

# Reduce load time to strengthen your brand and increase conversions

BY PAUL COOK

If there's one thing you should know by now about your customers, it's that they are *impatient*. And in recent years, as Internet connections have gotten faster, and more online activities compete for their time and attention, their expectations for a smooth and speedy experience on your web site have grown.

Yet to compete for their mind-share and loyalty—and their dollars—you've taken steps to make your web

a “tag,” or tracking code, that gets placed on your site so you can better track visitors' activities, measure the performance of your campaigns, and glean valuable data to help improve your target-marketing efforts.

But all of this comes at a price—it slows down your web site. And that can have serious implications. Even a one-second delay in page load speed will result in increased site abandonment and a 7% loss in conversions, according to a 2008

Also, when your site suffers latency, or page-loading delays, due to the number of marketing campaign tags, it can cause friction with your information technology department, which is often charged with improving your site's performance. They point the finger at you for causing all the slow-downs, and you get frustrated by their inability to make improvements. Maybe they've even gone so far as to set limits on what campaigns you can

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site flashy and eye-catching, and full of rich content to give them as much information as possible about their potential purchases. You've probably also implemented a number of online campaigns to increase awareness of your brand and deliver a more personalized experience. And with each of those campaigns comes

study by Aberdeen Group. Another study, by KISSMetrics, estimates that 40% of visitors abandon a site if it takes more than three seconds for its pages to load. Furthermore, Google factors web site speed into its ranking algorithm, so a slow-loading site will suffer lower ranking in web searches.

launch (and therefore what tags can be put on your site), and that just adds to the problem.

In a survey we conducted earlier this year, 80% of respondents admitted they are concerned or very concerned about page load times, yet only 14% feel they have optimized their site speed; and



## REDUCE LOAD TIME

25% of respondents said they have not taken any steps to improve site speed, while the majority have taken some steps but feel they could do more. The reasons most site owners and marketers haven't taken adequate measures may include a deficit of time and resources, and budget constraints that prevent them from purchasing tools and technologies. A general lack of understanding about what corrective measures to take is also a contributor.

If the scenario above sounds at all familiar, then keep reading. This article is intended to shed some light on how to address latency, by

offering advice on how best to measure site performance and providing some practical steps you can take to improve the speed of your site.

### Where to look for performance issues

In order to accurately measure page load speed—and determine the right “fix”—there are a variety of factors to consider:

**Server-side vs. client-side performance.** You can address the server side by adding more servers or using acceleration technologies, but you don't have a lot of control over client-side issues. For example,

do pages load differently on different browsers, or different devices? If so, you can work with your web designer to overcome some of those problems. How about different connection speeds? Does a significant portion of your customers live in areas where high-speed broadband connectivity is still limited? If so you might want to tailor your site to them—unless they represent only a small portion of your customer base.

**Where your visitors are.** Are your visitors in your backyard, or across the country? Or even overseas? You should use testing services that will show site performance for various access nodes and paths, so you can tell if your site performs well for local traffic but is quite a bit slower for traffic coming from other, far-off places. This might indicate that you need to have platform servers in other locations to accommodate those visitors.

**Peak and off-peak traffic times.** What are the variations in traffic load that your site can accommodate, and when are you more likely to see peak traffic numbers? If you can pinpoint certain times of day, or even specific dates when traffic volumes spike, you can enact temporary adjustments to improve performance during those times—while keeping your site intact during other, less busy periods.

**Look beyond the home page.** Different features and functionalities will load on different pages of your site, so don't assume that the way your home page loads is a good representation of your whole site. You need to evaluate different pages separately, and consider any applications that might be slowing particular pages down, such as user reviews on product pages or too many images on search results pages.

**Evaluate whether tags are slowing down your site.** You can determine if third-party tags, used by external

## OUTCOMES RESULTING FROM SLOW-LOADING SITES

Reduced conversions	51%
Visitor abandonment	46%
Perceived negative brand experience	47%
Reduced repeat visits	49%
Switching to competitive sites	40%
Other mentions: negative impact on search engine optimization	

## KEY STEPS TO IMPROVED SITE PERFORMANCE:

Optimize page code	63%
Improve performance monitoring	56%
Reduce page weight	55%
Reduce or remove third-party tags	35%
Add more web servers/locations	22%
Implement site acceleration technologies	22%
Unsure or “other”	12%

Source: TagMan, 2011

data-tracking providers, are slowing down your site by simply switching them off. This is not recommended as a permanent fix because of the loss of tracking data, but it can show you if tags are contributing to site latency. For example, one of our clients' third-party tags were affected by Hurricane Irene this past summer, and they saw their web site speed up considerably when they were forced to turn the tags off. There are providers that can evaluate the amount of time tags take to load; and tools that simulate a slow-loading tag, which will give you an idea of the potential drag on your site's performance.

As you're evaluating the areas outlined above, it's important to remember that you should never look solely at performance averages—a mistake people often make. If you only consider average performance you may have a false perception that your site performs just fine, and you can miss out on determining the real problems.

As an example from work conducted by web analytics consultancy Semphonic, a look at Site A's page transmission speeds shows that the average was 1,021 Kbps—kilobits per second—which isn't too bad compared to its competitor sites, which ranged from 880 Kbps to 2,810 Kbps. Yet a closer look at Site A's site statistics shows that the maximum transmission speed was 1,642, and the minimum was 31 Kbps. This is a pretty big variation—and the worst-case scenario is quite a bit slower than the average. So look at the full picture, not just the average.

### Measuring latency: Four steps to acceleration

So, given all that's been discussed above, how can you go about speeding up your site beyond some of the simple tweaks you might already have made? There's no simple, black and white answer—the most

important thing to remember is that you need to balance the user experience, and all the features and applications you're using to enhance usability, with site performance. How to strike that balance will differ for every retail site.

There are ways to improve performance without sacrificing the experience, but it's important to first look at the trade-offs people are currently making between functionality and the negative impacts of slow page loads. In our recent



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survey, respondents listed the most undesired outcomes resulting from slow-loading sites, led by reduced conversions, visitor abandonment and perceived negative brand experience (see chart).

Respondents also identified the key steps they've taken to improve site performance, including optimizing page code, improving performance monitoring and reducing page weight.

There are many ways marketers currently address page load speed, all of which are effective, except the idea of reducing or removing third-party tags—a common misperception. While nearly three-quarters (71%) of respondents said they're

aware that optimization of third-party marketing pixels/tags can hasten page load times, more than one-third addressed the impact of tags by reducing or removing them altogether—which means that all that valuable tracking data has gone out the window. When tags are removed, marketers have no idea how well their campaigns are performing and what contribution they're making to an actual purchase.

Before you jump the gun and remove all the third-party tags from your site, strip your product pages of compelling images or add a bunch of servers where they may not be needed, consider the following five options, which might give you the performance boost you need now.

**1. Optimize page code.** This was the number one response people gave on our survey for how they're addressing latency. Optimizing page code, or shrinking the Javascript, involves merging the separate sets of instructions that tell the page what to do. It stands to reason that downloading lots of small scripts takes longer than downloading one large script. Marketing professionals might have some trepidation, given that this is in the domain of the I.T. team. But quick fixes can be done, even by those with limited programming knowledge. All that needs to be done is to open the Javascript files and copy and paste them all into one file. If this sounds a bit daunting, there are a number of online resources that provide an easy guide to merging files dynamically, such as Smarty.net.

**2. Address site functionality.** Site performance will vary from page to page, depending on what applications and functionalities you have—such as site search, shopping cart, check-out, live chat, etc. This can be particularly true if you rely on hosted solutions. For example,

if your site search pages load slowly and you use a hosted provider, you can ask them what options they have for improving their speed, or consider switching to a different provider. Or, as was the case with one company, perhaps the additions to your installed internal search database grew by volumes over recent years, to a point that it dramatically limited performance—in which case, a clean-up of the database would likely speed up performance.

**3. Reduce the weight of social media apps.** Social media plug-ins, while increasingly popular for their potential viral impact, have recently been identified as a contributor to site latency. For example, in a study we did in conjunction with Catchpoint, we determined by looking at a number of sites that Facebook's 'Like' plug-in stalls page load time by approximately 0.2 seconds—which might not sound like much, but when it's combined with other plug-ins (like Twitter, Google +1, etc.) and third-party tags it can drag down performance. Google has taken proactive measures to improve the speed of its +1 plug-in, but again, when it's combined with other plug-ins the impact can still be significant.

**4. Optimize third-party tags.** Every online marketing application or campaign includes a tiny piece of tracking code—or “tag”—that sits on your site. There are tags for display ads, paid search, SEO, retargeting, e-mail marketing, affiliates, site analytics and more. Each individual tag can take up to one quarter of a second to load.

Our research shows that the average e-commerce web site has more than 20 different tags, many on the same page. Most e-commerce sites incorporate five to seven tags per page. As marketers invest more in online marketing, their growing

need to accurately track performance has increased the proliferation of tags, which has contributed greatly to latency in site performance.

As previously mentioned, many marketers address this problem by significantly reducing, or even removing altogether, the tags on their site. One major U.S. retailer removed all its tags during the holiday season and reported a sales gain of 15% just because their pages

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loaded faster. However, the downside to removing the tags was that the retailer gave up the ability to track their customers' marketing activities, which resulted in an incalculable loss of customer data. That's a very difficult trade-off, and one most marketers don't want to make.

A better approach to third-party tags is to optimize them—something you can achieve through use of more sophisticated tag management systems (which put all tags in one container, so they're more easily implemented and managed). There are several ways to optimize your tags. For example, you can configure your tag management system to perform parallel tag loading, which loads all tags in parallel rather than in sequential order, where slower loading tags can hold up the rest, thus reducing the total time necessary for the page to complete. You can also set limits so that any tags exceeding a certain amount of time to load can be timed out, and set your system so that only tags

relevant to particular visitors are loaded, rather than loading them all every single time. Finally, you should make sure any old tags that are no longer in use are removed from your site. Often, tags get put on a site and are then forgotten, and the accumulation of them can drag down performance.

**5. Start at the top.** When it comes to how your pages should load, always work your way from

the top down, loading items above the fold first. Taking this approach with all the properties on your site—including images, content and even tags—demonstrates to your visitors that you value their time and enables them to get started with their shopping experience right away, rather than waiting for items to load that they're not even readily able to see.

When you take a comprehensive view of your site's performance and how it's measured, you can easily find areas for improvement without having to take drastic measures that compromise usability and campaign tracking. Whatever you do, be sure to test your site's performance regularly so you're better able to determine when problems arise, and how to address them. Doing so will ensure that you deliver the smooth, streamlined experience your customers expect, and will help strengthen your brand reputation, improve search engine rankings, reduce site abandonment and lead to more purchases. ●