet statistics reporting companies like Nielsen//NetRatings and Media Metrix

Despite the current industry standards and detailed media kits that exist for each site, online advertising continues to be perceived as a costly and time-consuming venture. Fortunately, there are a number of companies that are coming together through industry forums to drive consensus about standards and foster integration among the many players in the market.

Technology and Infrastructure Vendor Goals

➢ Understand the industry and where they can add value for the market players.

➢ Establish and promote industry standards and tight integration among products and services.

➢ Develop, market, and sell value-added products and services that improve's the web's viability as an advertising medium.

Technology and Infrastructure Vendors Challenges

➢ Understanding each other's technologies and likely integration points.

➢ Convincing both buyers and sellers to adopt new rich media technologies.

➢ Evolving and uniformly adopting industry standards and methodologies for campaign measurement.

➢ Agreeing on the definitions of industry terms for measurement and ratings.

➢ Reducing the costs involved in implementing measurement technology for new media campaigns.

Solutions for Technology and Infrastructure Vendors

➢ Technology vendors and infrastructure companies need to participate in industry forums, such as the IAB, and form strategic alliances to tackle select issues.

➢ Sharing relevant information through conferences, white papers, and trade articles.

➢ All parties need to support and implement industry standards.

Creating Macromedia Flash Ads

The popularity of Macromedia Flash among designers, combined with broad expertise in the development community, have minimized development costs for web sites and applications. However, the unique challenges of the online advertising industry have slowed the adoption of rich media technologies like Macromedia Flash in advertising. Fortunately, new standards and tools are making it easier than ever for publishers and ad networks to support this rich media technology.

According to the recent report on Narrowband Creative from Jupiter Communications, Macromedia Flash has become a standard for developing rich media ads. It is perceived as a "superb tool for creating and deploying high-impact multimedia content" because it uses vector images instead of bitmaps, significantly reducing the file size and download time of each ad.   In addition, the ubiquitous Macromedia Flash Player is now being leveraged by advertisers and publishers for online advertising. This section identifies how to develop an ad that publishers will accept, including designing for site requirements, detecting whether or not the Macromedia Flash Player is installed, what to do if it isn't, and how to set up the file to enable the ad server to track performance.

Matching the Creative to Site Requirements

IAB/CASIE
STANDARDS FOR ADS

➢ 468x60 (full banner)

➢ 392x72 (full banner with vertical navigation bar)

➢ 234x60 (half banner)

➢ 120x240 (vertical banner)

➢ 120x90 (button 1)

➢ 120x60 (button 2)

➢ 125x125 (square button)

➢ 88x31 (micro button)

One of the biggest challenges in online advertising has been the competing interests of advertisers and publishers. Advertisers want to have the flexibility to use a variety of ad shapes, larger file sizes, and the latest web technologies to deliver the ultimate advertisement. Web publishers want to minimize the file size for the ad, while keeping the size and technology employed simple and standard to ensure that the user's visit is not compromised. The specifics for each web site may vary widely, forcing advertisers to pick a "happy medium," such as the 468 x 60 banner, to keep production costs down. In fact, a recent AdRevelance Intelligence Report (Building Roads Less Traveled: Understanding Ad Sizes and Technologies, October 2000), cites that the full banner is still the most widely used and site supported ad format (accepted by 97% of sites). In the absence of other specifications, you can use the specification listed in Table 1 as guidelines for creating your banner ad.

Table 1: Macromedia's Baseline Specifications for Full Banner Macromedia Flash Ads
Source: www.macromedia.com/solutions/richmedia/tracking/recommendations.html

Attribute	Value
Width	468 pixels
Height	60 pixels
Maximum complied (SWF) file size	15 K
Maximum substitute (GIF) file size	12 K
Maximum number of animation loops	3 loops

One of the great features of designing with Macromedia Flash is that developers are not limited to specific file dimensions. Use of vector graphics makes it possible to scale the creative to a variety of shapes and sizes without compromising the resolution of the image or necessitating expensive rework. The flexibility of Macromedia Flash enables other features as well, like extending the depth of information through user-controlled popup layers.

For its HP PhotoSmart P1000 Printer campaign (see Figure 3), Hewlett-Packard (HP) designed a Macromedia Flash banner that fit the standard full banner size requirements, while taking advantage of animation (moving skier and changing text), as well as in-banner printing. In this case, a "hidden" movie enables the user to print the specs for the P1000 without ever leaving the page. If users are interested in finding out more about other HP products, they also invited to go to the HP shopping site.

DETAILS WITHOUT DISTRACTIONS: IN-BANNER PRINTING

The Macromedia Flash ad to the right shows how to give web users detailed information to study without ever having to leave the publisher's site.

The ad first grabs the user's attention and drives the quality message home by having a realistic skier manifest out of the laser printer.

By formatting a marketing brochure (with details about the printer) as a hidden, printable movie clip, web users interested in the details about the product can print it out for later review.

If they are ready to make a purchase, or to see other items available in the store, they can go directly to the site.
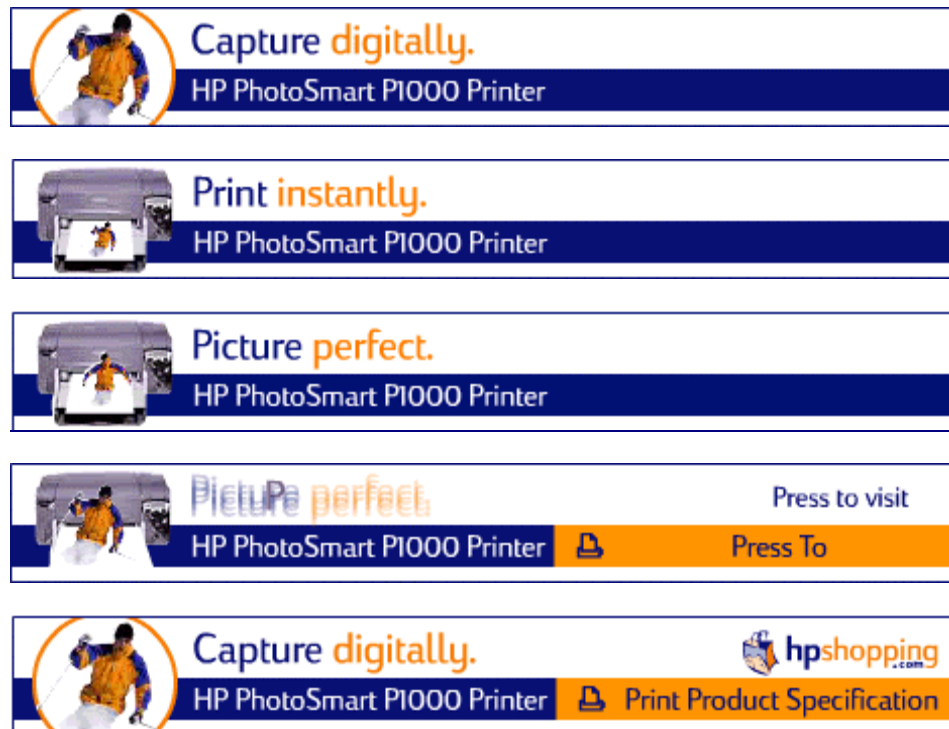

Figure 3: HP Takes Advantage of In-Banner Printing

Macromedia Flash Player Detection

Historically, many publisher sites have not supported some rich media technologies simply because a browser plug-in, such as the Macromedia Flash Player, was required. Publishers are concerned that if visitors to the web site do not have the plug-in when they encounter a page with an ad that requires it, that there will be a broken image on their site.

The broad deployment of the Macromedia Flash Player makes this an issue for only a small segment of web users who may still be using old web browsers. For those users, most Macromedia Flash developers assume the web publisher can simply prompt the user to download the Macromedia Flash Player as they would to view any other Macromedia Flash content on their site. However, this practice is not viable for advertising, making many publishers still wary of accepting Macromedia Flash ads. The more progressive sites will often accept Macromedia Flash ads on the condition that the developer incorporates sniffer code to determine whether or not the Macromedia Flash Player is installed, and to display an alternate version of the ad (in GIF or JPEG format) in the event that it is not installed.

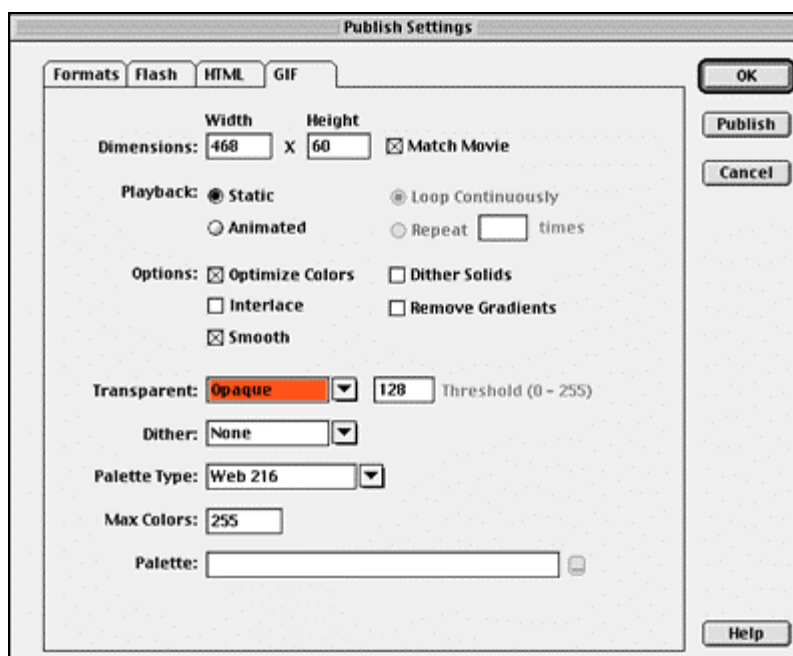**Figure 4: Publisher Settings to Create the Alternate GIF Ad**

To ensure that an ad is displayed for the advertiser in the rare event that the browser does not support the rich media technology employed, most web publishers require that an alternate GIF version of the ad be provided that can serve as a substitute so that the user's experience is not compromised. Macromedia makes it easy to create this alternate ad

through the **File>Publish Settings** command in its Macromedia Flash application. The **GIF** tab provides options to let the designer select which frame is used to create a non-animated GIF, or which range of frames is used to create an animated GIF (see Figure 4). However, developers need to select their frame(s) cautiously, to avoid creating GIF files that are too large to meet the publisher's requirements.

To make both the unobtrusive detection of the Macromedia Flash Player and the creation of the alternate ad relatively simple tasks, Macromedia has easy solutions available through their web site (see "Script-Based Detection" in Tech Note 14526, "How to Detect the Presence of the Flash Player," and the Macromedia Flash Deployment Kit at www.macromedia.com/software/flash/download/deployment_kit, and the Rich Media Tracking Kit at www.macromedia.com/solutions/richmedia/tracking/ RichMedia_Tracking_Kit.zip).

Making the Creative Super Lean

If the file size of an ad is too big to meet the specific production requirements of the site or ad network, Macromedia offers several suggestions for reducing the size of the Macromedia Flash file, including:

➢ Using the frame size report to identify the hidden space hogs. The size report provides detailed information about key frames, symbols, compression, sound sample rate, and fonts.

➢ Removing any "hidden" frames that are not visible to the user.

➢ Sticking with just one or two font families, preferably web-safe fonts that do not need to be embedded in the file.

➢ Avoiding importing fonts as outlines or that are broken apart.

➢ Designing graphics for screen resolution instead of print resolution.

➢ Minimizing the use of bitmap images and bitmap animations.

➢ Minimizing the use of key frames by grouping elements, tweening, and substituting symbols for graphic elements or groups.

➢ Keeping the concept simple, reducing the number of graphic elements and keeping the length of play short. If more detail is needed, link to the appropriate areas of the advertiser's web site or to other small Macromedia Flash movies.

➢ Avoiding multiple embedded movies, which can make it impossible for the ad server to track the performance of the ad.

> ➤ Avoiding using multiple CPU-intensive features within a single frame.

> ➤ Pre-loading symbols and special fonts in earlier frames.

Performance Tracking

One of the biggest barriers to the adoption of rich media technologies like Macromedia Flash has been confusion about how to incorporate performance tracking within an uneditable compiled file. For other media types, the publisher usually inserts a unique tracking string within the source code for the ad to count the click before displaying the destination web page for the advertiser. At the time that the ad is served on the web page, unique IDs identify on which page the ad appeared, the time, and the location. This enables the publisher to provide the specific performance metrics for each placement of the ad on their site. Until now, advertisers and web publishers followed laborious and costly processes for each ad placement to get the correct tracking string inserted:

1. The media buyer contacted the site's production staff to get the appropriate tracking string.

2. The media buyer transferred the tracking string information to the Macromedia Flash developer.

3. The developer created a unique copy of the Macromedia Flash source file (FLA) and hard-coded the tracking string into the creative.

4. The developer delivered the appropriate version of the Macromedia Flash ad (SWF file) to the media buyer.

5. The media buyer sent the creative to the publisher.

6. If the right version of the ad was sent to the publisher and the tracking string was inserted correctly, the ad would go live with the performance metrics being captured by the ad server. Otherwise, incorrect metrics, if any, would be recorded, skewing the results of the campaign. If the publisher realized the mistake, the process would repeat, beginning at Step 2, until the correct file was sent back to the publisher.

To help ease the burden of this process, the MFAA advises developers to create an editable HTML wrapper for the ad that uses the **<OBJECT>** and **<EMBED>** tags to pass through the appropriate parameter for the tracking string to the **getURL** action command within the compiled SWF file.

MFAA Recommend Process for Inserting the Tracking String

1. Create a Macromedia Flash ad with at least one button element.

2. For the button that will be used to track the clickthrough data, assign a simple **getURL(clickTAG)** action.

3. Create an alternate GIF version of the ad.

4. Create an HTML wrapper file that uses the **<OBJECT>** and **<EMBED>** tags to pass the appropriate parameters for the tracking string to the ad. Each publisher will need to modify this file to insert their own, unique tracking code. This file should also have the appropriate sniffer code to detect the presence of the Macromedia Flash Player, and to display the alternate GIF ad if necessary.

More detailed instructions are provided in Macromedia's *Rich Media Tracking Kit*, which is available on the Macromedia Flash site (http://www.macromedia.com/solutions/richmedia/tracking/designers_guide/ and http://www.macromedia.com/solutions/richmedia/tracking/adserving_guide/).   A brief explanation of the format of the **<EMBED>** string is shown here.

Tracking String Syntax

EMBED SRC="/imageserver/banner.swf?CLICKTAG=http://adserver.com/trackingstring?
   http://www.advertiser.com/destination.html"

There are a number of parts to this embedded tracking string. The first part of the tracking string, **/imageserver/banner.swf** is used to identify the location of the Macromedia Flash file on the publisher's image server (the advertiser will not know this string in advance).

The first question mark (**?**) indicates that a variable follows that will be passed to the Macromedia Flash file when a web user clicks on the ad. In this example, the name of the variable is **CLICKTAG**. This variable is used to identify the tracking location (**http://adserver.com.trackingstring**) on the publisher's server that will log the number of clicks on the ad. The tracking string is called from the ad using the **getURL** button action. The resulting clickthrough data is reported to the advertisers to help them determine the effectiveness of their campaigns.

The second question mark (**?**) indicates another variable that identifies the final destination (**http://www.advertiser.com/destination.html**) that the user will see after clicking on the ad.

In addition to being able to track standard clickthroughs with Macromedia Flash ads, advertisers can track various types of user interactions with the ad and how long they spent interacting the ad. Note that this additional data cannot be tracked through standard ad network reporting.

Table 2: Relevant Tech Notes for Creating Macromedia Flash Ads

Tech Note	Title
13638	"Flash and Internet Explorer Issues on the Macintosh Platform"
13765	"Redirecting the Microsoft Internet Explorer Browser for Macintosh"
14147	"Updated Flash 4 HTML Templabes Available for Download"
14159	"A Comprehensive List of Supported Flash Features Specific to Each Browser"
4100	"What Are Buttons?"
4101	"How Do I Create a New Button?"
14426	"Button Actions Are Not Working"
12632	"Creating Advanced Buttons"
14072	"How to Create a Button that Will Send Email Messages"
14146	"Button Hotspots Are Active Even thought the Buttons Are Covered with Other Objects"
12085	"Flash Player Streaming and Optimization Techniques"
14526	"How to Detect the Presence of the Flash Player"
4150	"Flash OBJECT and EMBED Tag Syntax"
12701	"Flash OBJECT and EMBED Tag Attributes"

Handling Other Publisher Tasks

Another roadblock to the widespread acceptance and adoption of rich media has been the time and complexity involved in processing and troubleshooting the creatives. Underscoring this point, a recent Newport Group Report (*Understanding the Value of Workflow Automation for Online Advertising*, January 2000) states that more than half of the trafficking job at the publisher's end involves troubleshooting creatives, leaving little time for campaign analysis, reporting, and other customer service initiatives.

In addition to verifying that an ad conforms to site specifications and properly inserting the correct tracking string, publishers need to do other production work on the ad before it is ready to be set up in the ad server for its scheduled run. For example, extraneous tags (**<HTML>, <META>, <TITLE>**, and **<BODY>**) need to be deleted from the HTML wrapper file for all types of ads. For rich media ads that are being served through a third-party ad server (such as DoubleClick, MatchLogic, or AdForce), a time stamp string needs to be inserted into the code for cache busting purposes (allowing a fresh page to be displayed with the current ad) that is specific to both the rich media technology employed and the ad server.

Once all of the production tasks are complete, the production person has to go back to the insertion order and extract the necessary details for setting up the ad correctly in the ad server. During the run of a campaign, the

production person needs to obtain performance data from the ad server and deliver that to the advertiser, as well as to their accounting department, who must reconcile the actual performance numbers with those contracted in the insertion order in order to bill the advertiser.

These tasks are usually handled manually, by people in several different departments. The complexity of the process and number of steps involved can lead to problems with the correct set up of the ad, leading to makegoods (IOUs from the publisher to give away free ad space to make up for the campaign's discrepancies). Tools for campaign management that automate the routine production and trafficking tasks are essential to keeping the overhead costs associated with online advertising down.

Conclusion

The ability to take advantage of rich media technologies, such as Macromedia Flash, is essential to developing a successful online campaign. Equally important is the dynamic measurement of how the campaign is performing without incurring undue costs. Recently agreed upon standards and innovative new tools make the production, support, and performance tracking of Macromedia Flash ads as simple as for other online ads. With the rapidly increasing support of this rich media format by web publishers and ad serving networks alike, advertisers can create Macromedia Flash ads with confidence.

In the end, advertising on the web is all about making the numbers. Web advertisements are held to a higher standard for performance than traditional advertising media. As reported in eAdvertising Report (Volume II, November 1999), "the Internet allows advertisers to target audiences with pinpoint accuracy. Like never before... marketers can track not only the customer who sees their ad, but also what action they took after they saw it." When it comes to online advertising, publishers are expected to deliver detailed campaign analysis reports with accurate information that can be used by advertisers to justify the media costs.

Online Advertising Today

While companies are more cost-conscious than ever before, the recent IAB 3Q2000 report on online advertising shows that the industry is continuing to grow at a steady pace. The report, conducted by the New Media Group of Pricewaterhouse Coopers, states and "Internet advertising revenues totaled nearly $2.0 billion for the third quarter of 2000," showing a net increase over revenues from the previous year of approximately 63%.

As compared to other advertising channels, the web is viewed less as a source for receiving information passively, and more as a reservoir of information that is waiting to be interrogated. The user approaches the web with goal-oriented tunnel vision. Without sound targeting and appropriate creative execution, advertising is often ignored or seen as an annoying and manipulative ploy. However when there is a welcome mutual exchange between the advertiser and the user, such as the

advertiser providing entertainment, humor, or information in exchange for the user's time and interest in the brand, the ad will be well received.

The key trends in online advertising include advanced user targeting, more emphasis on brand building (vs. direct marketing), and the gradual shift from "dot-com" advertiser dominance (previously 68% of the market) to Fortune 1000 and other traditional companies that develop large-scale advertising campaigns. Growing budgets, combined with better tracking techniques, more comprehensive reporting, and the need for more compelling ads, are fueling the development and acceptance of rich media formats such as Macromedia Flash.

MACROMEDIA FLASH: A DIRECT MARKETER'S DREAM

The Macromedia Flash ad to the right shows how to effectively promote seasonal items and events through an interactive webmercial.

The ad initially engages the user with moving images and a reminder about the upcoming holiday. It then helps the user solve the problem by presenting viable solutions and enabling the user to click through and purchase immediately.

This ad, designed by San Francisco advertising agency Left Field, used Macromedia Flash to create the Unicast Superstitial. The resulting ad gave Macy's a 19% clickthrough rate! For more details, see the case studies on the Macromedia web site.

Figure 5: Macy's Speaks Volumes through a Single Macromedia Flash / Unicast Superstitial Ad

Delivering High Impact with Macromedia Flash

Macromedia Flash is a valuable rich media technology for advertisers because it can deliver high impact ads that work within most publishers and ad serving network's requirements for site performance and user-friendliness. Its acceptance and popularity among designers, combined with ease-of-use, enables advertisers to effectively implement creative strategies within budget. So much so, that other rich media technologies like AudioBase, Enliven, Unicast, and Bluestreak allow designers to use Macromedia Flash to take advantage of their unique technologies.

The effect is self-evident. A recent online advertising campaign from Macy's (see Figure 5), took advantage of the many features of Macromedia Flash, using Unicast's popup Superstitial format. This highly-targeted, scalable ad downloaded quickly and produced a 19% clickthrough rate. Within a single ad space, consumers were reminded of an upcoming event (Mother's Day), offered helpful suggestions for appropriate gifts, and given the opportunity to purchase immediately or browse the Macy's web site for additional ideas.

And while there has been confusion over support for the Macromedia Flash Player, the most recent statistics from NPD Online show that 96.4% of web users already have the Macromedia Flash Player installed, enabling more than 317 million people to view Macromedia Flash ads. For the rare cases in which a user does not have the Macromedia Flash Player installed, Macromedia provides an easy method to create an alternative GIF file, along with instructions for determining whether or not the Macromedia Flash Player is installed. The MFAA has also been working with industry leaders to address other issues, such as standard methods for enabling performance tracking. In summary, Macromedia Flash ads enable advertisers to:

➢ Provide users with quick access to the information that interests them the most

➢ Instantly size and resize an ad without compromising the image quality or incurring new production costs

➢ Deliver multiple layers of content without sacrificing the aesthetics of the ad

➢ Obtain performance statistics by enabling developers and publishers to insert the essential tracking string

➢ Obtain tremendous clickthrough rates, enhancing brand recognition and ultimately increasing revenue

Fast Forward: Tools for Success

As the online advertising industry continues to evolve, new standards are being developed and adopted. Rich media technology companies are also actively working with the online advertising industry to define standards for developing ads using that particular technology. For example, members of the MFAA are working closely together to share and promote best practices to address the challenges of creating and supporting ads based on Macromedia Flash technology.

Addressing broader issues, industry organizations like the IAB, FAST, and Emerging Interest (formerly the Rich Media SIG) have been actively focused on standards for ad models, and basic performance measurement. In addition, a number of infrastructure companies are dedicated to providing tools that streamline workflow, making it possible to effectively and efficiently manage day-to-day Internet advertising operations.

For example, Solbright offers a unique collection workflow automation software for buyers and sellers that significantly improves the flow of accurate and timely information among departments, avoiding last-minute production problems:

➢ The Dispatch™ service helps media buyers locate appropriate sites and understand the types of ads they accept and their production requirements. It also enables the buyer to verify that the creative meets publisher specs.

➢ The AdSuite™ AdSales Manager™ service captures contract details for status tracking, providing relevant and timely information to trafficking, production, and billing departments.

➢ The AdSuite AdTraffic Manager™ service combines this information with the publisher's ad models and customized rich media filters to automate many of the production tasks involved in preparing the ad for placement in the ad server, including validation of the creative against established site requirements.

➢ Once the campaign has started to run, the AdSuite AdBilling Manager™ service handles the reconciliation of contracted amount with the actual performance numbers from the ad server and provides detailed summaries for accounting and invoicing.

About Macromedia and Solbright

Through partnerships among advertisers, agencies, ad serving companies, independent web sites, rich media technology vendors, and other companies that support media planning and campaign management, best practices combine with evolving standards to support and fuel industry growth. The Macromedia Flash Advertising Alliance (MFAA) is one such partnership in which Macromedia and partners like Solbright bring together an unparalleled understanding of rich media technologies and the online advertising industry to meet the unique challenges facing online advertisers and publishers today.

Macromedia's mission is to make work easier for people who build web content, and to enable them to deliver the most effective user experiences. Passionate about what the web can be, Macromedia delivers award-winning products like Macromedia Flash that empower developers to provide engaging experiences on the web and enable winning e-business solutions. Headquartered in San Francisco, Macromedia is on the web at www.macromedia.com.

Solbright is focused on streamlining the business of all online advertising. It specializes in web-based workflow automation solutions that simplify the implementation of online advertising for advertisers and publishers alike. For example, Solbright's AdSuite system for publishers reduces the time to process rich media ads by more than 80%! Such advances are possible because of Solbright's innovative technology and dedicated staff, who bring the company years of experience in systems architecture, ad server integration, database management, and customer service. Headquartered in New York City, Solbright is on the web at www.solbright.com.

Learn More about Online Advertising

News Sites	Selected Articles
ClickZ www.clickz.com	• "A Rich Media Great Comes Through," Bill McCloskey, 11/2000 • "Animated GIFS: More Expensive than Rich Media?," Karim Sanjabi, 06/2000 • "Debunking the Myths," Karim Sanjabi, 06/2000 • "Sometimes It Pays to be Rich," Heidi Anderson, 01/2001 • "That Sneaking Impression, Part 1 & 2," Tig Tillinghast, 08/2000 • "Tips for Evaluating New Rich Media Formats," Tom Hespos, 05/1999
TurboAds www.turboads.com	• "The History and Mystery of Vector Graphics," Bill McCloskey, 04/1999 • "Rich Media Challenges and Rewards," Jeff Wilkins, 08/2000
ChannelSeven www.channelseven.com	• "Comparing Apples and Oranges: The Fruit Salad of Advertising Measurement," Lawrence Pintak, 01/2001
Digitrends www.digitrends.net	• "Rich Media: Online Advertising's Beacon," Rob Graham, 12/2000 • "Webmercials Save the Online Adscape," Brett Bush, 12/2000

Research Sites	Selected Articles
AdRelevance www.adrelevance.com	• "Building Roads Less Traveled: Understanding Ad Sizes and Technologies," 10/2000
Jupiter Research www.jup.com	• "Narrowband Creative: Balancing Diminishing Near-Term Effectiveness with Long-Term ROI," 2/2000
Millward Brown www.millwardbrown.com	• "The Medium Is Part of the Message — The Role of Media for Shaping the Image of a Brand," 11/2000
Millward Brown Interactive www.mbinteractive.com	• "Evaluating the Effectiveness of The Superstitial," 10/1999 • "The Wired Digital Rich Media Study," 01/1999
Forrester Research www.forrester.com	• "The Content Site Turnaround," 12/2000 • "Internet Advertising Skyrockets," 08/1999 • "Macromedia's Flash Floods the Web," 05/1999
Newport Group, Inc. www.newport-group-inc.com	• "Understanding the Value of Workflow Automation for Online Advertising," 2000, (download from Solbright at www.solbright.com/pdfs/newportgroup.pdf)
eMarketer www.emarketer.com	• "The eAdvertising Report," Volume II 11/1999 and Volume III 06/2000

Standards Sites	Selected Articles
MFAA www.macromedia.com	• "Rich Media Recommendations" • "Tracking Macromedia Flash (SWF) Movies"
IAB www.iab.net	• "IAB/CASIE Advertising Banner Sizes" • "IAB Internet Ad Revenue Report," 3Q2000 • "Myers Reports and IAB Note that Online Advertising Shifts Mainstream," IAB Informer Newsletter, 12/2000
FAST www.fastinfo.org	• "Audience Measurement Guidelines," 01/2000 • "Basic Advertising Measures," 03/1999 • "Data Reconciliation Study," 01/1999
Emerging Interest www.emerginginterest.com	• "Emerging Rich Media Technologies to Create $34B Industry by 2005," 01/2001

www.solbright.com

212 Fifth Avenue • 7th Floor • New York, NY 10010 • voice: +1 212.696.9300 • fax: +1 212.696.9476