

ADD SOME FLASH TO YOUR MAPS

Novel technologies like WebGL and the HTML 5 canvas element are designed to develop 3D webapps, but they are supported by only select browsers.

An immediate alternative is the Adobe Flash 9, already present in most of the browsers and performs at par with the others



Web applications (or “webapps”) built on Bing Maps, MapQuest or Google Maps provide the consumer with a 2D perspective of the world. This perspective is constructed from an arrangement of rectangular text blocks and prefabricated bitmap tiles fetched from a server and positioned within the browser window by JavaScript, HTML and CSS. This process is similar to building a toy house with Lego blocks. It’s somewhat primitive, but effective.

Inside every new PC or Macintosh is a graphics processing unit (GPU) 100 times faster than its CPU. This GPU can easily chew through the hundreds of billions of calculations per second necessary to deliver real-time 3D realism, dynamic perspectives, custom shading and lighting.

Ideally, these webapps would trade their Lego blocks for the privilege of tapping into the GPU, to let the consumer fly in and around the streets below, like Superman! To that end, the W3C, Khronos Group and others are defining Web technologies like WebGL and the HTML 5 canvas element to harness the power of the GPU. Firefox 4 and Chrome 10 have implemented these nascent technologies, but it will take time (years?) before they are supported across all mainstream browsers.

In the interim, a technology exists today, present in 99 per cent of desktop and notebook browsers that deliver on the promises that WebGL and the canvas element offer tomorrow.

This technology is Adobe Flash 9 and above, which I call Flash “generation 2.”

Flash 9, released in 2006, represented the second generation of Flash, a rebirth that left behind a world of badly written banner ads and annoying splash-screens. This Flash was redesigned as a GPU-accelerated environment with a programming language called ActionScript 3 that delivers native-like performance, a 3D vector scene graph that makes HTML 5’s canvas tag seem like a child’s etch-a-sketch, and a Blu-ray quality video decoder, which YouTube puts to good use.

A few map based webapps that use Flash “generation 2” include SpatialKey.com and Travelocity.com.

As Flash continues to evolve at a fantastic rate, it’s likely that its next version, Flash 11, will be released before WebGL achieves broad support. Flash 11 will give webapps greater access to the GPU’s 3D engine. The result, as demoed at MAX 2010 in Los Angeles, is a 100-times performance gain over Flash 10, which itself is no slouch.

Flash runs well on desktop and notebook platforms, but despite the efforts of Adobe, Google and others, it remains a mixed bag on smartphones and tablets (Steve Jobs article titled “Thoughts on Flash” at <http://goo.gl/dZ2xT> delves into the gory details). Last month, Adobe announced their Flash Builder 4.5 development tool, which plans to ship in mid May. The notable (some would say magical) feature of this release is the option to recompile Flash ActionScript 3 source code to natively target Android, iOS (iPhone, iPad etc.), and Blackberry Tablet OS (but not Blackberry smartphone) platforms.

Please visit <http://goo.gl/mx8h8> for information on the free Adobe tools that can help you to add some Flash to your maps! ☑

Kevin MacDonald
Senior Architect, ThinkWrap Solutions Inc
kevin.macdonald@thinkwrap.com