User Interaction: AJAX Basics

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INF 133 Fall 2010
Follow up from last class

Data Presentation

HTML  XHTML  XML

Data Transport

JSON
• AJAX
  • “Asynchronous Javascript and XML”
    • although XML can be replaced with any data format
  • Developed to support “rich clients”
  • One of the big enablers of Web 2.0
Consider a spreadsheet, once can
- Edit data in place
- Changes are updated in real-time
- Dependencies across the document
- Feedback from the mouse and cursor
- Cells highlight
- Overall a pretty rich user interface experience
• “Rich Client”
  • Rich
    • In the U/I sense
    • “Spread-sheet” like
  • Client
    • Lives in a networked world
• Sovereign Application vs.
• Transient Application
I am typing the most important document of my life.
• Desktop World

AJAX in action: Crane
AJAX in action: Crane

Cloud Computing World

PROCESS
LOGIC → DATA MODEL

PROCESS
LOGIC → DATA MODEL

CLOUD SERVICE
MIDDLE WARE
SERVER FARM

CLOUD SERVICE
MIDDLE WARE
SERVER FARM

Friday, October 8, 2010
- Network induces variable delays, always worse than local
- Cut to whiteboard
• Asynchronousness
• Cut to whiteboard
• Defining principles of AJAX

1. Browser hosts an application, not content
2. Server delivers data not content
3. User interaction with the application can be fluid and continuous
4. This is real coding
1. Browser hosts an application, not content

- Web 1.0 model
  - every page is new content
- Web 2.0 model
  - download a program at first
  - every page is new data
- Some server functionality is moved to browser
  - example, the shopping basket is in the client
1. Browser hosts an application, not content
• Browser hosts an application, not content
2. Server delivers data not content

(A)

Web 1.0
2. Server delivers data not content
2. Server delivers data, not content
3. User interaction with the application can be fluid and continuous

- Typically when a page is submitting data, the user is in limbo
  - Use the shopping cart example
  - Google Suggest
- Sovereign versus Transient Applications
4. This is real coding

- jQuery (http://jquery.com)
- Prototype (http://www.prototypejs.org/)
- ExtJS (http://www.extjs.com/)
  - very good for prebuilt themes and controls, but not very customizable
- YUI (http://developer.yahoo.com/yui/)
- MooTools (http://mootools.net/) - very compact, much smaller than the others
- Dojo (http://dojotoolkit.org/)
• Some good resources
