

# *Effective* Flash Deployment

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## What is this about?

- SWF Object – Javascript method for embedding Flash content in web pages
  - Solves IE Active Content problem
  - Improves or enhances:
    - Search Engine Optimization (SEO)
    - Web accessibility
    - Flash player version detection
    - Flash player upgrades

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2

## My background

- CodeGeek.net, Inc. - Fort Collins
  - Web development using a distributed team model
  - Consortium of skilled professionals & larger firms
- My focus
  - User-centered design
  - Web standards
  - Flash as data-interface tool
  - Information architecture

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3

## IE Active Content problem

- Eolas Technologies, Inc. sues Microsoft for patent infringement with respect to the way Internet Explorer (IE) renders ActiveX controls loaded by the APPLET, EMBED, or OBJECT elements.
- August 2003 Jury verdict: Microsoft must pay \$521 million for infringing on Eolas' patent.
- Microsoft breaks IE
- "*Microsoft is apparently of the position that this [IE modification] helps their litigation position.*"

- [www.eweek.com/article2/0,1895,1944867,00.asp](http://www.eweek.com/article2/0,1895,1944867,00.asp)

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4

## What Microsoft broke...

- Active content that is embedded in HTML pages in certain ways will not be able to receive user input (for example, keyboard or mouse events) until the user clicks to either activate or continue loading the control.
- Affects:
  - IE 7
  - IE 6 with recent "security" patch
- <http://www.adobe.com/devnet/activecontent/>
- Example of broken content
  - Look at <object> code

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5

## The Solution!

- SWF Object
  - created by Geoff Stearns
  - [blog.deconcept.com](http://blog.deconcept.com)
  - formerly FlashObject

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6

## Basic use of SWF Object

- Uses simple HTML code
- Link to Javascript file
- Code changes:
  - Replace <object> code with script
  - Link to swfobject.js in head
- Broken IE content now works

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7

## Additional benefits

- SWF Object also improves or enhances
  - Search Engine Optimization (SEO)
  - Web accessibility
  - Flash player version detection
  - Flash player upgrade process

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8

## SEO best practices

- Separate content from layout
- HTML code should be semantic
  - HTML tags should be used to indicate the *meaning* of your content
- Use CSS for layout

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9

## Semantic HTML for SEO & Accessibility

- Primary tags used to markup your content:
    - <h1> through <h6>
    - <p>
    - <ul><li> and <ol><li>
- Use <a> tags effectively for SEO
  - Bad: <p>Click <a href="url">here</a> for information about the IBM X40 laptop.</p>
  - Good: <p>Click for <a href="url">information about the IBM X40 laptop</a>.</p>
- Use "alt" attribute with content-relevant <img> tags
- Use "title" attributes where possible, supported by most tags
- Use "summary" attribute with tables
- All of the above:
  - maximizes SEO
  - enhances accessibility of your content as well – e.g. screen readers

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10

## Alternate content

- Provide fully functional alternate content in the <div> to be replaced
- This is indexed by search engines, whereas your Flash content may not
- Visitors w/o Javascript or Flash will see it
- Dovetails with "progressive enhancement" web development

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11

## Accessibility

- Doesn't refer only to visitors with disabilities
- Also applies to viewing your content on devices with limited capabilities (e.g. PDA's)
- What if they don't have Javascript enabled? (10-20% of web users don't!)
- What if visitors don't have Flash?
- What's a developer to do?

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12

## Alternate content examples

- No Javascript – SWF Object won't work
  - They will see your alternate content
  - Provide more info between <noscript> tags
  - [View example](#)
- No Flash
  - Can handle this case using Flash Player detection integrated with SWF Object

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13

## Flash player version detection

- SWF Object has interface for FP version detection
- Specify minimum version (e.g. 8.0.24) as fifth parameter:

```
var so = new SWFObject(
    swf, id, width, height, version, bgcolor,
    useXML, quality,
    xiSuccessRedirectURL,
    nonXiRedirectURL);
```
- Uses a Javascript function in SWFObject.js to return the Flash Player version

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14

## Lots you can do once version is detected

- Provide textual feedback to visitors
  - View code and [example](#)
    - FP version < required by site and < 6.0.65
    - Different response whether Flash not installed at all, or just inadequate version
- If inadequate version :
  - Have visitors upgrade Flash player
    - with Express Install
    - manually
  - Or redirect visitors to a different page

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15

## Upgrading Flash Player

- Express Install (XI)
  - New feature to upgrade to Flash 8 or later
  - Works when visitors already have FP 6.0.65 and newer
  - Internet Explorer:
    - Seamless upgrade
    - Visitors never leave your page, browser never closes
  - Mozilla based browsers:
    - Upgrade not seamless, but still best upgrade path
    - Visitors will be directed to close their browser
    - Browser will automatically launch again
    - returns visitors back to same page on your site or alternate page through a redirect
- You should provide a link for older versions of Flash Player to upgrade manually

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16

## Express Install demo

- Modify the .fla to enable Express Install
  - Add some ActionScript to frame one (start your movie on frame two)
  - Put expressinstall.as file in same directory as source .fla file
  - Modify expressinstall.as for advanced error handling
- Internet Explorer with FP 6.0.65
- FireFox with FP 6.0.65
- Demonstration of Express Install failure:
  - FF or IE with FP 6.0.47 (FF experience is worse)

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17

## Express Install limitations

- Must have the Flash source code
- Without source code, could possibly nest Flash files
  - use a “wrapper” .fla that uses Express Install and loads the main movie .swf on the second frame

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18

## Going farther with Express Install

- Modify expressinstall.as to handle:
  - installation cancelled case
    - a situation worth looking at
  - installation failed case
- Redirect users:
  - No matter what (unless they have proper version of Flash player to view your content)
  - Only if they are ineligible for Express Install
- Or provide a manual link for non-XI upgrade

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19

## Testing protocol

- Once you've incorporated Express Install
  - Test with FP 6.0.65 or newer, but older than required by your content (Express Install should work)
  - Test with FP 6.0.47 (or older) to see how a failure will work (not pleasant)
  - Test with javascript disabled:
    - use developer's toolbar
      - available for IE and FireFox
      - <http://chrispederick.com/work/webdeveloper/>
  - Test with no Flash player

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20

## Flash Player un/installers

- Uninstallers
  - [http://www.adobe.com/go/tn\\_14157](http://www.adobe.com/go/tn_14157)
  - Only need the latest uninstaller – it will install all previous versions of Flash Player, except from open browsers
    - Windows version
    - Mac OSX version
    - Mac OS8/9 version
  - New Windows uninstaller for FP8 and earlier released May 11, 2006 (public release)
  - If using Flash 9/8.5 Beta, get installer/uninstaller from [labs.adobe.com](http://labs.adobe.com)
- Installers for old versions of Flash Player
  - [http://www.adobe.com/go/tn\\_14266](http://www.adobe.com/go/tn_14266)
- Use appropriate installer
  - "ActiveX" or "ax" version for IE
  - "Plugin" version for Mozilla/PC
  - Macintosh: "classic" and "osx" versions

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21

## Stay updated

- [blog.deconcept.com](http://blog.deconcept.com)
- SWF Object official email list  
<http://lists.deconcept.com/listinfo.cgi/swfobject-deconcept.com>
- Version 1.4 is first version after name change from FlashObject to SWFObject
- Current version is 1.4.1 as of June 3, 2006 (fixes a problem with streaming content)

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22

## Upgrade procedures

- If using SWFObject now
  - Just replace old SWFObject.js file on your web site with new ones as they are released
- If using FlashObject
  - Replace FlashObject.js file with SWFObject.js file
  - Change script link in all HTML pages formerly using FlashObject.js to the new file name
  - Optional: change "fo." and "FlashObject" references to "so." and "SWFObject"

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23

## Why does all this matter?

- Internet Explore 6 "patch"
  - Already in place – your content is probably broken already
- Internet Explorer 7 due soon
  - Has same Active Content issue
- Flash player version 9 is due soon
  - Provide a way for your visitors to upgrade easily

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24

## Alternatives to SWFObject

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25

## Adobe solutions (Javascript)

- Flash authoring tool extension
  - Released April 14, 2006
  - [www.adobe.com/go/7c29e252](http://www.adobe.com/go/7c29e252)
- Convert Active Content with Dreamweaver 8.0.2:
  - How to: [www.adobe.com/go/2f98fbe7](http://www.adobe.com/go/2f98fbe7)
  - Dreamweaver 8.0.2 Updater - May 9, 2006: [www.adobe.com/support/dreamweaver/downloads\\_updaters.html](http://www.adobe.com/support/dreamweaver/downloads_updaters.html)
- Manual solutions
  - [www.adobe.com/devnet/activecontent/articles/devletter.html](http://www.adobe.com/devnet/activecontent/articles/devletter.html)

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26

## Additional resources

- Video tutorial
  - [www.cartoonsmart.com/change\\_code.html](http://www.cartoonsmart.com/change_code.html)
- CommunityMX extension for Dreamweaver
  - Inserts FlashObject code and js file (need to manually update the js file with each new version)
- To embed Flash content in blogs
  - WordPress, TextPattern
  - [www.kimli.com/plugins/kml\\_flashembed](http://www.kimli.com/plugins/kml_flashembed)

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27

## Thank you

- Visit [www.codegeek.net](http://www.codegeek.net)
- Want to collaborate? Send me email
  - [ronz@codegeek.net](mailto:ronz@codegeek.net)
  - Anticipated needs:
    - HTML/CSS coder embracing web standards
    - Graphic designer
    - Flash developer with ActionScript 2 skills
    - PHP/MySQL coder

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28