

DLSLUG Presentation: Firefox extensions



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Firefox extensions, Roger Trussell

- My email address is Roger.K.Trussell@valley.net
 - Subject to change when I switch to DSL
 - I have a Bachelor of Science from RPI.
 - My resume is available on-line and upon request.
 - <http://hotjobs.yahoo.com/resumes/joejavacavalier2001/windowswizforyou>
 - I am familiar with mostly client-side technologies.
 - Programmer and support roles
 - “Jack of all trades”
 - I understand most server-side technologies.
 - Very little practical experience administrating servers
 - Always willing to learn new technologies and methods
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- What are Mozilla extensions?
 - Extensions are small add-ons
 - Add new functionality to **all** Mozilla applications
 - This means such applications as Firefox and Thunderbird.
 - Modify or enhance the functionality of the browser
 - used to add user interface items to Mozilla applications
 - can be used to add toolbars, buttons, or completely new features
 - Allow the application to be customized
 - The Mozilla Foundation can keep the core applications small.
 - I will focus on extensions for **Firefox** 1.5 and newer.
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Format of presentation

- Overview of technology
 - Examples that I have written
 - Examples that others have written
 - Possible tools for writing extensions
 - Questions and Answers
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- Extensions versus other objects

- Search plugins

- add additional search engines in the search bar

- Plugins

- helps the browser display specific content like playing multimedia

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Technologies and concepts that I will use

- This are prerequisites. Sort of...
- I'll try to keep the technical details to a minimum.

- Basic understanding of GUI components
 - Menus, buttons, etc.
 - Passing familiarity with XML
 - Basic understanding of any procedural scripting language
 - Most of my functionality comes from JavaScript
 - MVC approach: (Model, View, Controller)
 - Functionality separate from aesthetics!
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XML in extensions (Part 1): XUL is cool

- XUL: XML User Interface Language (XUL)
 - XUL was designed for creating the user interface of the Mozilla application
 - XUL is an “XML grammar”; it is a set of rules used to describe user interfaces.
 - XUL itself is not a W3C standard
 - XUL was invented by Mozilla/Netscape; it is used by many.
 - The Luxor/Java toolkit is a non-Gecko example. <http://luxor-xul.sourceforge.net/>
 - XUL source files looks like XHTML source files
 - XUL uses the precision of XML.
 - (Tags must be closed. All strings must be double quoted. etc.)
 - XUL tags declare which widgets and script files are used
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XML in extensions (Part 2): RDF

- RDF = Resource Description Framework
 - Another XML grammar
- Describes useful data for both people and computers
- Used in extensions for configuration
 - install.rdf
 - contents.rdf (for older versions of Firefox)



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Structure of an extension (part 1):

What is inside an xpi file?

Xpi (or zippy files) are zip files with a specific structure

- “chrome.manifest” file
 - Lists XUL files that Firefox should use to extend the GUI
 - “install.rdf” file
 - Name, ID, creator, etc.
 - Used by Extension Manager during install and updates
 - Content, locale, and skin sub-folders
 - XUL files, scripts, localized string tables, and style sheets
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Structure of an extension (part 2):

What is inside an xpi file?

- Contents folder
 - XUL files and JavaScript files
 - XUL files can specify which scripts files they need
 - Locale folder with language sub-folders
 - dtd files
 - Each dtd file contains a language specific string table
 - Common names can be used for each string in different languages
 - Skin folder
 - CSS files (or style sheets)
 - Enhance aesthetics of GUI in same way as web pages
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Structure of an extension (part 3): What is inside an xpi file?

- Content, locale, and skin folders may be compressed
 - into jar file w/o manifest (jar = zip, pretty much)
 - Jar file would go into chrome sub-folder
 - Must update install.rdf and chrome.manifest
 - Lets extension manager know that you've compressed your content
 - Speeds up loading of extension
 - Optional, I wouldn't bother for small extensions
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- References/Bibliography

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 - http://developer.mozilla.org/en/docs/Creating_toolbar_buttons
- <http://developer.mozilla.org/en/docs/Extensions>
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- <http://www.xulplanet.com/>

