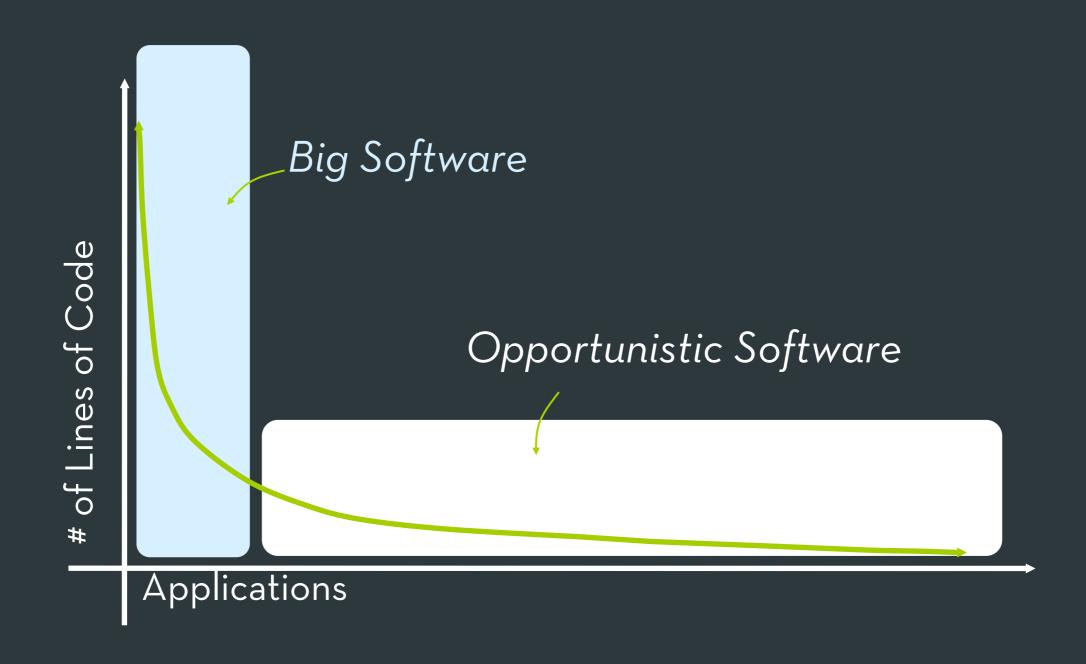


Tuesday, May 24, 2011

STANFORD HCI GROUP designing for diversity **Scott Klemmer** 

### diverse applications











### diverse platforms











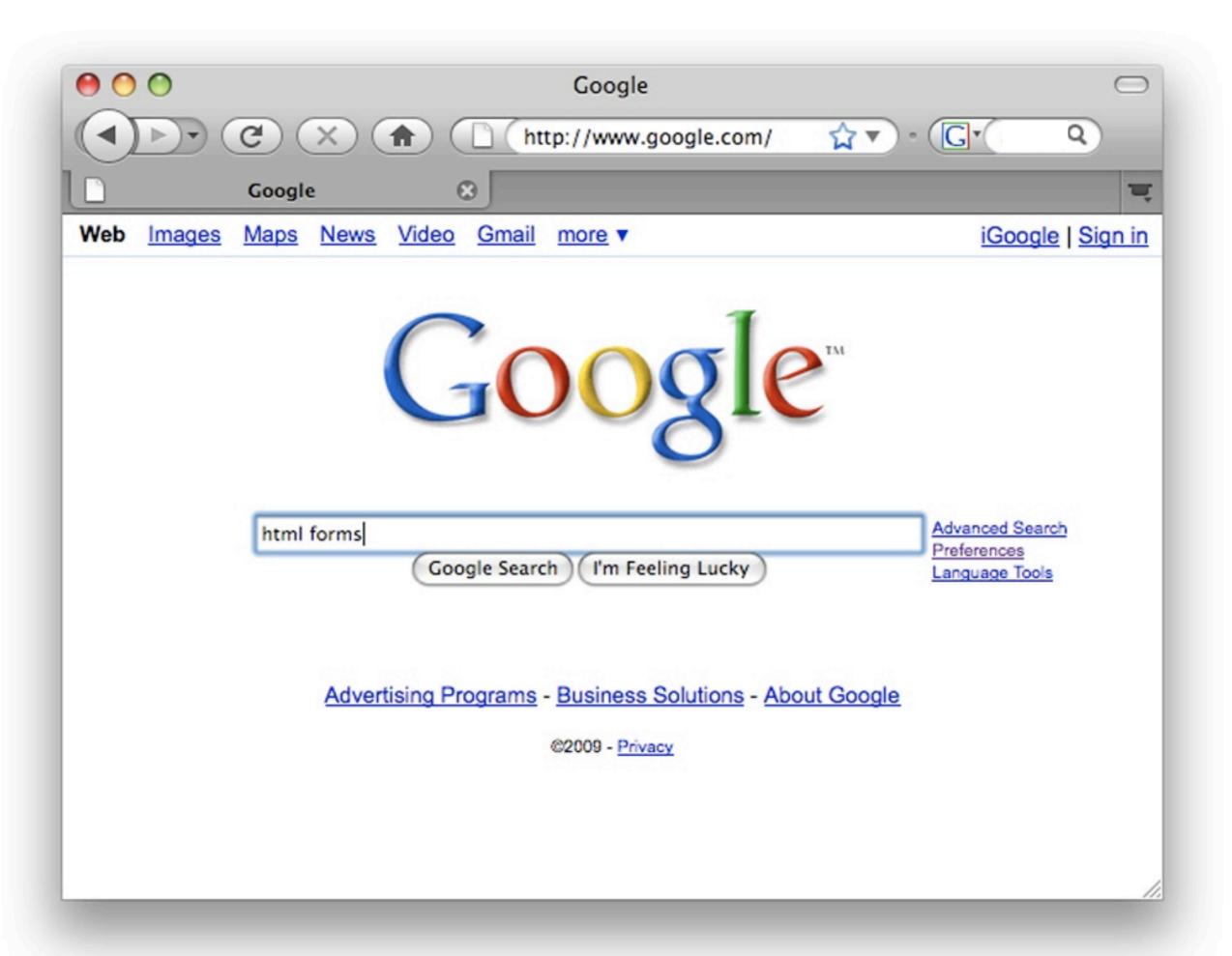
"good grief, I don't even remember the syntax for forms!"

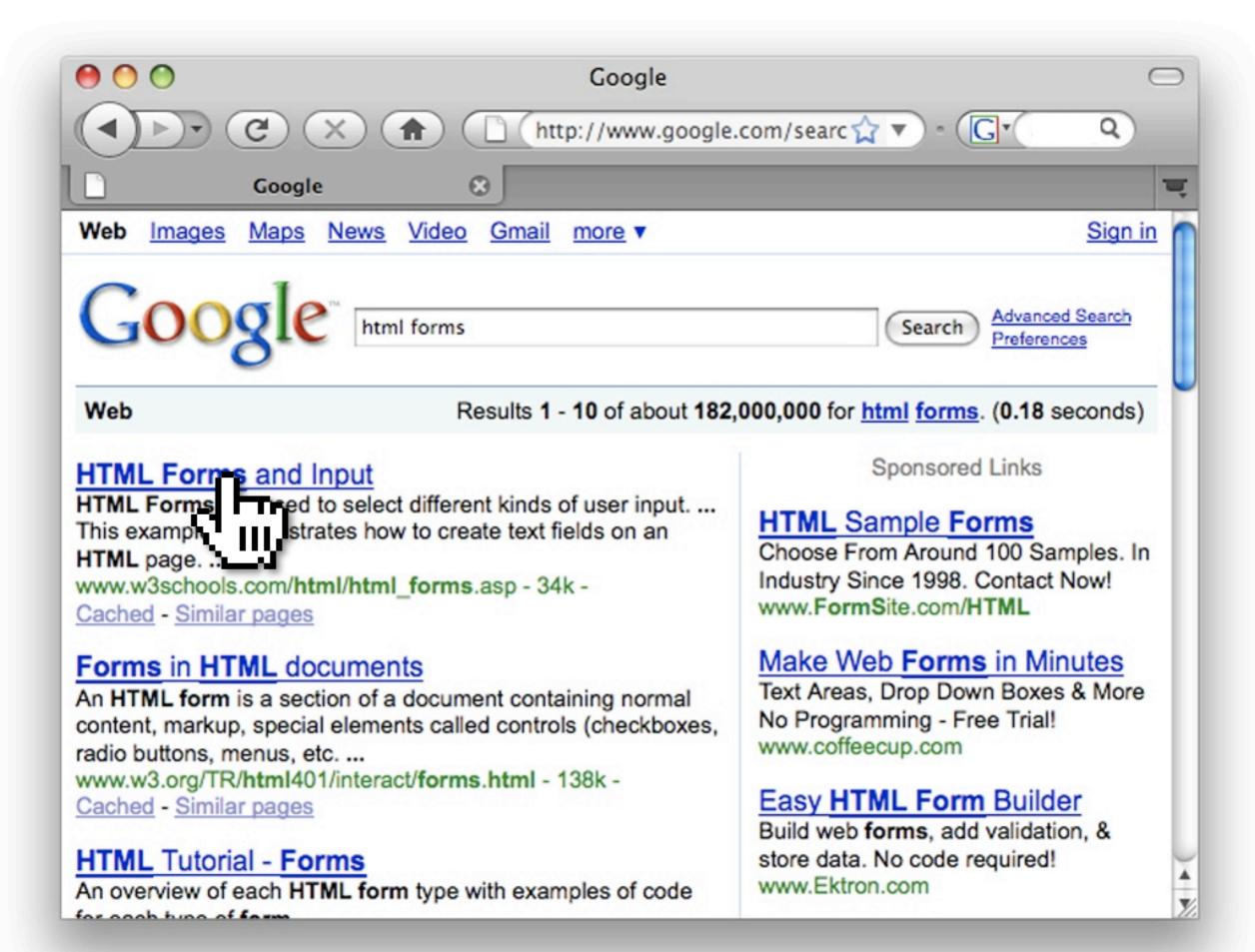
Joel Brandt et αl.

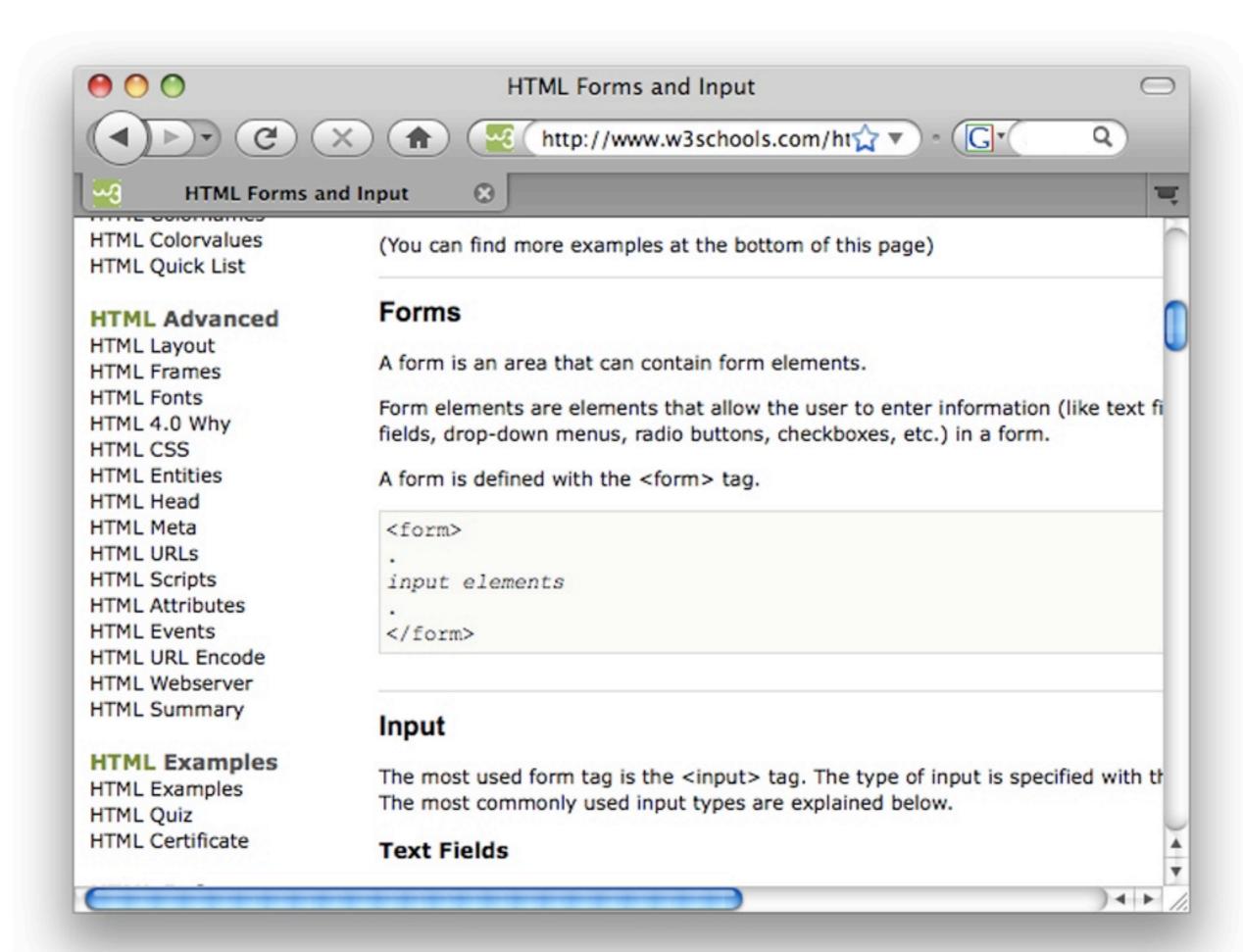
1:-- chat.php

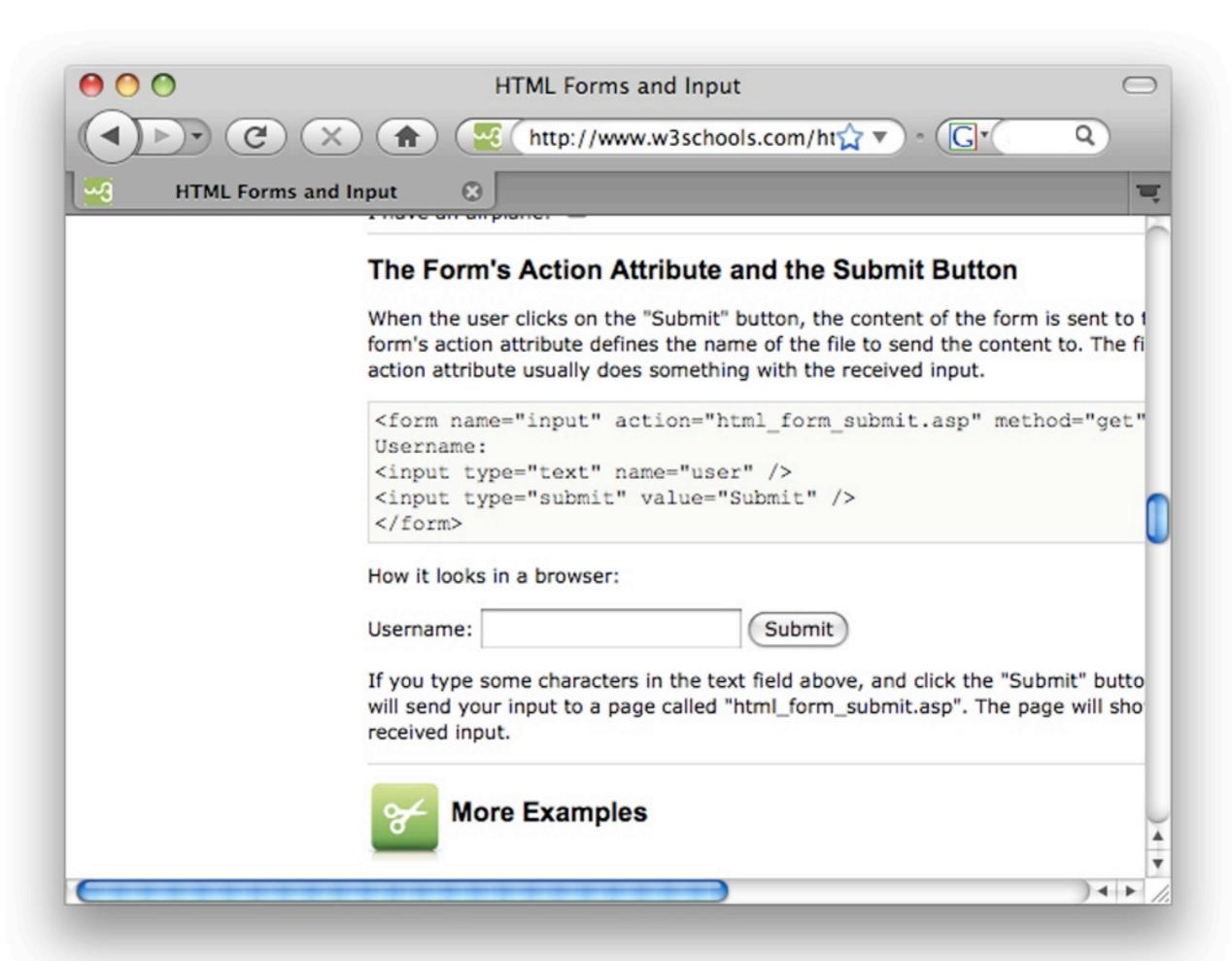
All (1,0)

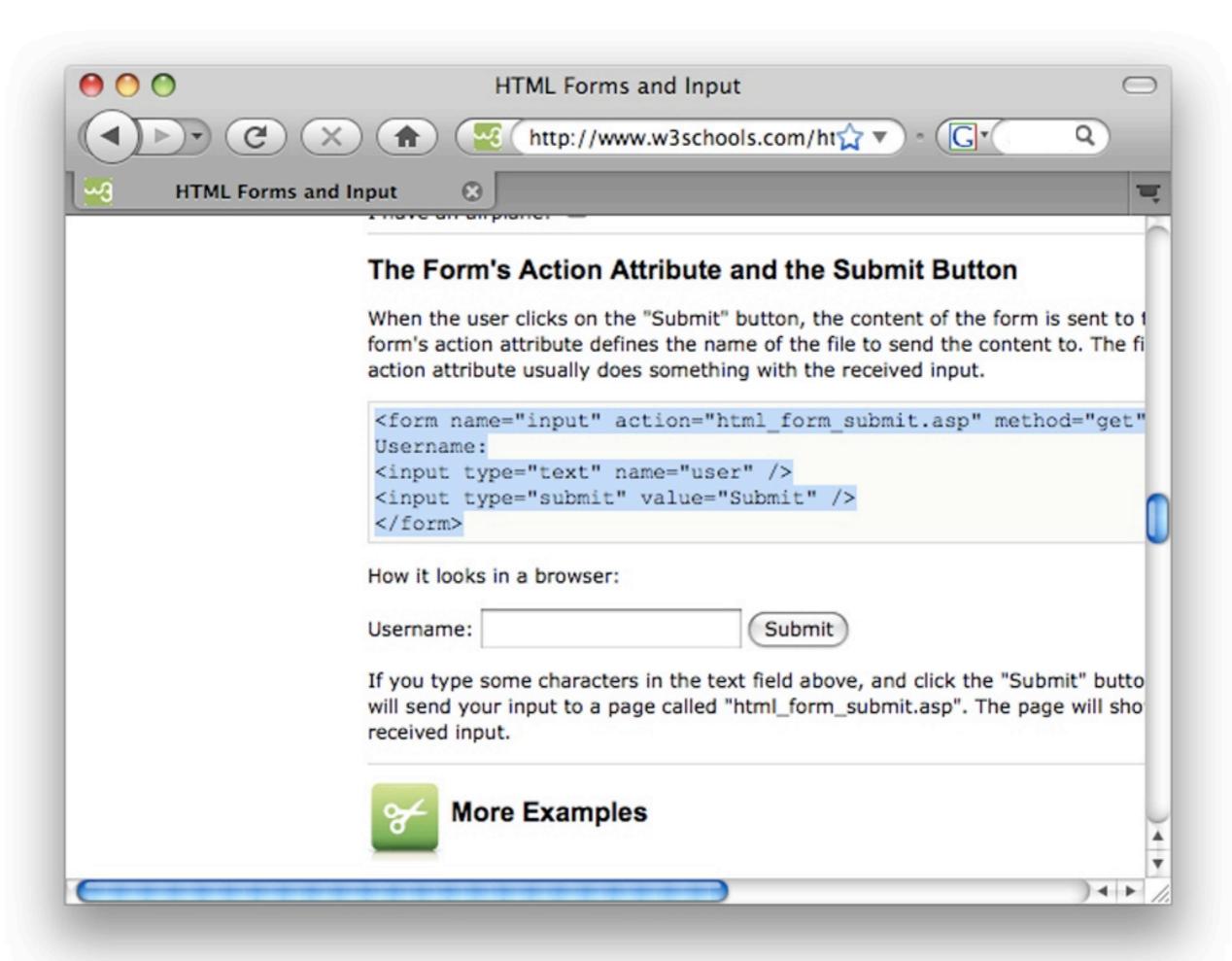
PHP Abbrev

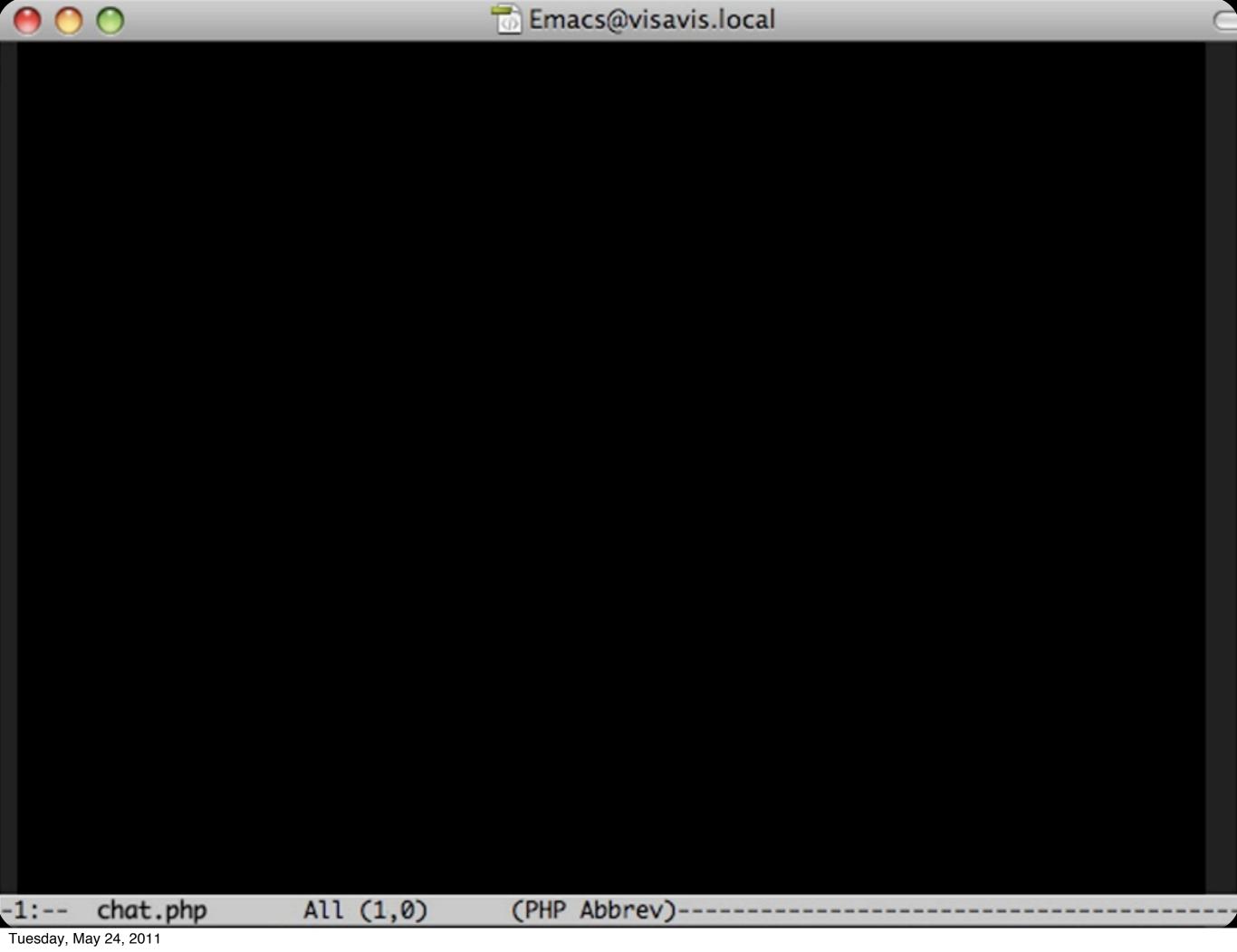


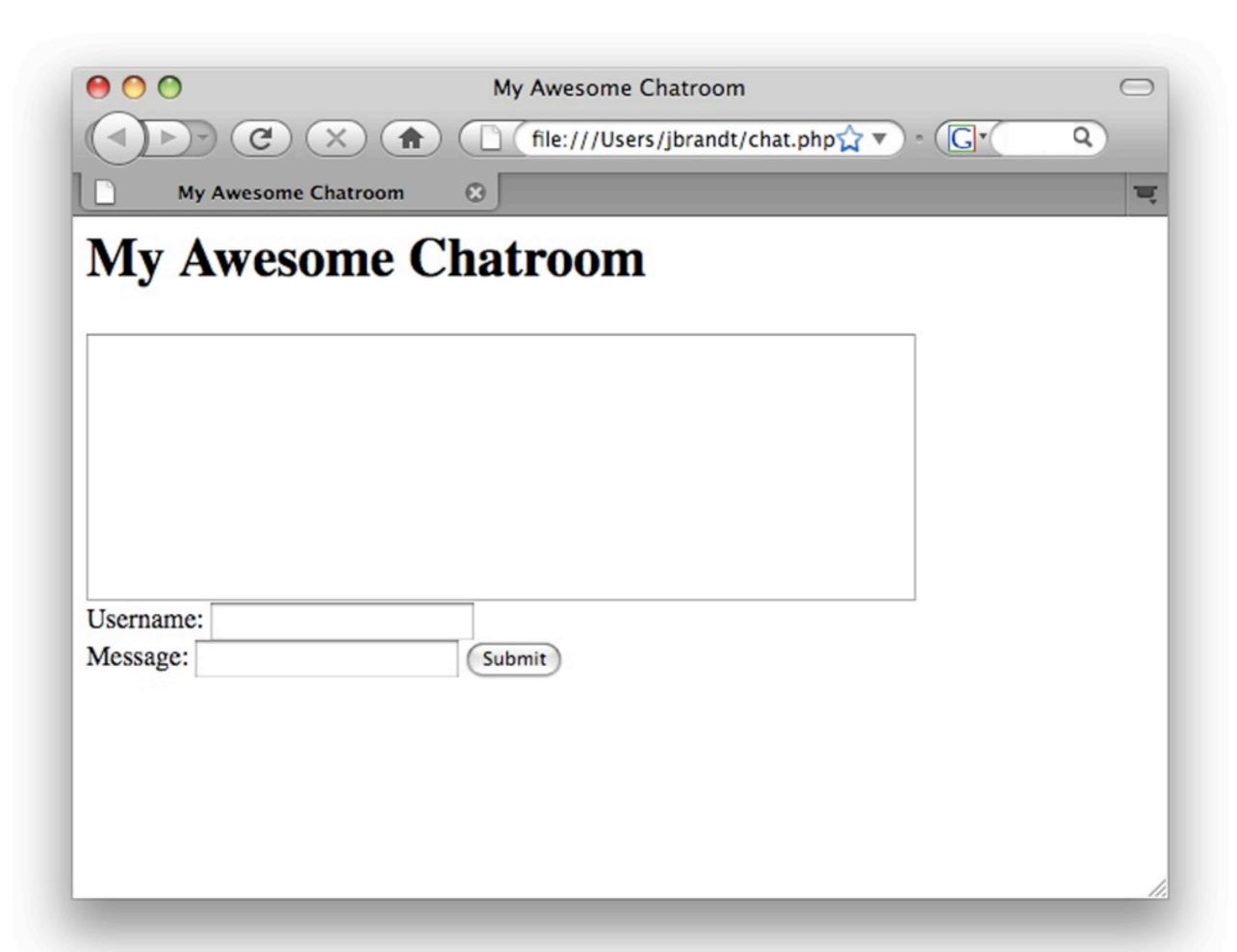




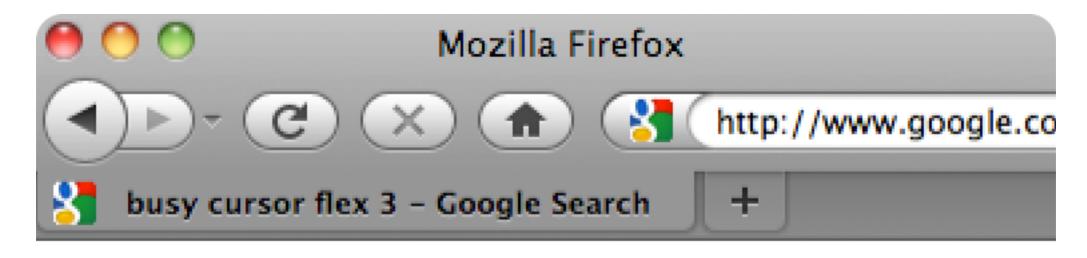


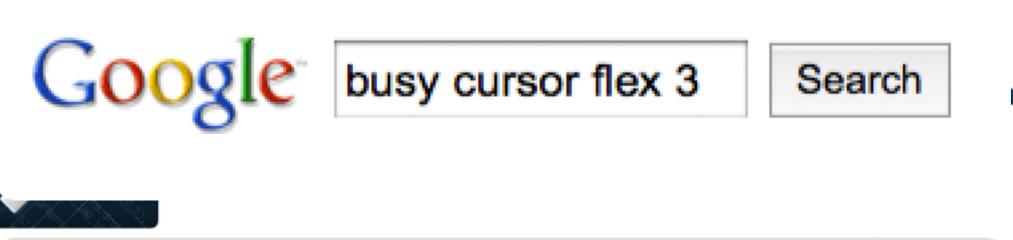


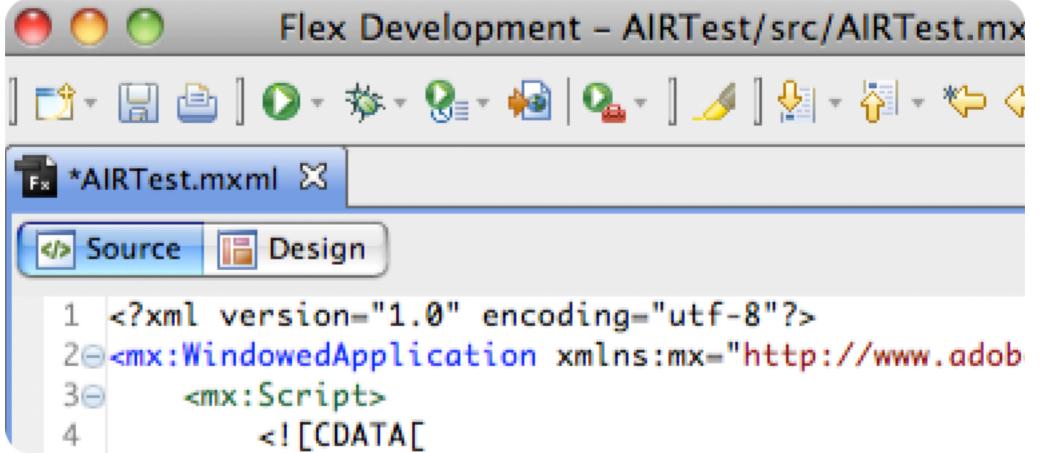


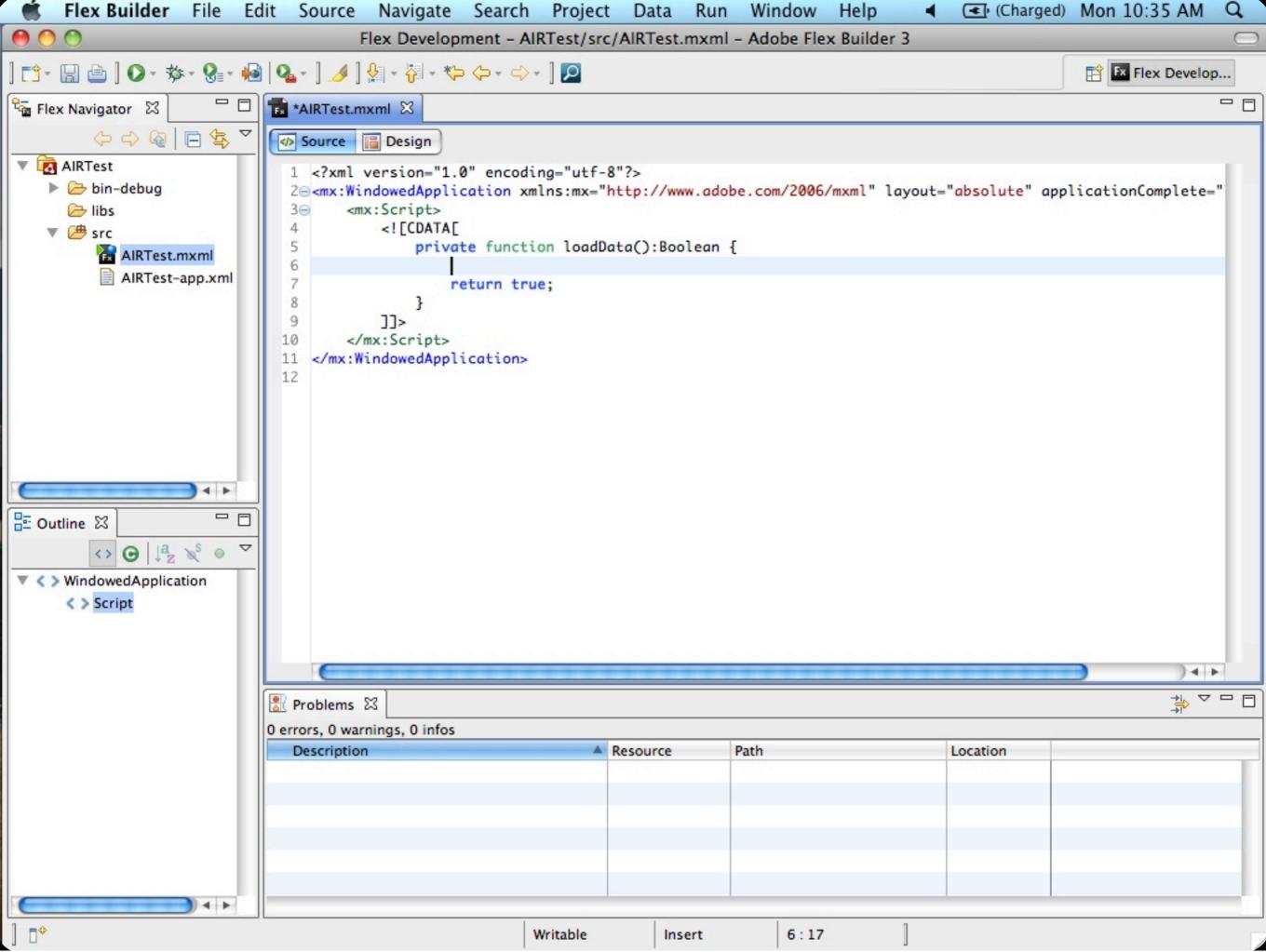


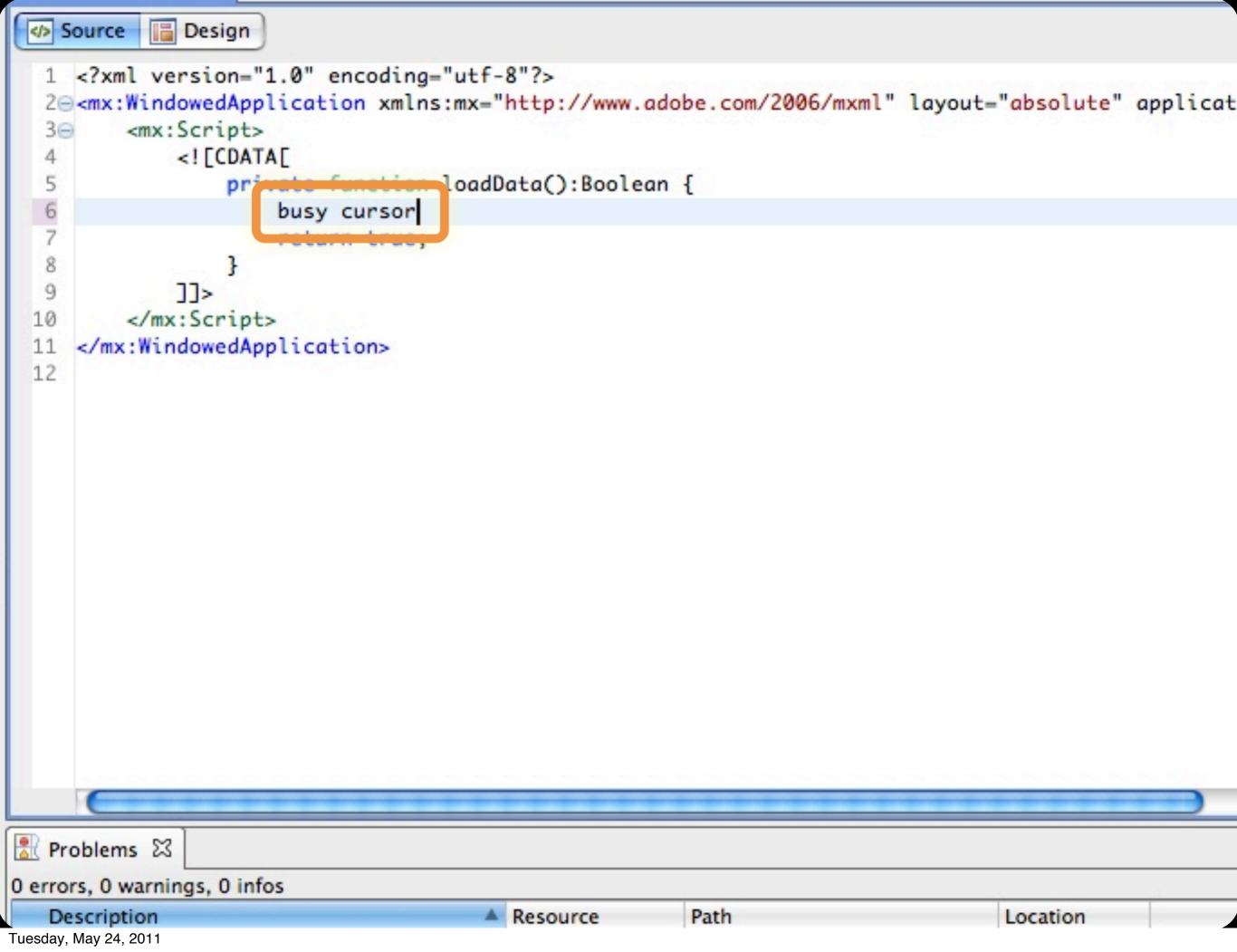
# The Web lowers the costs of creating, sharing, and accessing examples

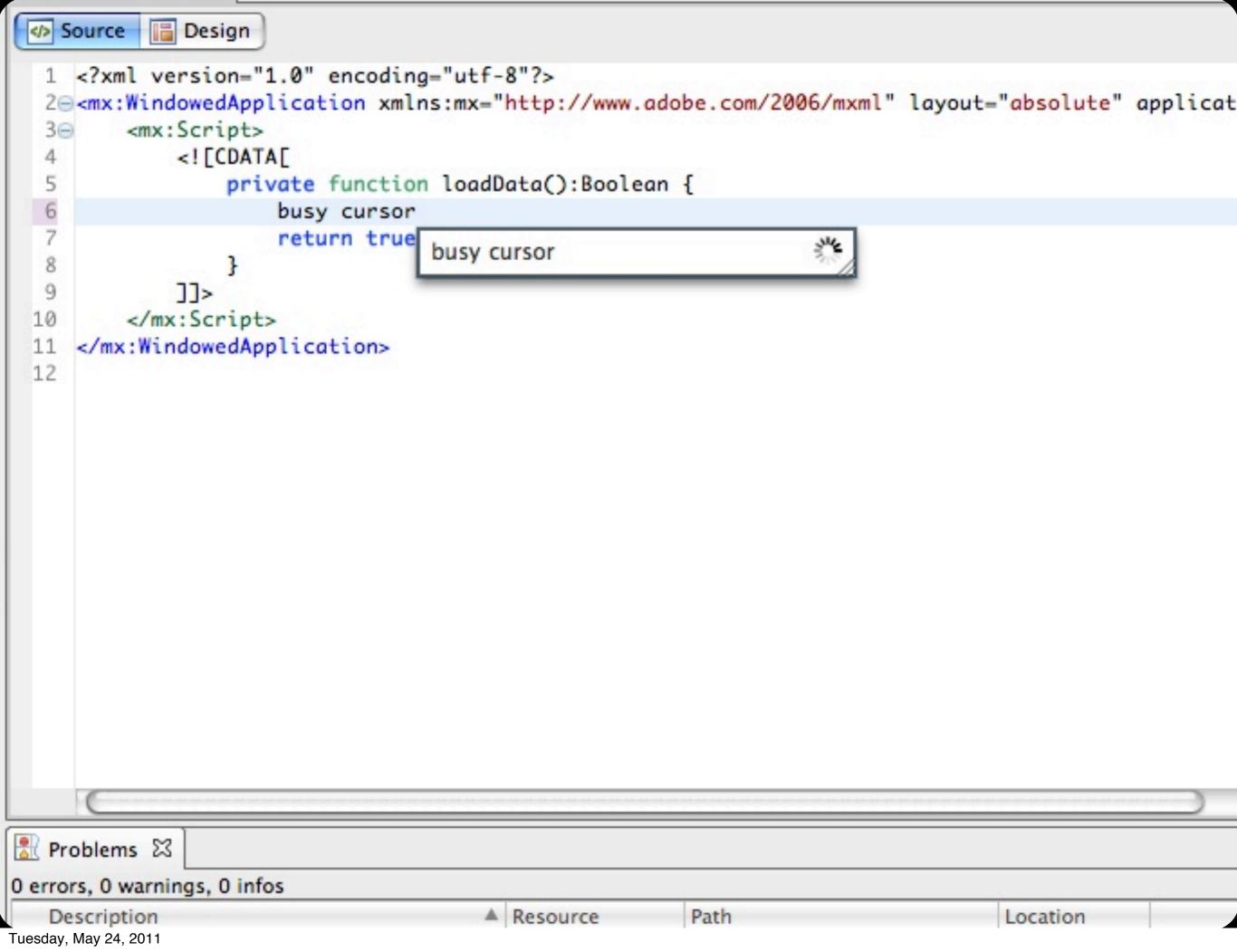


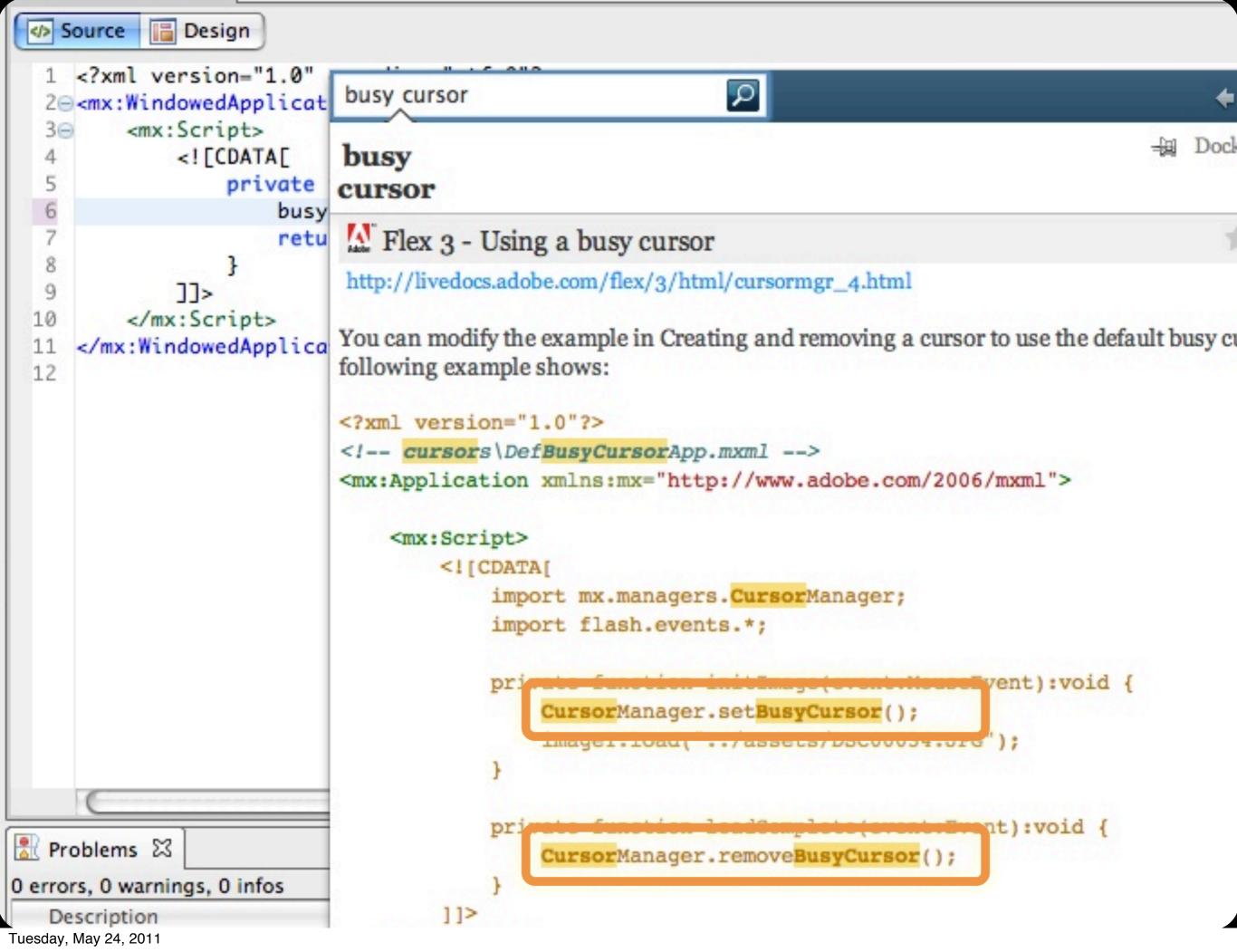


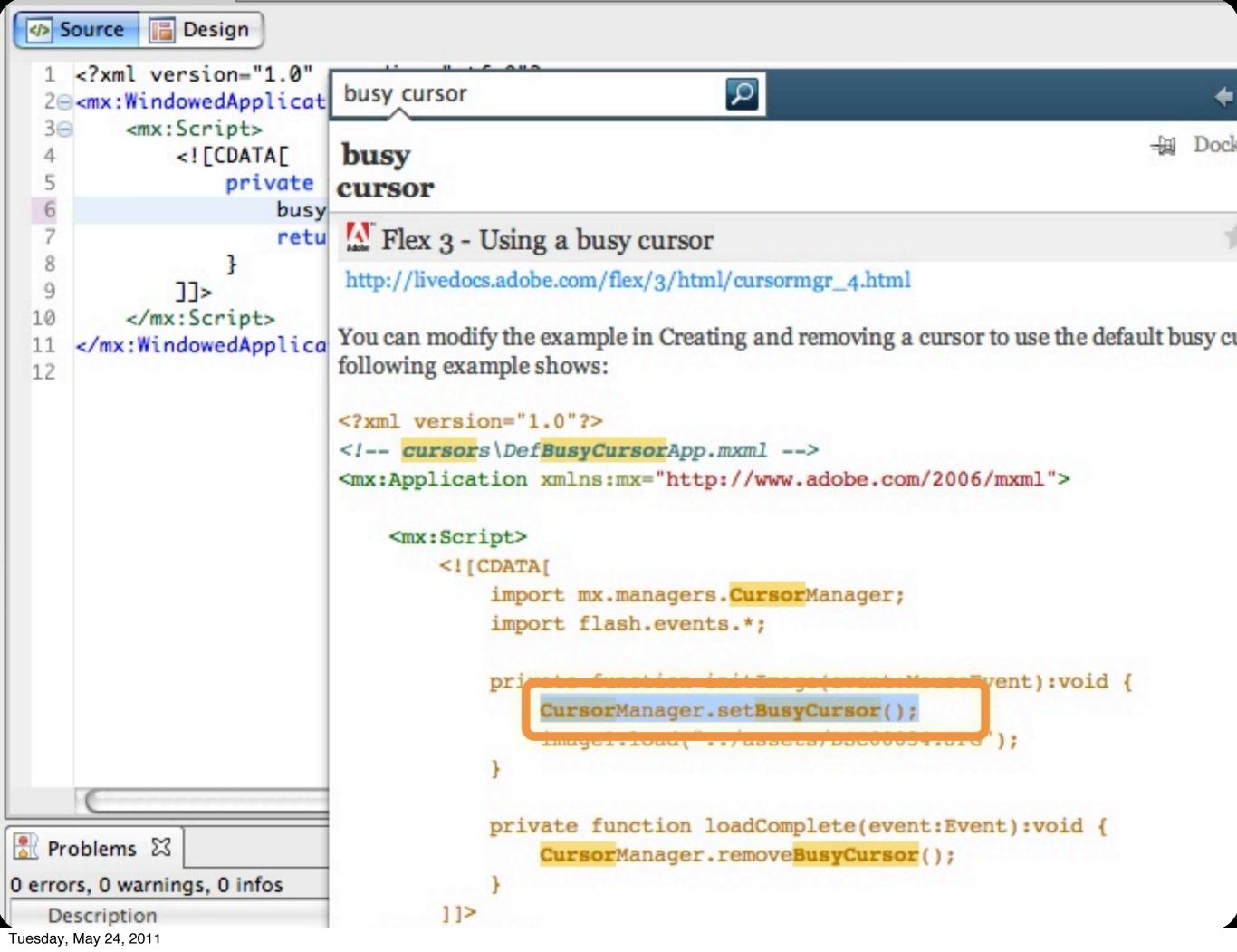


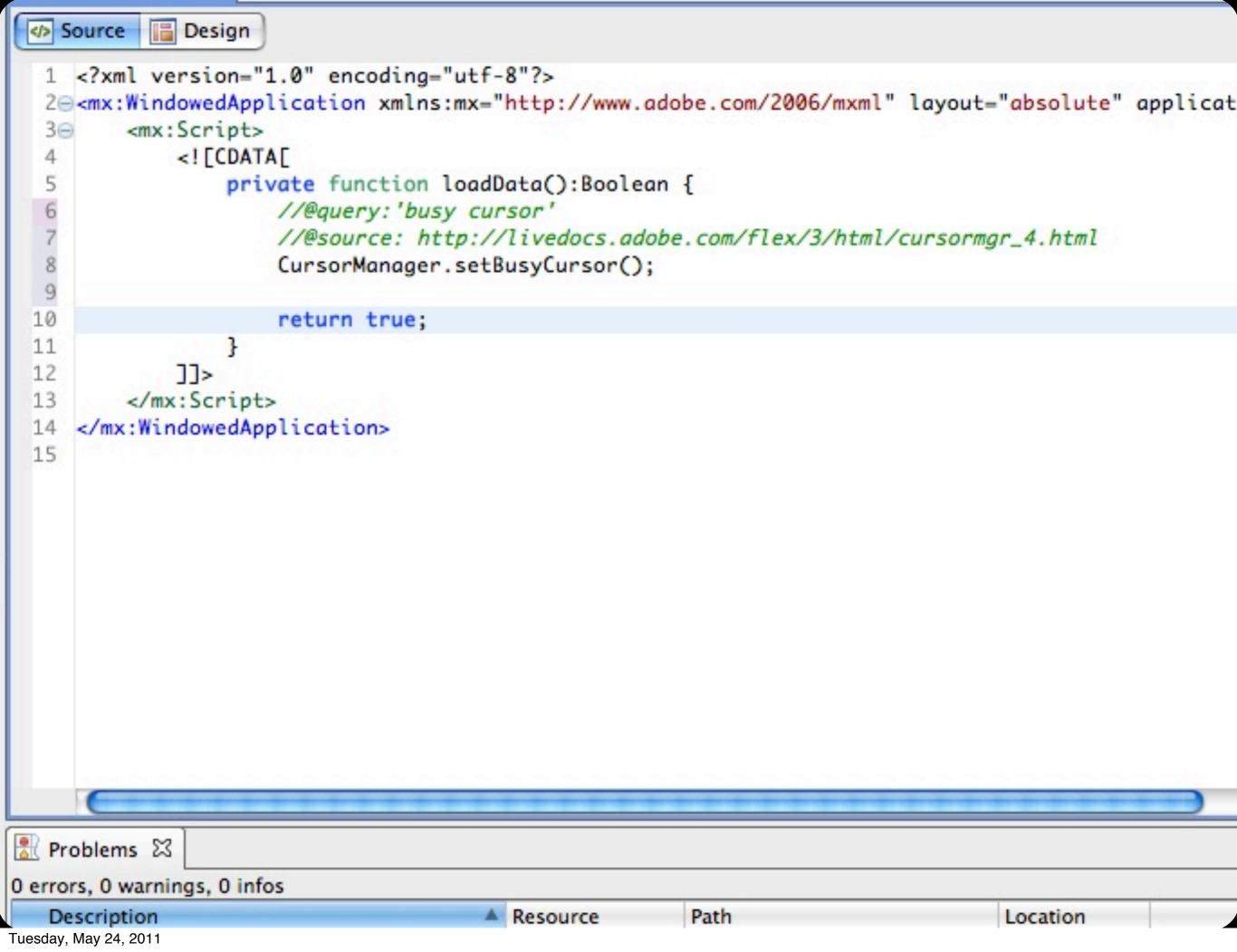


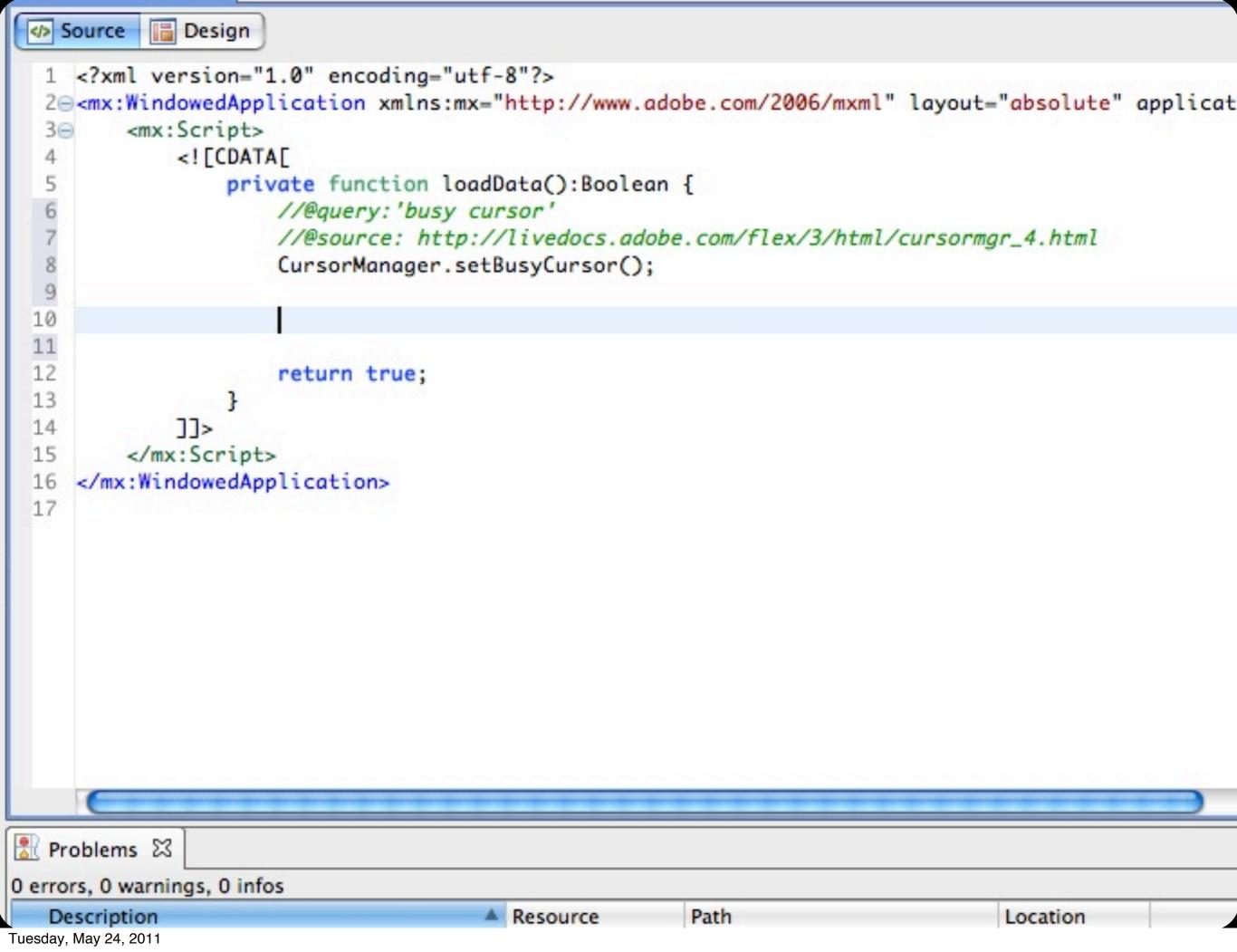


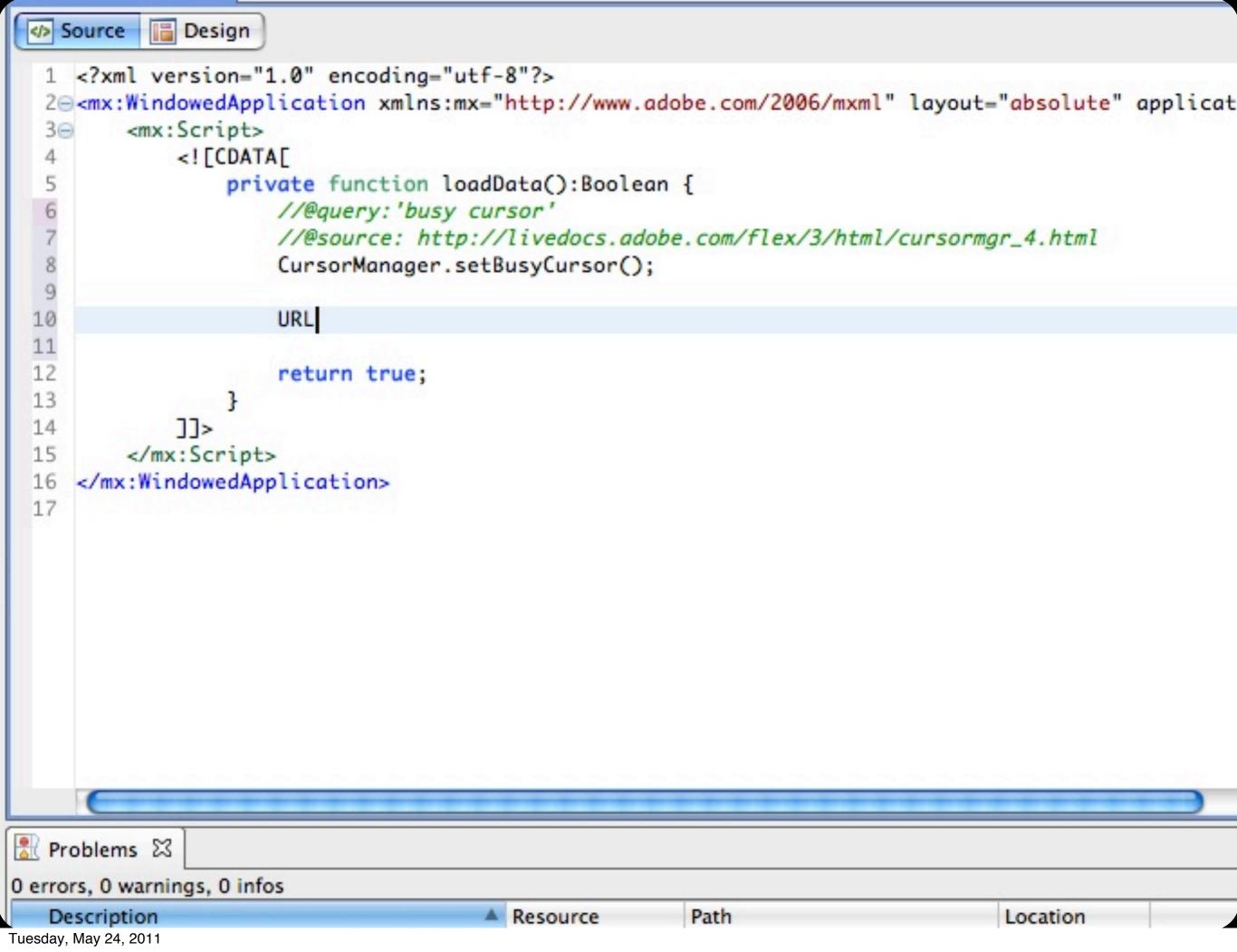


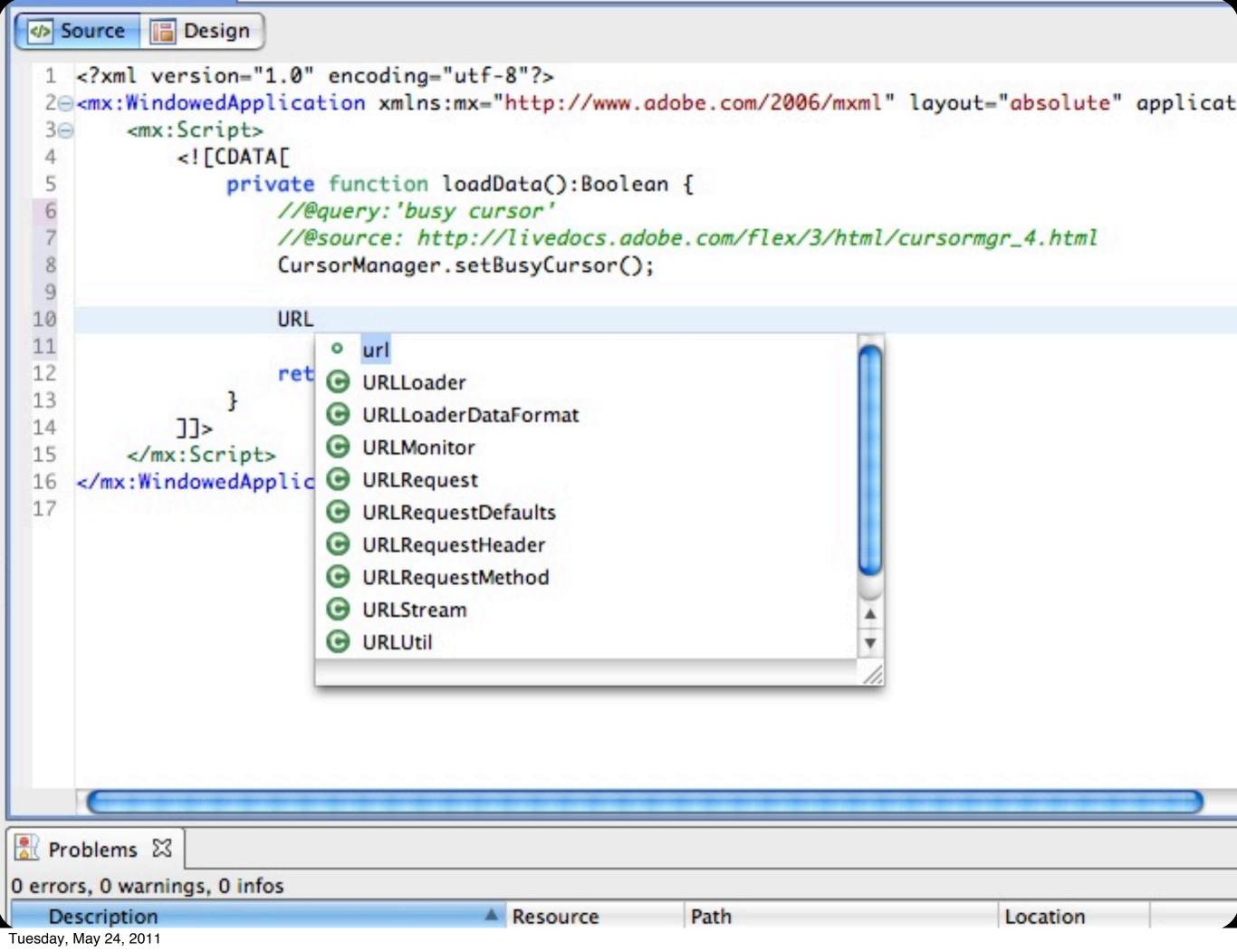


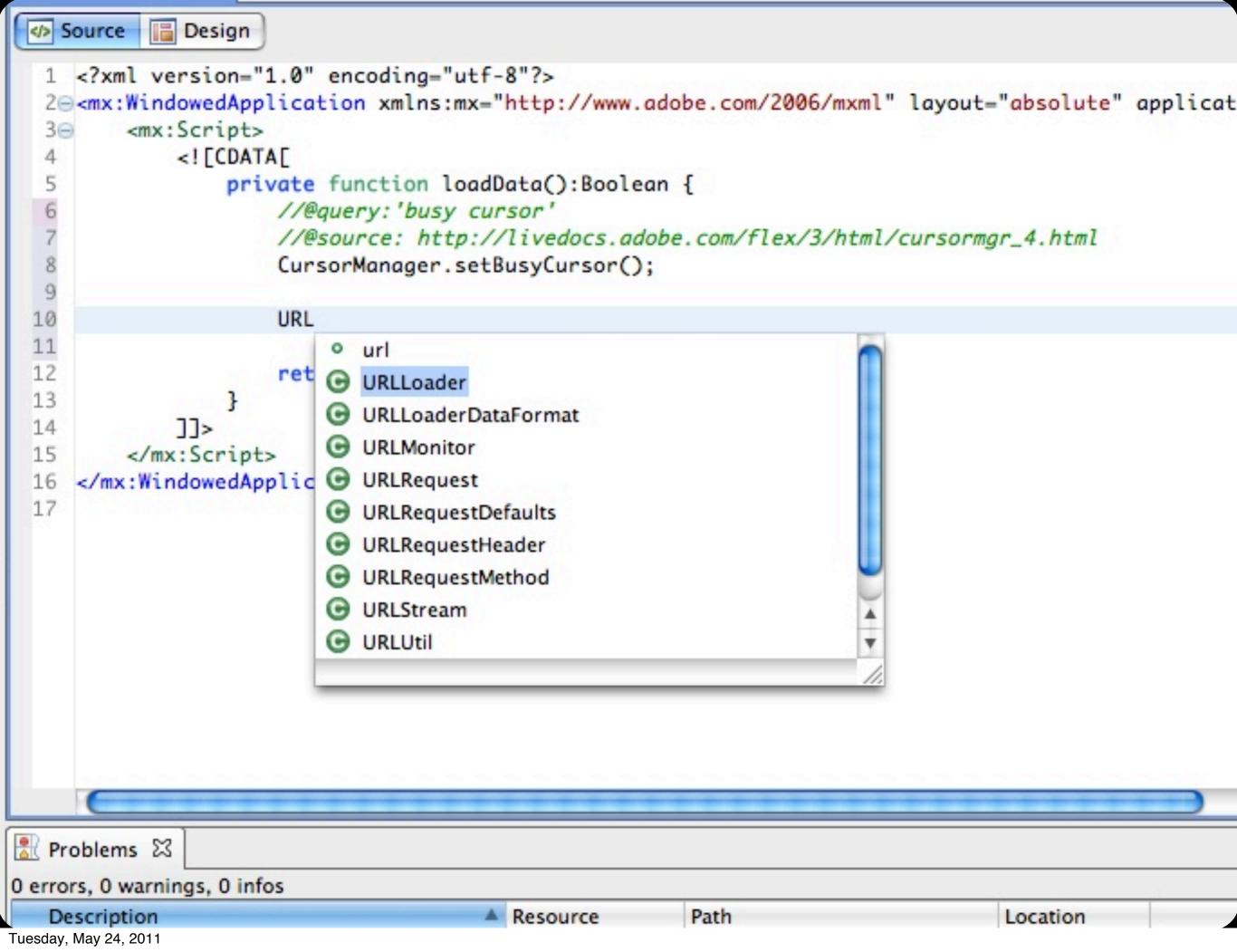


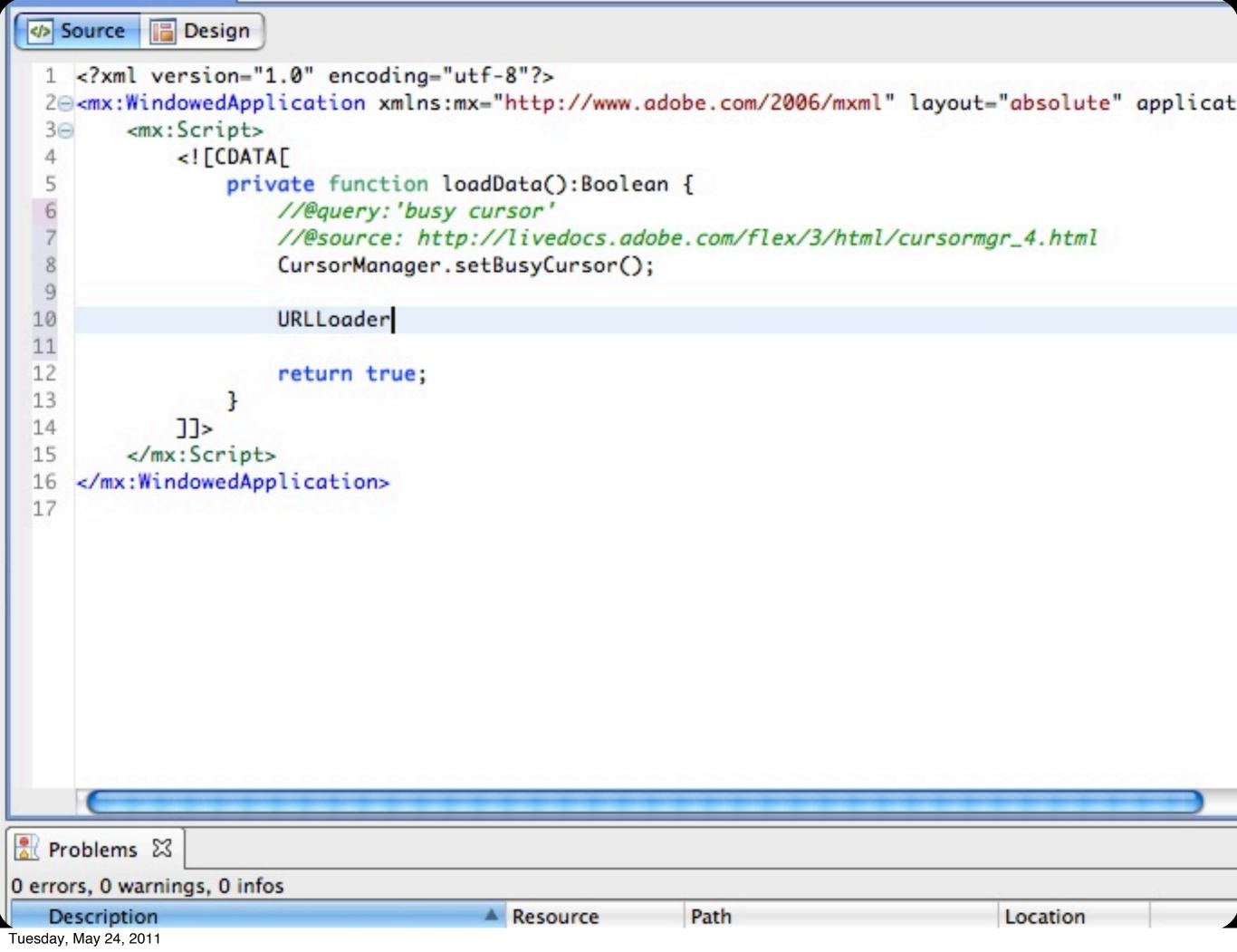


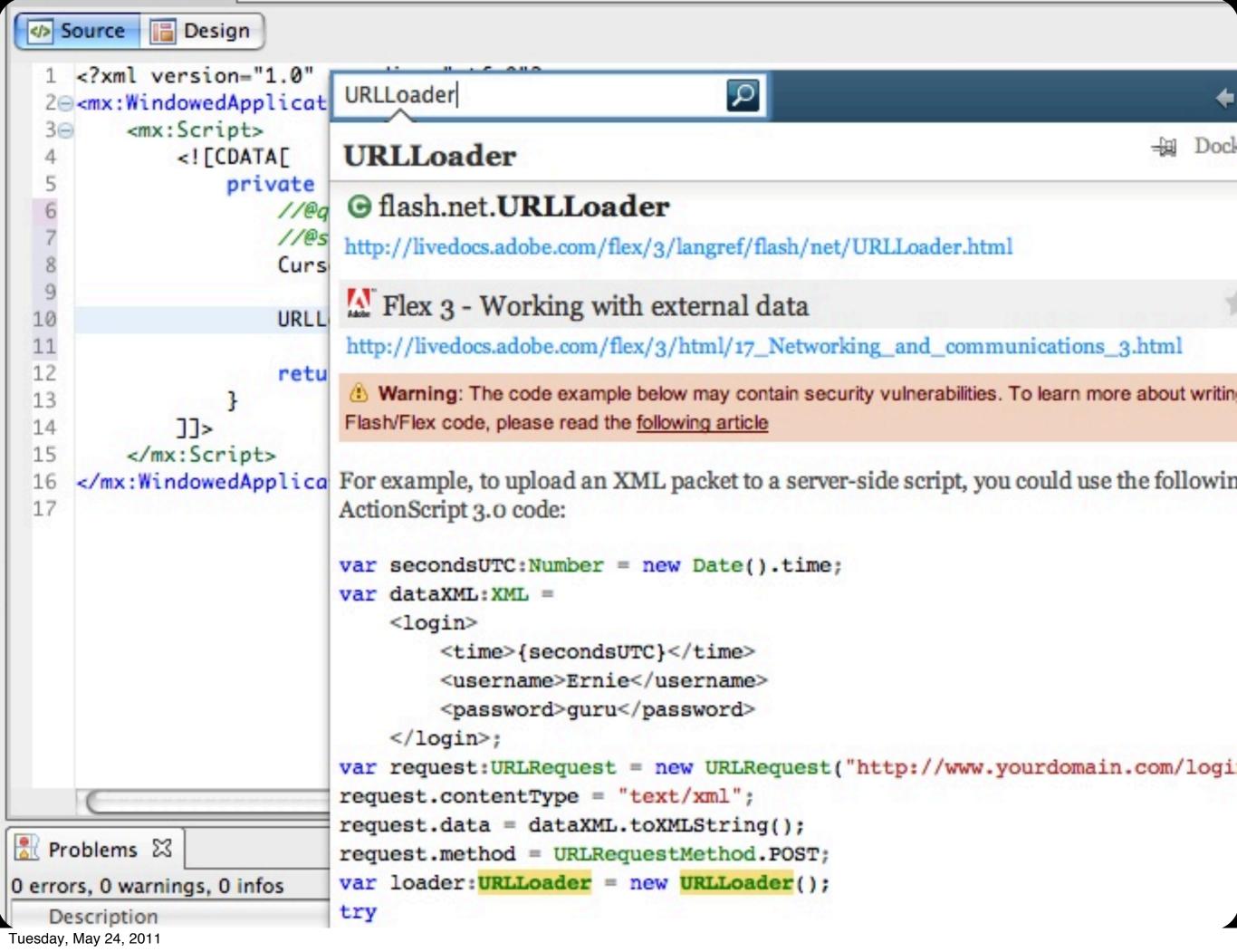


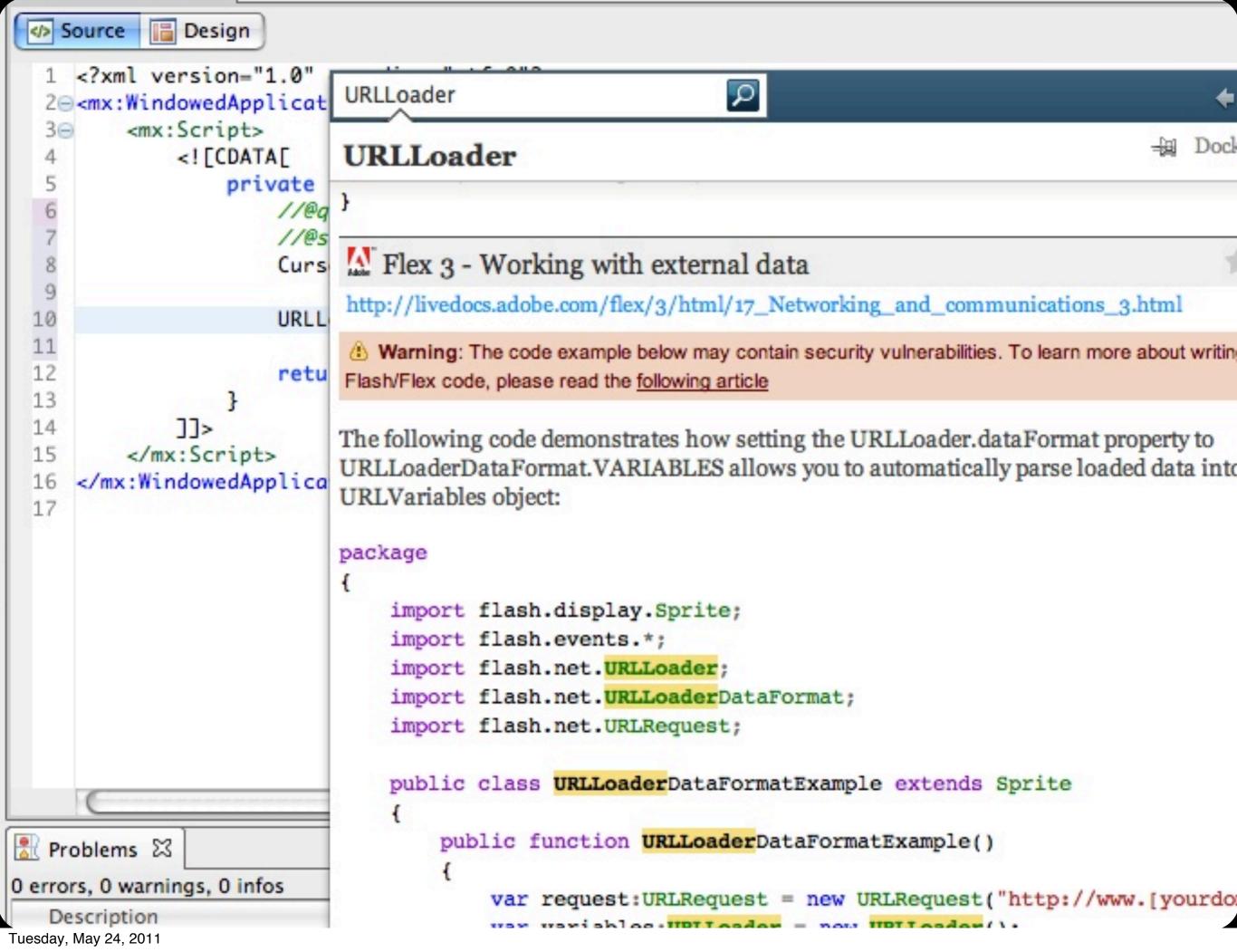


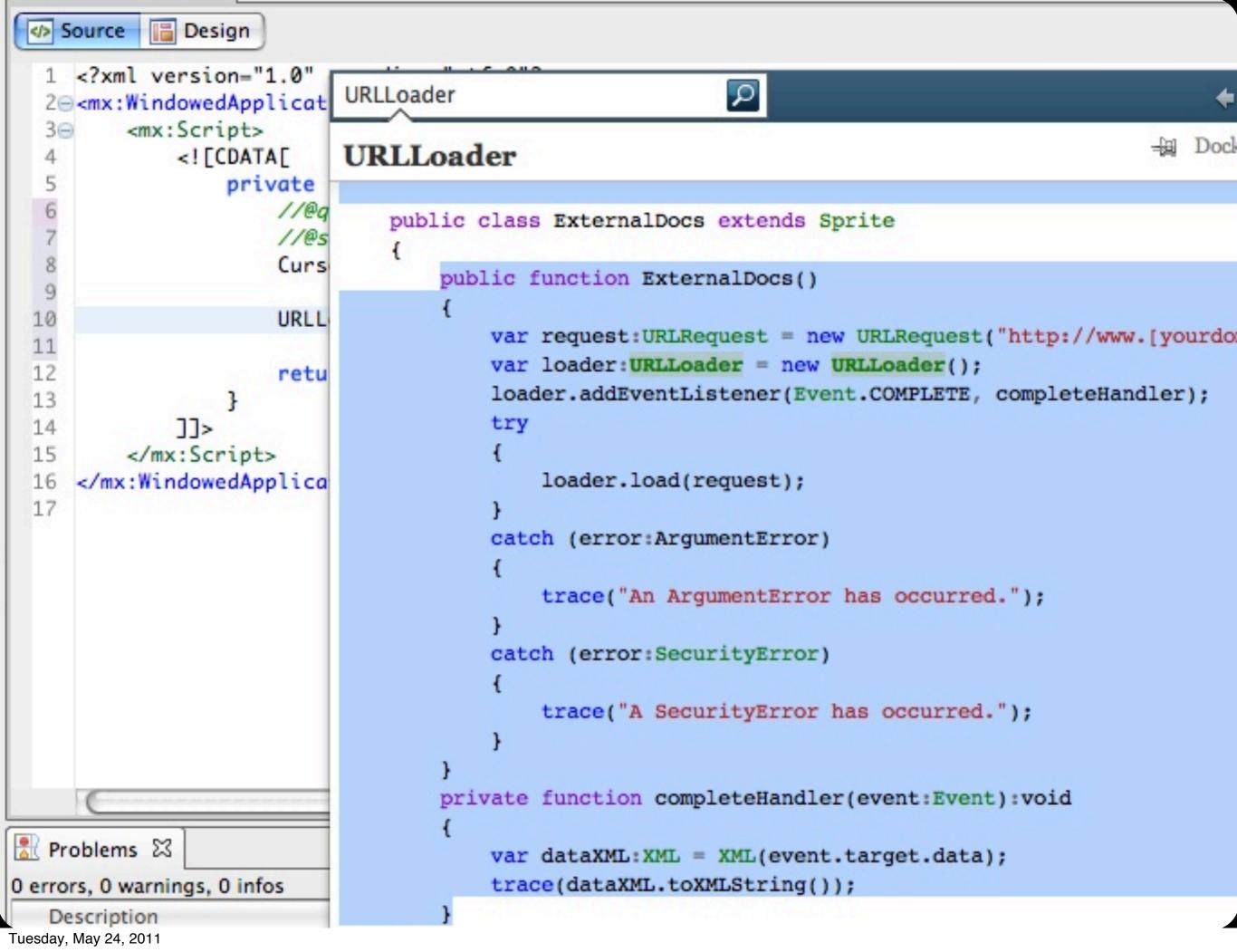


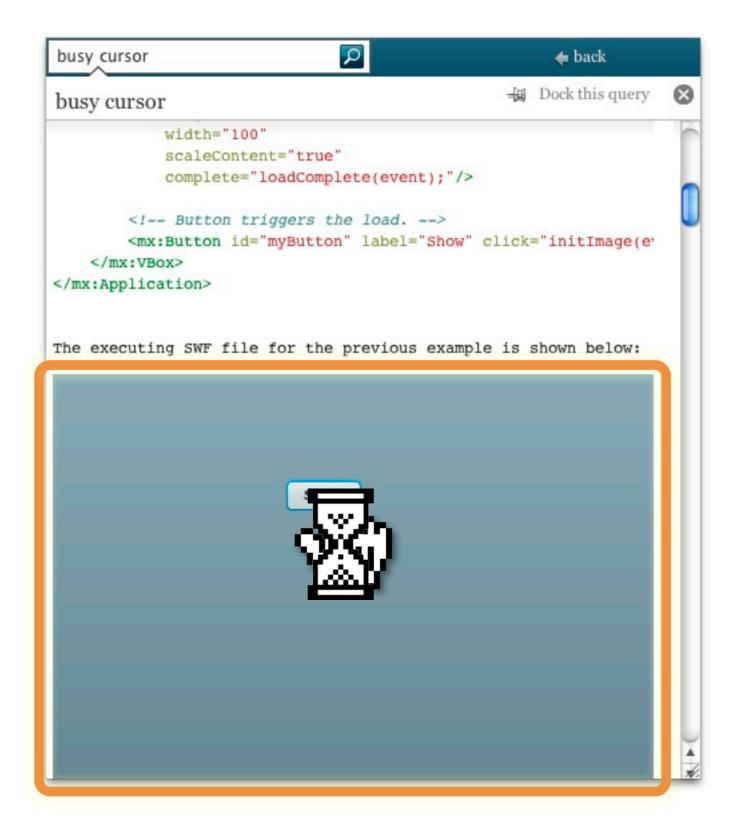






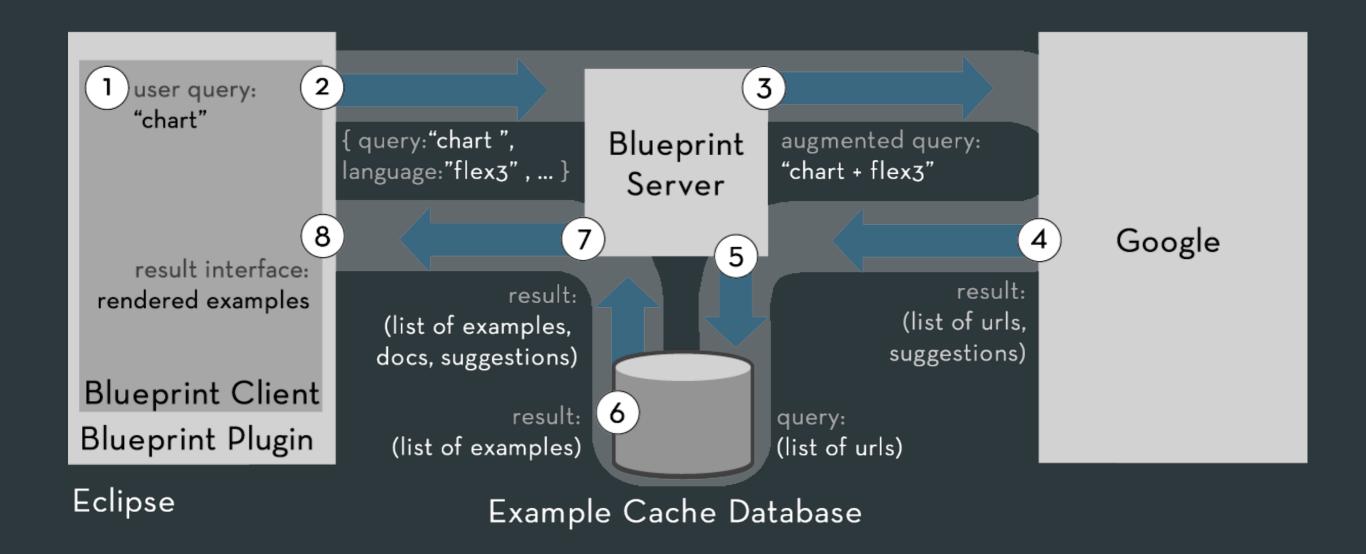






# Blueprint's content is written as examples

#### Blueprint Query Handling



## Does example-centric search affect quality and efficiency?

- Betwen-subjects study w/ Flex programmers (n=20)
   "retrieve text from a URL and place it in a text box"
- Same tools. Only difference is Blueprint.
- Faster example finding -> faster programming (p<.01)</li>
- ...and the code was rated higher quality! (p<.O2)

### Does example-centric search change how programmers work?

- Released on Adobe Labs (since May 2009)
- Logged queries and interface actions
- Analyzed logs after 3 months
  - Conducted interviews to generate hypotheses
  - Compared Blueprint logs to Adobe Community Help logs from the same period
  - Blueprint: 17,012 queries from 2,024 users
  - Community Help: 26,036 queries from 13,283 users

## Results

- Example results often show sufficient information. People click through less often.
- Blueprint users query with code more often
- The time cost of finding examples is lower in Blueprint. People will re-find more often.

# "Only through imitation do we develop toward originality"

John Steinbeck

#### Bonnie E. John

Professor

Carnegie Mellon University
Human-Computer Interaction Institute

5000 Forbes Avenue Pittsburgh, PA 15213

Office: 3521 Newell-Simon Hall

Voice: (412) 268-7182 Fax: (412) 268-1266 Support staff: (412) 268-7099



E mail: bej@cs.cmu.edu

Home Research Teaching Positions Service Personal

#### RESEARCH

I am interested in techniques to improve the design of computer systems with respect to their usefulness and usability. To that end, I have investigated the effectiveness and usability of several HCI techniques (e.g., think-aloud usability studies, Cognitive Walkthrough, GOMS) and produced new techniques for bringing usability concerns to the design process (e.g., CPM-GOMS and software architecture evaluation for usability). Much of my work focuses on cognitive modeling, where I work within a unified theory of cognition to develop models of human performance that produce quantitative predictions of performance with less effort than prototyping and user testing. I also work on bridging the gap between HCI and software engineering, specifically including usability concerns in software architecture design.

Two active research projects have their own websites.

<u>Usability and Software Architecture (U&SA)</u>

The CogTool Project: a Tool for Cognitive Modeling

#### **TEACHING**

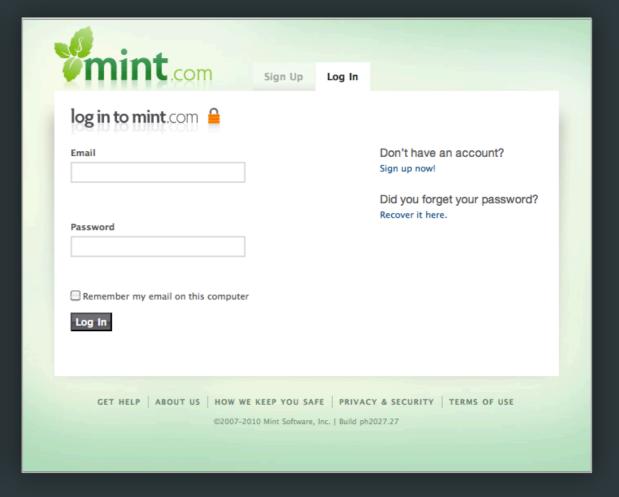
I teach courses in HCl design and evaluation methods. I was the Director of the Master of Human-Computer Interaction Program for almost a dozen years, stepping down in January 2009.

FULL CURRICULUM VITA (.pdf)

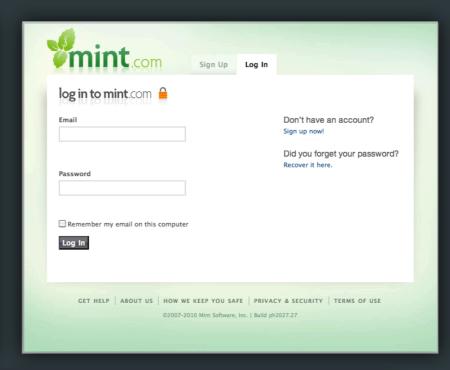
Last modified on May 23, 2003 by bej@cs.cmu.edu

content style

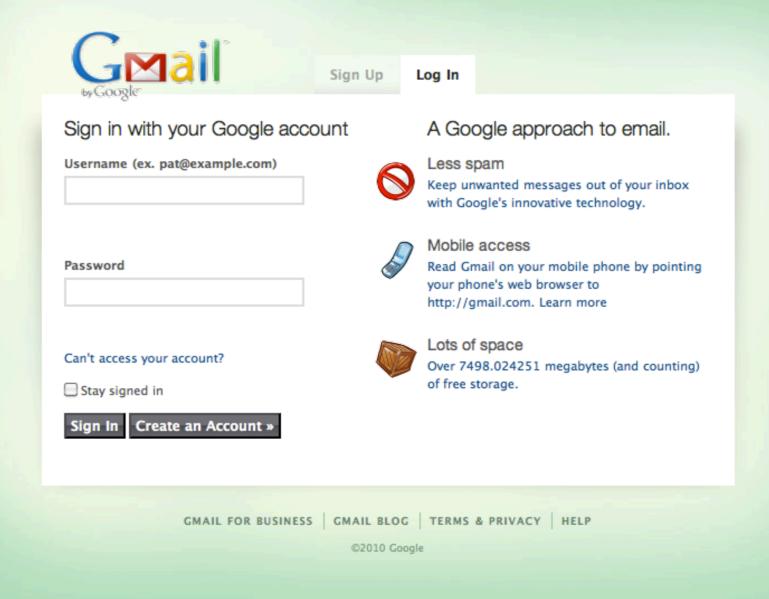




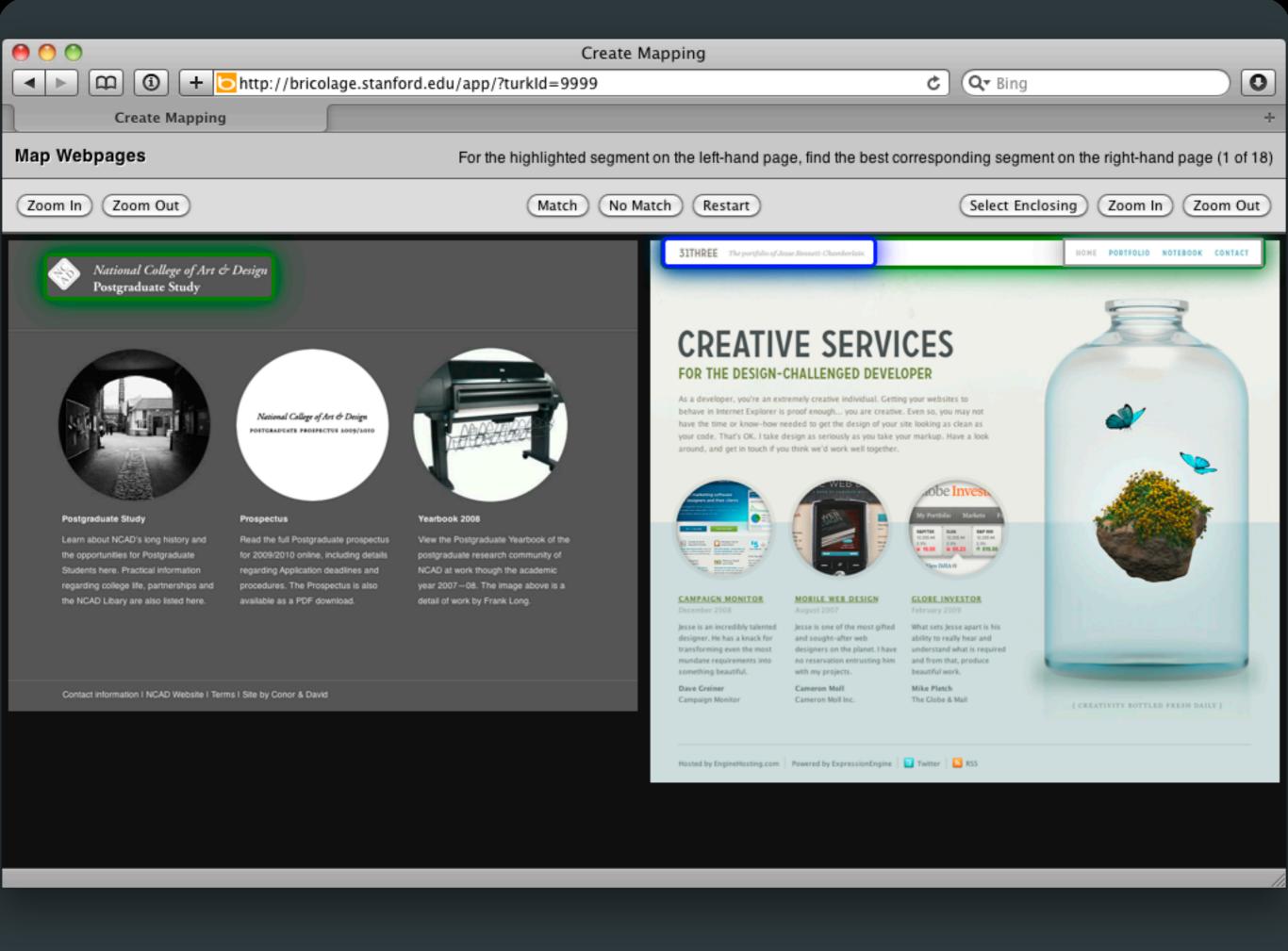




style



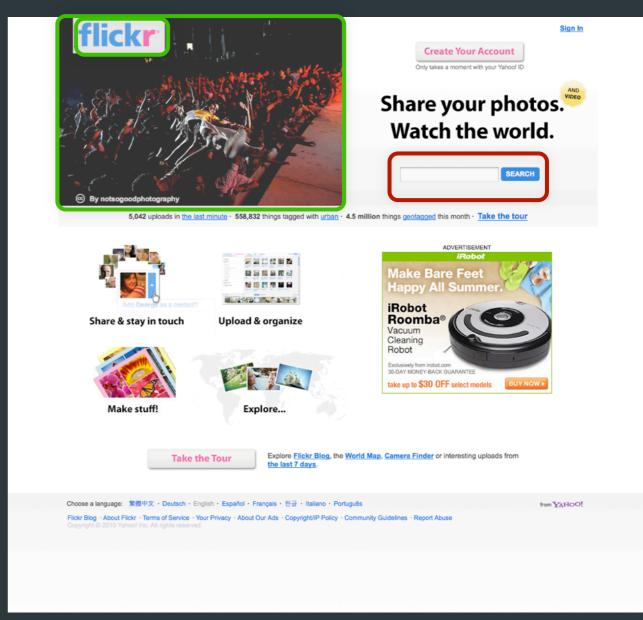
How do people map Web pages?



## balance semantic & structural constraints

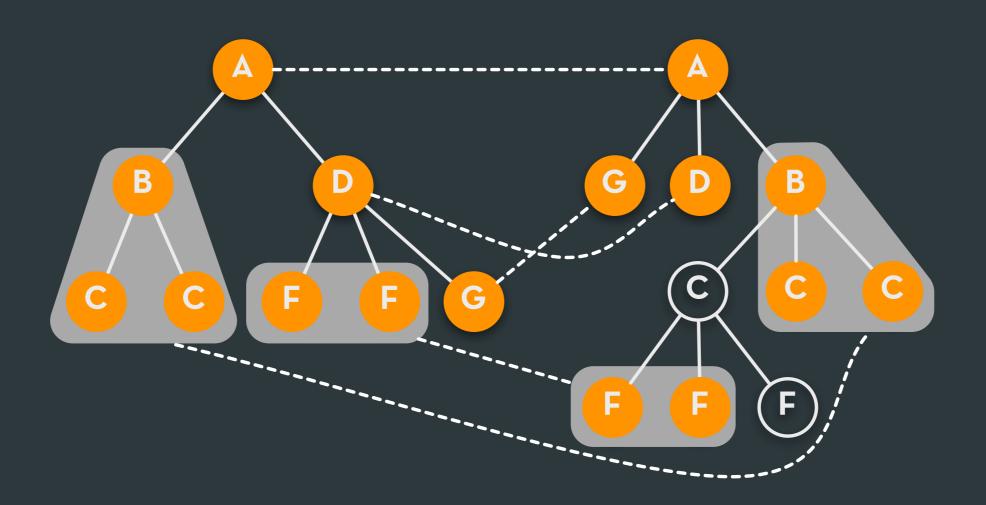
## TREE MATCHING: TOO RIGID





Produces a mapping that rigidly preserves ancestry

## FLEXIBLE TREE MATCHING



- relaxes rigid ancestry constraint
- semantic, sibling, and ancestry cost model
- see our follow-up paper in IJCAI

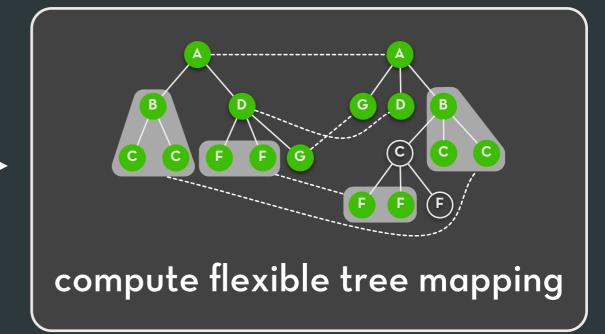
## MACHINE LEARNING

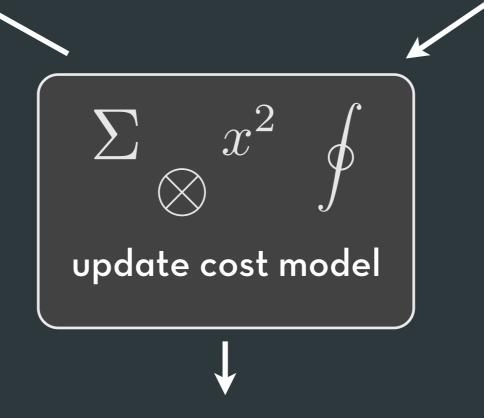






randomly pick a training pair





[Collins 'O2]

## MACHINE LEARNING RESULTS

visual	53%	
visual and sibling		67%
visual and ancestry		75%
bricolage		78%

## rapid prototyping

## Welcome to the portfolio of Rik Catlow, Internet Product Designer & Developer.

#### Creativity + Technology

Developing a product on the web requires many different skillsets, from information architecture, user interface design, web site design and development, to usability analysis, content management, search engine optimization and more. It's not



enough to have a great design or a strong technology platform; these need to be seamlessly

integrated. In the last 12 years, I've worked for ground-floor start-ups to multi-national corporations and gained the experience for managing, building and developing web products from concept to launch.

Enjoy! — Rik Catlow

#### About Rik Catlow

This site is designed, coded and updated by me, Rik Catlow. I live with my wife Wassa, daughter Becca, and a fat tabby cat named Bo in Charlotte, NC. I currently work for Bank of America as Senior Visual Designer. I advocate for web standards, the user and visual design simplicity.

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#### Contact Info

Rik Catlow → Resume / Linkedin Profile

Email: rikcatindustries@gmail.com

Personal Site: rikcat.com

Twitter: @rikcat

Status: Interested in full-time opportunities

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Personal Site: rikcat.com

Twitter: @rikcat

Status: Interested in full-time opportunities

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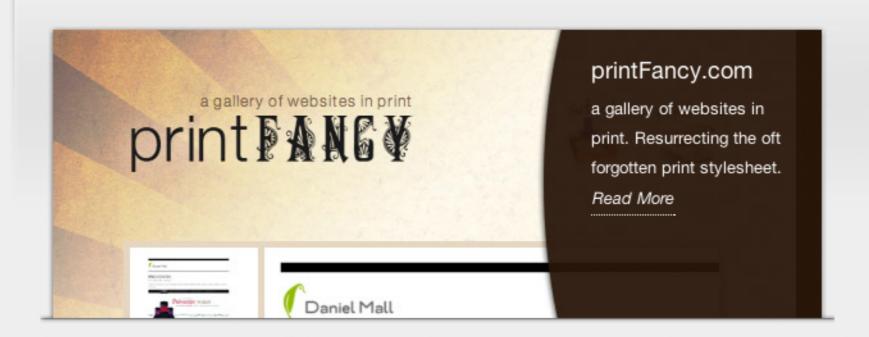
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We help generate targeted traffic, manage quality and sustainable campaigns, and measure results to ensure a great ROI.

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Contact Info

✓ Rik Catlow → Resume / Linkedin Profile

Email:

rikcatindustries@gmail.com









## retargeting between form factors











#### Blog

#### Spring 2010 jQuery Talks

I gave a number of talks this spring on jQuery and especially on some of the recent additions made in jQuery 1.4. Below are all the slides and demos that I've given.

The conferences / meetups that I spoke at (or will speak at, in the case of MIX), and the talks that I gave, are [...]

24 Comments · Posted: March 4th, 2010 · Tags: jquery, speaking, talks, workshop

#### .closest(Array) in jQuery 1.4

A new method signature is slated for jQuery 1.4: .closest(Array). It builds upon the previous .closest() method and hyper-optimizes the logic needed for handling event delegation (and live events).

closest() (and by extension, is()) has become a critical function in jQuery. With more people using live events reducing any overhead has become of the utmost importance. [...]

50 Comments · Posted: December 18th, 2009 · Tags: closest, live, jquery

#### .nodeName Case Sensitivity

When working with the DOM .nodeName property there are two hard-and-fast rules that most people abide by:

The node names of HTML elements are always uppercase, even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters. <a href="https://example.com/html">https://example.com/html</a> even if they're explicitly created using lowercase characters.

The node names of XML elements are always in the [...]

31 Comments · Posted: November 24th, 2009 · Tags: dom, javascript, browsers

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#### JavaScript Books



JavaScript Secrets
Secret techniques of top
JavaScript programmers.



#### Pro JavaScript

The best techniques for professional JavaScript. Published by Apress.

#### Micro Updates



@jeresig

Infrequent, short, updates and links.

#### JavaScript Jobs

Ninja Jobs: JavaScript Jobs
Mozilla: Browser Jobs

Hosting provided by: Engine Yard\*



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#### JavaScript Books



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## http://hci.stanford.edu

Blueprint

Joel Brandt, Mira Dontcheva, Marcos Weskamp

CHIO9, CHIIO, IEEEO9, No Code Required Bricolage

Ranjitha Kumar Jerry Talton Salman Ahmad

CHIII