



Faster, easier and safer than ever

A Developer Overview

Pete LePage
Product Manager
Microsoft Corporation

Internet Explorer 8

Users.



Developers.



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

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" />
```

Make Sure You're Ready!

- **Test**

- Test with Beta 2, fix if possible

- **Meta Tag**

- Add Meta tag to each page or at server level

- **Redesign**

- Design with standards in mind

- **New Application Compatibility Center**

- <http://MSDN.com/IECompat>

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 JScript

New DOM Features

New For
Beta 2

- **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

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

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 bar, and back button

XDR & XDM

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

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!

CSS 2.1 Compliance

“...they can use any other algorithm even if it results in different behavior.”

CSS 2.1 Table Width Algorithms

CSS 2.1 Table Width Algorithms

DIFFERENT BEHAVIOR

CSS 2.1 Support

- Notable new CSS features
 - Generated content and counters
 - Outlines
 - New 'display' values for tables
- CSS 3.0 Features
 - Box-sizing property
 - Vertical text

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

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

Developer Tools

New For
Beta 2

- 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

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()*

Accelerator XML File

```
<?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>
```



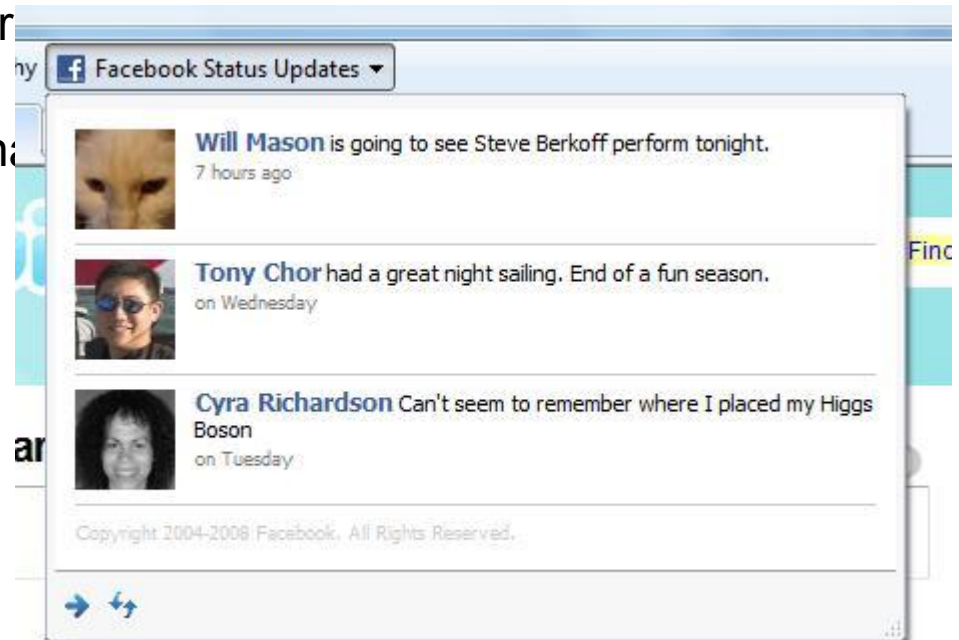
Web Slices

- 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

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">  
    Will Mason is going to see Steve Berkoff ...  
    <hr />  
    Tony Chor  
    <hr />  
    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>

Microsoft[®]

Pete LePage

Pete.LePage@Microsoft.com

<http://blogs.msdn.com/petel>

Twitter: [PeteLe](#)

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