here comes HTML5—should we care?

MIX10 is the annual Microsoft event for web developers and designers, and the big news from this year's conference was expanded HTML5 support in Internet Explorer 9 (IE9), including support for the audio and video tags. Basically, this means that when IE9 ships (Microsoft didn't announce a ship date), it will play video without a plug-in such as Flash or Silverlight. How? Like all of the HTML5-compatible browsers, IE9 will supply its own codecs to play video files. For most readers, this rates a big yawn, but HTML5 is something you need to know about—even if it's just to conclude that it probably won't be important in the near term.

HTML5 has been coming for a while, and it is currently supported in Apple Safari, Google Chrome, Mozilla Firefox, and the Opera browsers. Of course, since Microsoft IE still owns close to half the browser market, support in other browsers is interesting but not particularly relevant. The HTML5 versus Flash issue came to a head when Apple announced that the iPad wouldn't support Flash because, in the words of Steve Jobs, Flash is an unstable "CPU hog." Though I didn't tackle the stability issue, my tests at StreamingLearningCenter.com proved that Flash Player 10.1 is extremely efficient on platforms where it can access hardware acceleration for video playback. Moreover, Flash proponents counter that Apple's reticence to support Flash is more about protecting App Store revenue than any Flash deficiency, given that lots of games Apple charges for are available for free with Flash.

There's no doubt that if the iPad is a raging success, it will put pressure on many mainstream websites to support HTML5; otherwise, iPad users won't be able to view video or advertisements on their sites. That said, there's an equal chance that the iPad will ultimately support Flash, bowing to pressure from competitive products from Hewlett-Packard Co. and other vendors. Taking the iPad out of the picture for a moment, what's the short-term prognosis for HTML5?

First, some background. According to W3Counter (www.w3counter.com), the current combined market share for Internet Explorer 8, 7, and 6 is 24.45%, 14.4%, and 9.79%, respectively, for a total share of just less than 49%. According to Wikipedia, IE6 shipped in 2001, and IE7 shipped in 2006. So, while the technical cognoscenti feel it's imperative to drive the latest browser, clearly, much of the rest of the world doesn't agree. Even if Microsoft shipped IE9 tomorrow, HTML5 support won't be pervasive anytime soon.

Given that the most netizens won't be using an HTML5-compatible browser anytime soon, clearly, no commercial website is going to abandon Flash in the short term. Sure, you can easily support HTML5 and continue to support Flash, but what's the advantage of adding HTML5 support in the near term? That's when the picture starts to get really muddy.

For example, though all HTML5 browsers support the video tag, which enables playback without plug-ins, they never agreed on a single codec. Apple Safari and IE will support H.264, while Mozilla Firefox and the Opera browser will support Ogg Theora. Google Chrome will support both. So, today, to fully support HTML5, you're going to have to produce and deliver using two codecs (three if you're currently streaming with VP6).

In addition, many broadcast sites now use digital rights management (DRM) technology to protect their content. This works well with Flash or Silverlight because a single player exists on all platforms and browsers. But under HTML5, there won't be a single player; the browser supplies the basic player functionality supplemented by JavaScript code. Features that are integral to the Flash or Silverlight players, such as DRM, adaptive streaming, and (soon) multicast, will have to be programmed in.

Today, for DRM, content owners look to one party such as Adobe to protect their content. With HTML5, you have to write the code yourself and trust each browser developer to operate properly. Sure, it's possible to protect your content this way, but there's a huge gap between what's possible and what will convince a content owner to chuck Flash or Silverlight. Ditto with adaptive streaming, which relies upon logic within the player to determine when to switch streams. Sure, this logic could be built into the webpage via JavaScript, but until HTML5 penetration gets anywhere close to 90%, how is that superior to Flash or Silverlight today?

Basically, most HTML5 proponents are attempting to prove that HTML5 is "good" by proving that Flash is "bad" because of the aforementioned performance and stability issues and that it's not an open standard. But if Flash were that bad, why would Motorola and Google, presented with the exact same facts as Apple (but minus the App Store), choose to support Flash on the Droid phone? Why would virtually every other mobile vendor make the same decision? And while open standards sound great, 95% of internet users don't care—they just want their video to play.

As far as I can see, the "advantages" of adopting HTML5 in the short term include increasing your encoding and storage requirements, defeaturing your video player and rebuilding it from scratch, and dealing with uncertainty as to DRM, adaptive streaming, and multicast. It doesn't sound like anything a bunch of commercial websites will be in a rush to adopt. And if they're not in a rush, you and I certainly don't need to be.

Jan Ozer (jan@doceo.com) is a frequent contributor to industry magazines and websites on digital video-related topics. He is chief instructor at StreamingLearningCenter.com.

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