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Improve the Speed of Mobile Web Campaigns: 4 Factors that Affect Load Times

SUMMARY: The mobile Web infrastructure is in its infancy, which creates pitfalls for your mobile marketing campaigns. Several factors can drag down your performance and upset your customers.

Find out which factors are most likely to slow down your mobile loading and response times, and how you can prevent them from irritating your audience.

Efficiency is paramount to mobile users. After all, they are counting on fast, reliable information delivered to their mobile devices. But mobile Web browsing and SMS-based services are vulnerable to delays caused by the platform's limited bandwidth.

For example, a man in a store might want to check his account balance before making a purchase. If he uses an SMS-based service provided by his bank, he needs a response message quickly -- even a few minutes is too long to wait.

Or, perhaps you're a marketer who has purchased CPC display ads on a mobile website. If the ad's landing page does not load quickly enough, the money spent on clicks will be wasted.

"A lot of these things you don't really think about in the desktop Web world, but the smallest little weakness in mobile magnifies itself by multiple orders of magnitude," says Tony Perez, Manager Mobile Technologies, Keynote Systems.

Perez and his team are responsible for monitoring and measuring the performance of mobile experiences. The team has noticed recurring problems that stretch the time it takes to receive an SMS message, load a WAP page, or login to a user account. So we asked him to describe the most common problems he's noticed, and what you can do about them.

Here are four factors you can manage to improve the performance of the mobile user experience, followed by an explanation of the factors outside of your control:

The Factors You Can Control

Factor #1. Images

Similar to the good ol' days of the early Internet, images on WAP sites can eat a lot of bandwidth, slowing down load times. While images provide a fuller, more enjoyable experience, using too many can frustrate users.

Instead of using every image that's present in your website, make sure your mobile site is more selective in its use of images. Decreasing the images' size and quality might also be necessary to improve load times.

Factor #2. Redirects

Avoid redirects whenever possible. Load times can be slower when users type in a URL but are redirected to another site, Perez says.

"A lot of times that has to be communicated back and forth with your handset," he says. "I've seen examples where the number of redirects goes three or four levels deep. For all those links being pushed from the next site to the next site, it can take 10 or 15 seconds."

Factor #3. Multiple servers

Delivering a mobile site's content from several servers does not necessarily slow loading times. However, if one of those servers is overwhelmed or slowed down for any reason, then it can dampen the experience and prevent a quick load.

Make sure that all the servers responsible for sending your mobile content are running as efficiently as possible.

- Use of mobile accelerator services

Marketers who use third-party mobile accelerator services, such as Akamai, should be sure that their technology is configured properly, Perez says.

These systems use a network of servers to help marketers get their content geographically closer to visitors to quicken load times. Although they are proven to work, they only do so if set up correctly.

Factor #4. Partners

Any partner you use to provide your mobile experience should be as concerned with your performance as you are.

Marketers often use SMS aggregators who deal in bulk messaging to send and receive messages. Examples include MX Telecom and mBlox. These companies can experience slower processing and response times, just as any servers do.

Be sure to fully explore your options when selecting mobile partners, and try to establish a level of expectations and requirements for performance. Unfortunately, there is no industry standard for how these companies are rated, Perez says.

- Note on monitoring

Because the performance of a mobile service is dependent on several variables, it is important to monitor your performance throughout the day and throughout the week.

Servers have multiple, fluctuating demands on their bandwidth. A weak server in your process might run well on a Tuesday morning and start failing on a Friday evening. If you measured performance on Tuesday, you might be led to believe that everything is fine -- until the complaints come rolling in.

Carriers: The Factor You Cannot Control

Unfortunately, not everything that affects mobile performance is within your power to manage. The most common problems occur with the wireless service carriers themselves, who experience periods of heavy volume that slow down the entire network.

In some cases, Perez notices the following performance pattern:

- Midnight through 6 a.m. - wonderful performance
- 7 a.m. to 8 a.m. - delays begin to increase
- Noon - delays peak
- Afternoon - delays settle again
- Evening - delays peak again

"It's not the same for all operators," Perez notes. "For some, we don't see that at all, and then others we see it on a daily basis."

- How to handle service delays

While some major mobile infrastructure companies such as Google and Yahoo! are given account managers at the carriers to handle these problems, most marketers will not have that luxury.

However, you should strive to explain the delays and typical slow times to your customers, so that they understand where the issues lie.

"You might not be able to do anything about it, but at least if your customers are complaining you know what the problem is and you can say 'We understand the problem and we're monitoring it,'" Perez says.

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