Faster, easier and safer than ever

Overview for Webmasters & Developers

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Security & Crash Recovery

- ## Security is key
  - Domain Highlighting
  - Improved Add-On experience
- ## Crash Recovery
  - Browser tabs run independently
- ## InPrivate
  - Browse knowing nothing is being stored
- ## Feeds Platform adds authentication support
  - HTTP based authentication for Basic and Digest
  - Basic authentication via SSL
  - Can save credentials

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CSS 2.1 Compliance

- Driving Principle is Interoperability
  - Follow the spec to the letter
  - For areas of ambiguity, seek clarification
  - Propose a solution that is in line with the spec
- Path to CSS 2.1 compliance is not crystal clear
  - Actively contributing tests – over 3700 so far!

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CSS 2.1 Compliance

> **"…they can use any other algorithm even if it results in different behavior."**
>
> CSS 2.1 Table Width Algorithms

A New Layout Engine

- Users expect their sites to "just work"
- What do developers want?
  - IE6 Rendering
  - IE7 Rendering
  - IE8 Rendering
- IE7 and IE8 rendering engine built in
- How do we give developers what they want?
- Compatibility Meta Tag or HTTP Header

<meta http-equiv="X-UA-Compatible" content="IE=7" />

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Performance and Memory

- Connection Limits Increased
  - Broadband: 6
  - Modem: 2
  - Configurable via API's
- Pre-Parser doesn't block at script tags
- JScript Improvements
  - DOM object look ups are much faster
  - Circular referenced objects are garbage collected
  - Faster native Jscript operations
    - Function call performance
    - String methods
    - Array methods
    - Read, write, and deleted Object methods
    - Garbage collection algorithm
    - Communication layer between DOM and JSript

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New DOM Features

- ## Mutable DOM Prototypes
  - Add new methods
  - Add new properties
  - Override default built-in behavior for methods
  - Override default built-in behavior for properties
- ## Native JSON Support
  - Faster JSON access
  - Uses JSON2 nomenclature
  - 3rd party code no longer needed

DOM Improvements

- *hasAttribute("attrName")* (on Element)
  - Supports "unspecified" attributes
  - Case comparisons for HTML are case-insensitive
  - Getters/setters behave consistently (return strings)
- *ownerElement*, *contentDocument,* and more
- *getElementById()* no longer includes 'name'd elements
- Dynamic radio buttons and checkboxes now work properly
- *getAttribute*(for/style/class/[boolean]) fixed
- Boolean attributes properly returned
- HTML collections fixed
- Operation Aborted parsing error relegated to script error
- DataURI

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DOM Store

- Web Applications today use local storage
  - Cookies, UserData control
- Many web applications today would like more
- HTML5 adds the Storage interface
  - Session Store (tab/session specific)
  - Local Store (shared across sessions)
  - Key Value string pairs
  - 10MB per domain
  - 100MB total
- IE8 Extension
  - Check remaining store
  - Clear store

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AJAX Navigation

- Feature of HTML 5
- AJAX Applications provide "challenges" when users click the back and forward buttons
- AJAX Navigation allows developers to support back/forward navigation
- Allows copying & pasting of AJAX URLs!
- *window.location.hash*
  - IE fires a *window.onhashchanged* event
  - IE updates the address back, and back button

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XDR & XDM

- Features from HTML 5
- Cross Domain Requests (XDR)
  - Cross domain communication is integral to AJAX development
    - XDomainRequest
- Cross Domain Messaging (XDM)
  - Cross document messaging allows sharing data across frames
    - *window.PostMessage()*

Selectors API

- Added CSS Selector API from W3C WebAPI WG
    - *.querySelectorAll()*
    - *.querySelector()*
- APIs can be called on the document or element
- 50 times faster than JavaScript tree traversal

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Developer Tools

- Tools ship in the box
- Debugging HTML & CSS
  - View effective styles, Trace styles, View applied rules, View layout, Edit HTML and CSS
- Debugging JavaScript
  - Execution control, Variable Inspection, Immediate Window
- Easy rendering engine changing
  - Switch between layout modes without changing the page source

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Developer Tools

- ## JavaScript Profiler
  - One click start/stop of profiler
  - Quickly see where application is spending time
  - Function or Call Tree View
- ## Save Edits
  - Notepad like editing & inline editing
  - Add/Change attributes, classes & properties
  - Make changes to HTML, CSS, and save to disk

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Accelerators

- Provides web services with a simple right click
  - Maps, Blogs, Email, Productivity, Social Networking
- Quickly drive users back to your site
- Uses Open Service Format
  - Simple XML file
- Easy to deploy to users
  - *window.external.IsServiceInstalled()*
  - *window.external.AddService()*

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Accelerator XML File

```xml
<?xml version="1.0" encoding="utf-8" ?>
<openServiceDescription xmlns="http://www.microsoft.com/schemas/openservicedescription/1.0">
  <homepageUrl>http://maps.live.com</homepageUrl>
  <display>
    <name>Map with Live Maps</name>
    <icon>http://maps.live.com/favicon.ico</icon>
  </display>
  <activity category="Map">
   <activityAction context="selection">
     <execute method="get"
              action="http://maps.live.com/default.aspx?where1={selection}" />
     <preview method="get" action="http://maps.live.com/geotager.aspx">
      <parameter name="b" value="{selection}" />
      <parameter name="clean" value="true" />
      <parameter name="w" value="320" />
      <parameter name="h" value="240" />
      <parameter name="format" value="full" />
     </preview>
    </activityAction>
  </activity>
</openServiceDescription>
```
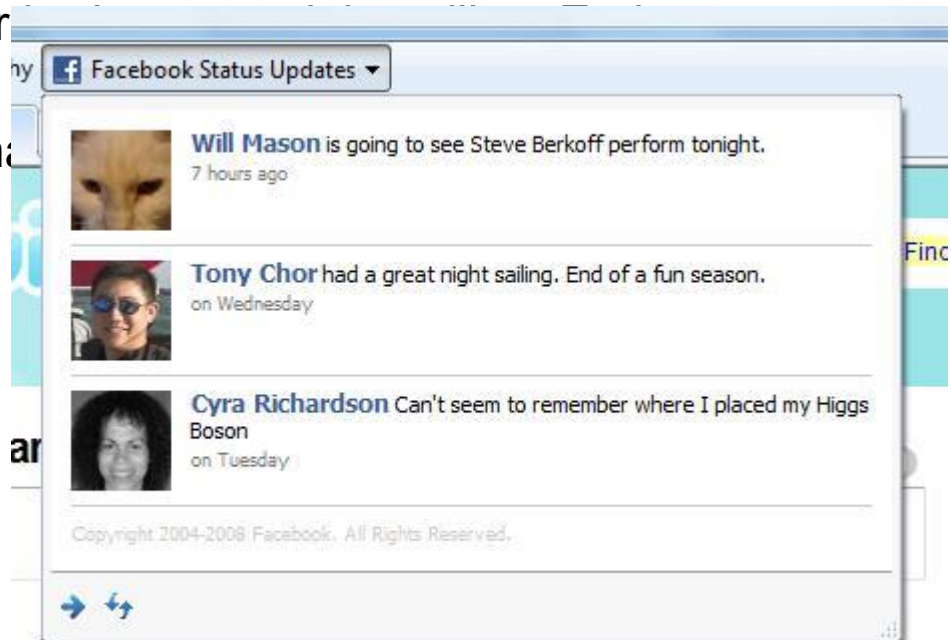
Web Slices

- Users monitor lots of content on the web
  - Auctions, Weather, Top News, Blogs…
- Web Slices allow users to subscribe to content directly within a web page
- Requires a developer to mark up their page with a couple of new CSS classes

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Web Slice Code Sample

http://www.ebay.com/amazonkindle20543521543

```
<div class="hslice" id="facebookSlice" >
    <p class="entry-title">Facebook Status Updates</p>
    <div class="entry-content">
        <img src="will.jpg">Will Mason is going to see Steve Berkoff …
        <hr />
        <img src="tony.jpg">Tony Chor
        <hr />
        <img src="cyra.jpg">Cyra Richa
        <hr />
    </div>
</div>
```

Call To Action

- **Install Beta 2 today**
  - VPC's are available
- **Test, Test, Test**
  - Test Your Websites
  - Add The META Tag As Appropriate
  - Get Others To Test Their Web Sites
  - Tell Us About Our Bugs!
- **Learn About IE Application Compatibility**
  - http://MSDN.com/IECompat

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