



Rich Media Advertising with SVG and JavaScript

Introducing SVG and HTML5
VIDEO element to the mainstream
advertising

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Abstract

With introducing the AUDIO and VIDEO elements as part of the HTML5 Specification, a new opportunity is open to introduce SVG and web standards as platform for rich media online advertising (interactive and video content in online ads). The tools and apps for rich media online advertising provided nowadays are build with the Flash technology as delivery platform, and therefore are dependant on one vendor, Adobe, to provide IDE, API and Frameworks.

Rich Media advertising history

Back in October 25, 1994 HotWired (the online sibling of Wired Magazine) was the first web site to sell online advertising space in large quantities to a wide range of major corporate advertisers. They were also the first company to provide click through analytic reports to its customers. This (sales) initiative was the brain child of Rick Boyce, a former media buyer with San Francisco advertising agency Hal Riney & Parnters.

In late 1996 Hewlett Packard partnered with San Francisco-based online agency, Red Sky Interactive, to produce what is now regarded as the worlds first interactive rich media banner ad (dare I say Advergame). The ad was developed by Red Sky programmer Chris Hurwitz (using Macromind Director) and allowed users to play the classic videogame Pong within a banner ad. Looking back, it seems quite poignant that the world's first rich media ad was based on the world's first video game, Pong. ([source](#))

- Java Applets
- JavaScript early attempts
- Macromedia Shockwave Player
- Macromedia Flash PLayer
- FLV - Flash video
- Adobe Flash Player 10

Rich Media ad examples

- <http://www.doubleclick.com/insight/gallery/examples/the-sims-3.asp>
- <http://www.doubleclick.com/insight/gallery/examples/volvo-xc60.asp>

Questions:

- Is it accessible?
- Is it reusable once created?
- Is it CPU / Bandwidth hungry?
- How big are those files?
- How much does it cost to produce one of this?

Rich Media Authoring Applications

- Adobe CS
- Adobe Flash
- Video Production Apps

Why Flash is ahead and SVG is still behind?

- SVG and Web Standards move too slow, propriety software move faster
- Modern Browsers (a.k.a. FF and Webkit) - only recently started to support SVG natively with full spec implementation.
- IE - we still have to hack it to make it work with this technologies and use the old-school plug-in work around or wait for the big industry players to distribute this solution
- Luck of professional authoring tools

Why SVG will be better?

- Accessibility
- Semantics
- Open Standard
- Development Environments
- Testing
- QA
- Maintenance

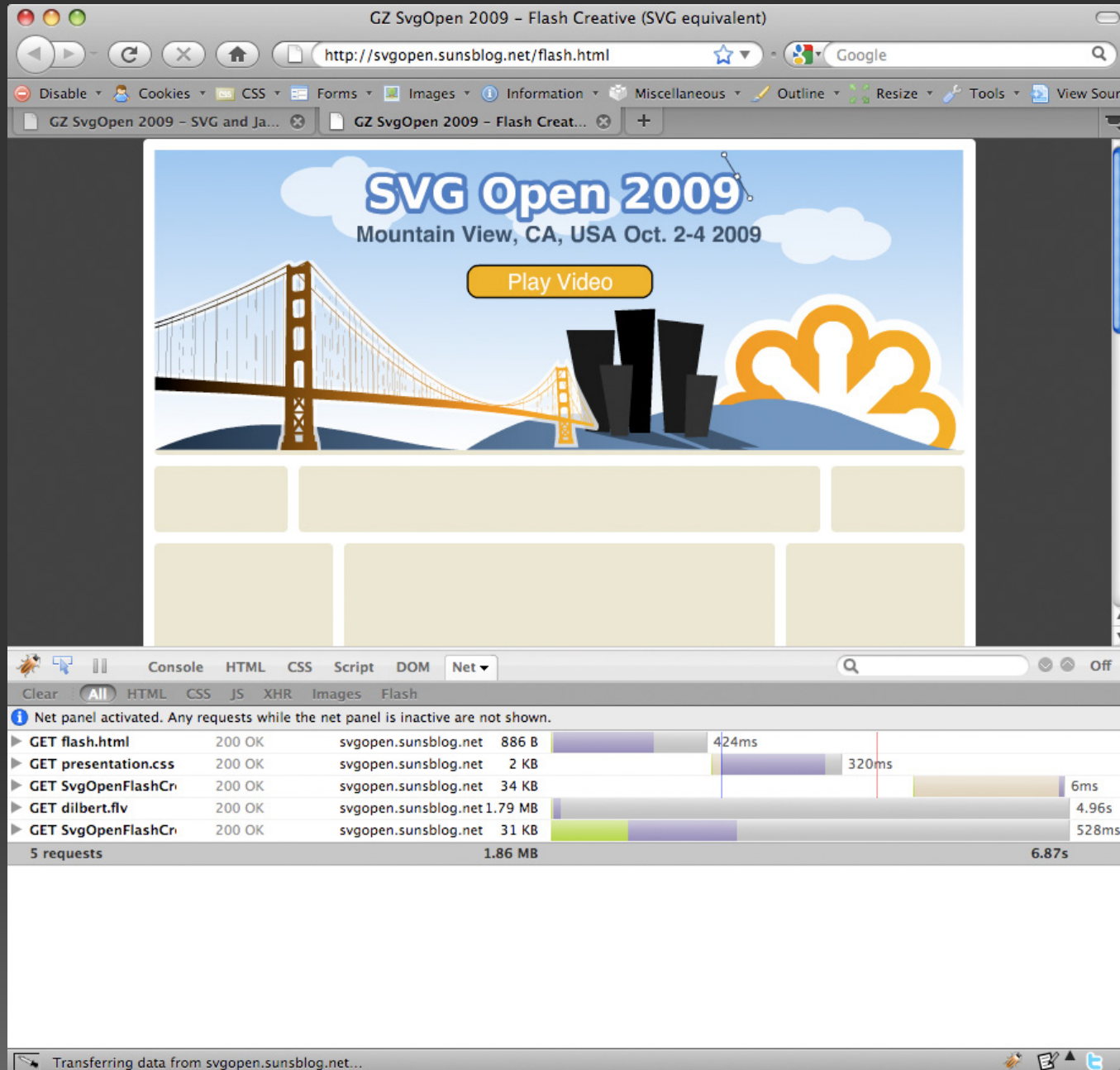
Rich Media Creative Prototype with SVG and the VIDEO element

<http://svgopen.sunsblog.net/svg.html>

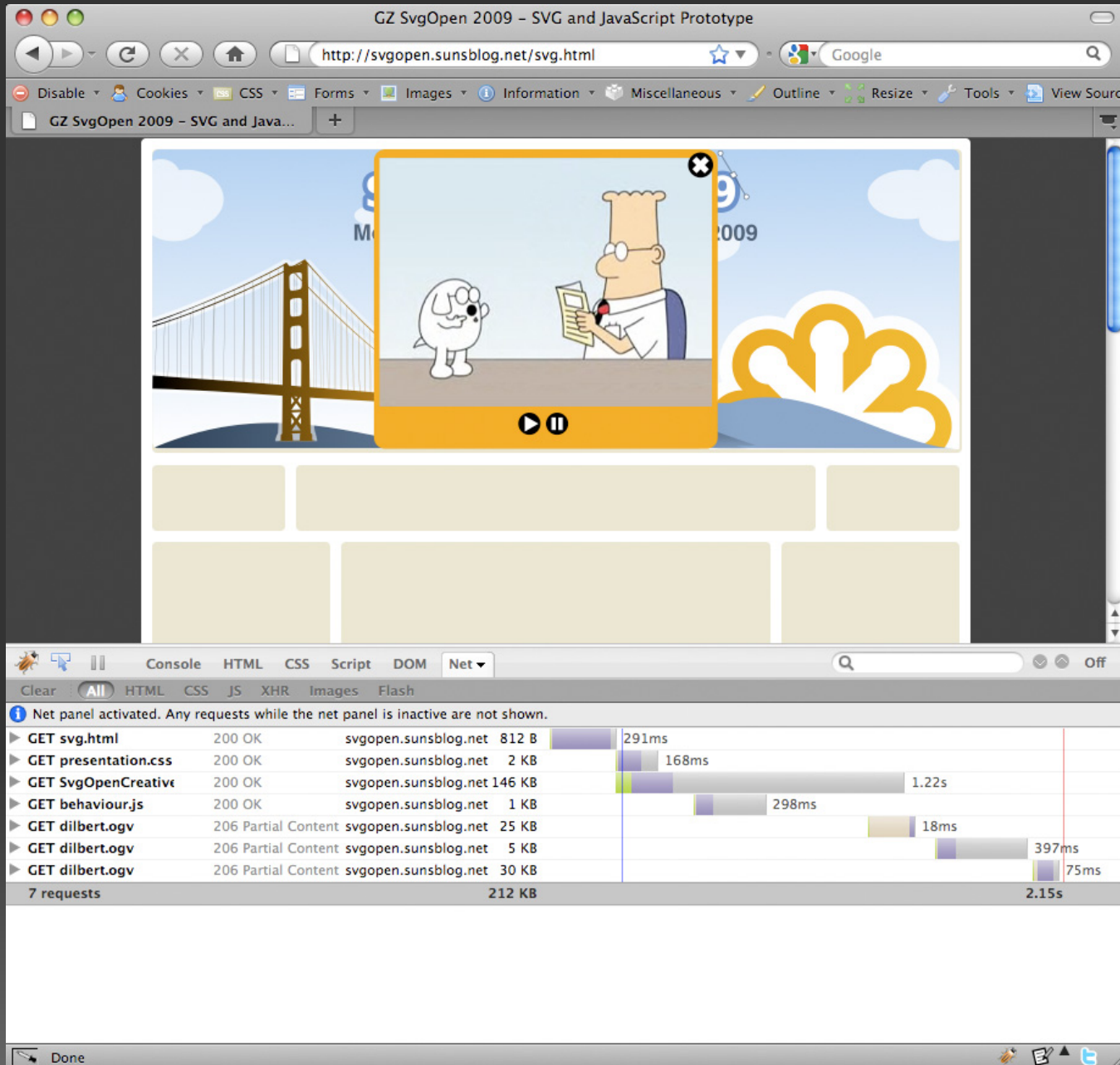
Rich Media Creative with Flash (SVG Equivalent)

<http://svgopen.sunsblog.net/flash.html>

Creatives performance (Flash) 6.87s



Creatives performance (SVG) 2.15s



Why SVG over CANVAS?

- Accessibility
- Semantics
- Developers familiarity with web standards
- Same thing, yet another API

Facing problems

- No SVG based authoring tools for the masses.
- Not everyone is engineer or web developer.
- Designers, main force behind online advertising creativity and solutions, like to draw and paint, not code.
- There are some authoring tools, like Inkscape (very powerful but with no time based animation features), as free alternative to Illustrator.
- Adobe Flash is offering everything needed for rich media authoring, and established as standard in the advertising world.
- Production of ads can be very expensive if you hire only engineers (with no design and media skills) to produce SVG/JavaScript based ads.

The Good News

SVG "**foreignObject**" is here to save the day. You can insert the HTML5 **VIDEO** element and add all video player **scripting**:

```
<g transform="translate(418,10)">
  <foreignObject width="300" height="240">
    <video autobuffer="autobuffer" width="300" height="240"
      id="dilbert" xmlns="http://www.w3.org/1999/xhtml">
      <source src="dilbert.mp4" type="video/mp4" />
      <source src="dilbert.ogv" type="video/ogg" />
    </video>
  </foreignObject>
  <rect x="0" y="240" width="24" height="24"
    fill="blue" stroke="none"
    onclick="document.getElementById('dilbert').play()"/>
</g>
```

Tools

I'm sure there are plenty more in the wild, but I find this selection very useful and promising:

- Desktop
 - Inkscape (<http://www.inkscape.org/>)
- Web
 - SvgEdit (<http://code.google.com/p/svg-edit/>)
- APIs
 - Raphael (<http://dmitrybaranovskiy.github.io/raphael/>)
 - jQuery SVG Plugin (<http://keith-wood.name/svg.html>)
 - SVG Web Toolkit (<http://code.google.com/p/svgweb/>)

Video encoding

Video authoring services will need to encode web videos in MP4 (Safari, Chrome) and Theora Video OGV (Firefox, Chrome) so the video can be played using the HTML5 VIDEO element. Encoding software I used for the Dilbert video in the prototypes are:

- MP4
 - HandBrake (<http://handbrake.fr/>) (desktop app - Windows, OS X, Linux)
- OGV
 - FFmpeg2theora (<http://v2v.cc/~j/ffmpeg2theora/>) (command line app - Windows, OS X, Linux)

Browser support !!!

- Desktop

- SVG support for all browsers is here (well, almost all - IE is not supporting it, but there is a way around it). There is no excuse today not to make SVG an advertising standard. See the link below for detailed browser support:

<http://a.deveria.com/caniuse/#agents=All&eras=All&cats=SVG,Canvas&statuses=rec,cr,wd,ietf>

- Mobile

- iPhone (basic, foreignObject element not supported)
- Android (not yet)
- Palm Pre (No)
- Symbian (SVG Tiny 1.1 - not applicable for rich media advertising, but applicable for standard ads)
- Windows Mobile (No)

Accessibility

Grouping constructs, when used in conjunction with the '**desc**' and '**title**' elements, provide information about document structure and semantics. Documents that are rich in structure may be rendered graphically, as speech, or as braille, and thus promote accessibility.

<http://www.w3.org/TR/SVG/struct.html#DescriptionAndTitleElements>

The Future

- If IE is sorted, there will be no breaks to implement SVG as mainstream rich media advertising platform. There are workarounds, but we would like to see native support, ideally.
- If we develop professional authoring environments, SVG will be adopted by the advertising services industry.

Conclusion

- Yes, it is possible to design and create SVG rich media ads with video. You saw the working prototype. It works.
- Yes, we still have lots of work to do by providing authoring tools and updating existing or create new ad serving platforms.
- Yes, it will happen.
- Yes, we need new funky name for all this "a la AJAX".
- Let's do it!

THANK YOU!

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