2014 Minnesota Government IT Symposium
For State Agencies, Counties, Cities, Higher Education and Nonprofits

December 9-11, 2014   RiverCentre, St. Paul, MN   www.mngts.org/itsym
(Presented by GTS Educational Events)

Session 31

Got a CMS? Get Your Webdevmojo Back with JavaScript!
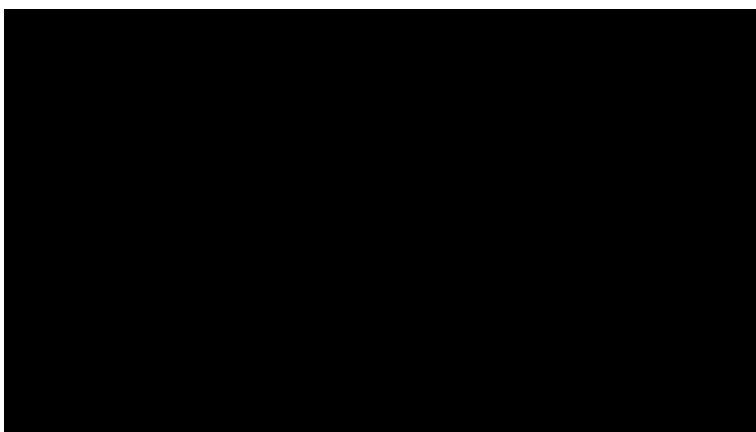
Paul Burtness, Anoka County, MN

Wednesday, December 10, 2014
2:00 p.m. – 3:00 p.m.
Presentation and code examples at:
http://paul-burtness.github.io/webdevmojo/

Losing your mojo?

Austin Powers: The Spy Who Shagged Me

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What is it?

- Mojo – a power that may seem magical and that allows someone to be very effective, successful, etc. http://www.merriam-webster.com/dictionary/mojo
- Webdevmojo – the ability to solve problems in an amazing way using a web application…
- and have fun doing it!

How do you lose it?

- Migrate your website from a self-hosted site you build and control…
- To a managed-hosting site built with a 3rd-party Content Management System (CMS)
- Pros – no longer responsible for managing a server, distributed authoring, etc.
- Cons – format limitations, limited to built-in functions

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How do you get it back?

- Contract with vendor to customize the CMS
- Modify the CMS yourself
- Build applications on another server
- Integrate your applications with the CMS
  demo – http://www.anokacounty.us/InmateLocator

Why JavaScript?

- Java – runtime issues, learning curve
- Flash – security issues, no iOS support
- JavaScript – universal support, appropriate for wide range of solutions, approachable

How do you play?

```
<html>
<head>
<title>My JavaScript Page</title>
<script type="text/javascript"
src="http://yourserver.com/js/script.js"></script>
</head>
<body>
<h1>
<script type="text/javascript">
document.write("Hello World");
alert("It worked!");
</script>
</h1>
</body>
</html>
```

Can you play?

- Need to get <script> code into the HTML
- Probably cannot access <head> section
- Check documentation/support
- Rich text editor with HTML editing
- Custom HTML editor
- Put in a new page and try it (test version?)
- Does it display?
- Does it cause an error?
  - demo – http://www.anokacount.us/tryit

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Why can't you play?

- Security risk of script insertion
- Interference with other scripts on the page
- Vendor quality control
- Just because

Why would you want to play?

- Include information from other sources on your site (JSONP and CORS)
- Enhanced use of information from your site (RSS and site API)
- Custom solutions
- Customize design

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What do you have to play with?

- JavaScript – statements, functions, objects, DOM interaction, etc.
- JavaScript Libraries – example: jQuery
- Use "View Source" or "Inspect Element" to see if jQuery is loaded
- Try simple code to see if you can use it
  demo – http://www.anokcounty.us/tryjquery

How do you "play well with others?"

- Problem – If your CMS uses JavaScript, your code can break the page (but not the CMS)
- Reason – By default all JavaScript on the page is global
- Consequences – You can overwrite existing variables and functions on the page, or the page can overwrite yours
  demo – http://www.anokacounty.us/youbrokeit

How do you "play well with others?"

- Solution – Create a JavaScript "namespace," a single global object that contains all your variables and functions
- Reference - http://www.kenneth-truyers.net/2013/04/27/javascript-namespaces-and-modules/
- Code demo

Patterns

- Change page design
  http://www.anokacounty.us/2092/Charitable-Giving-Campaign
- Use referrer code
  http://www.anokacounty.us/list.aspx
- Use a data document
  http://www.anokacounty.us/278/Estimated-Tax-Calculator
- Display data from another system
  http://www.anokacounty.us/1405/Adult-Trial-Updates
  http://www.anokacounty.us/727/Inmate-Locator

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Keep it accessible

- Cognitive – simple and straightforward
- Physical – mouse and keyboard interface, touch friendly
- Vision – dynamic content
  http://www.w3.org/WAI/intro/aria.php
  http://speckyboy.com/2013/02/04/myths-about-how-blind-people-use-the-internet/

Working environment

- IDE – Visual Studio Express, Brackets, Webstorm
- Method – build/test in a stand-alone HTML page and then insert into CMS page
- Version Control – create a project and track versions using git (github.com or bitbucket.com) or other VCS
- Tracking – keep a list of pages with JavaScript

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Thank You!

Paul Burtness
Anoka County Website Coordinator
Paul.Burtness@co.anoka.mn.us
763-323-5732
www.anokacounty.us
Presentation and code samples at:
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