

Web Testing

CS585 Software Verification and Validation

February 18th, 2015

<http://cs585.yusun.io>

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<http://yusun.io>

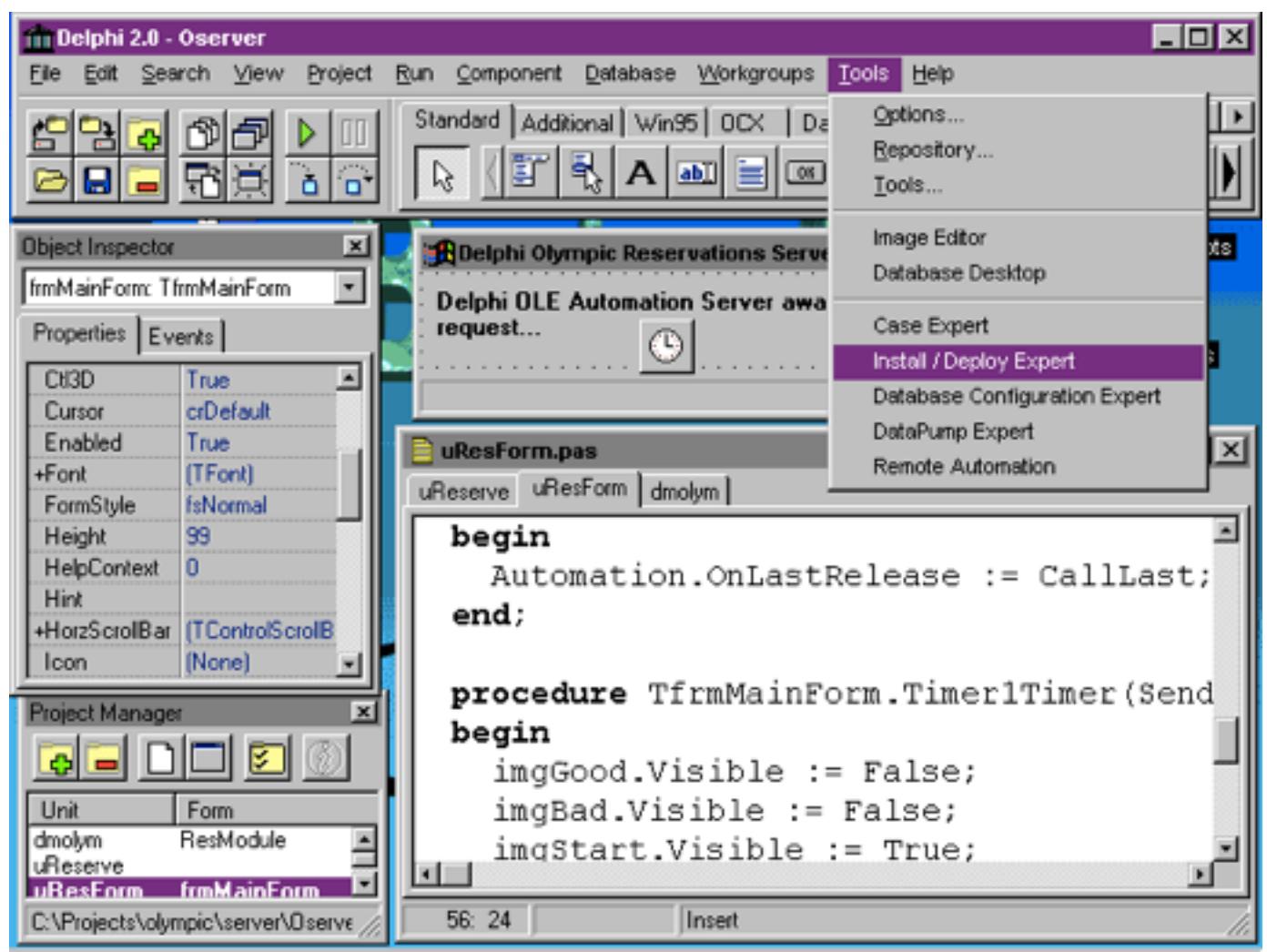
yusun@cpp.edu



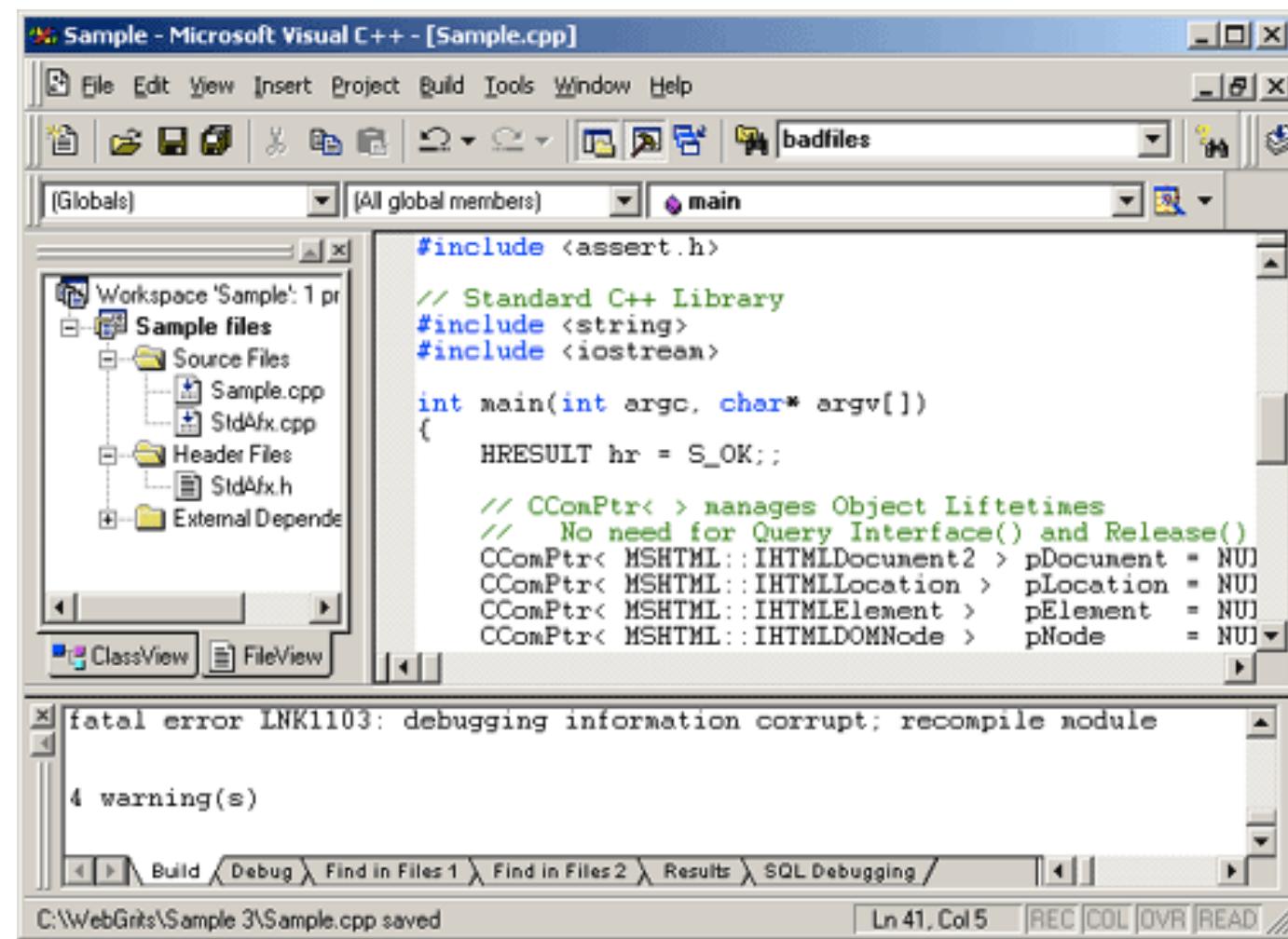
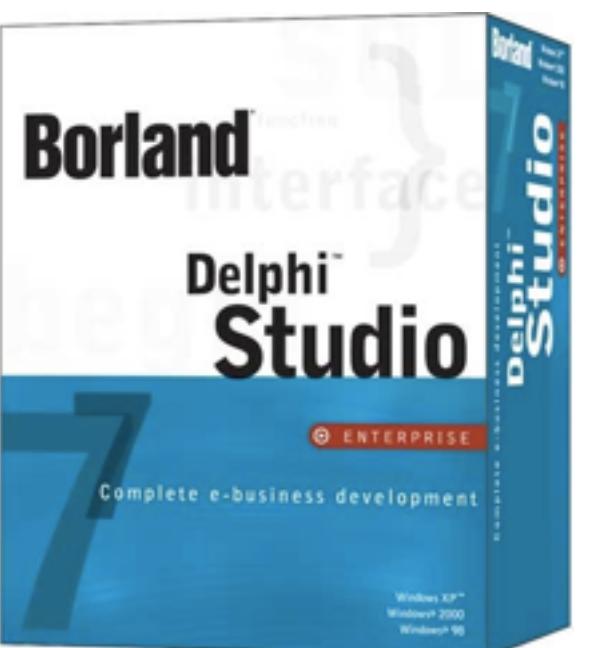
CAL POLY POMONA

Back in 2002 ...

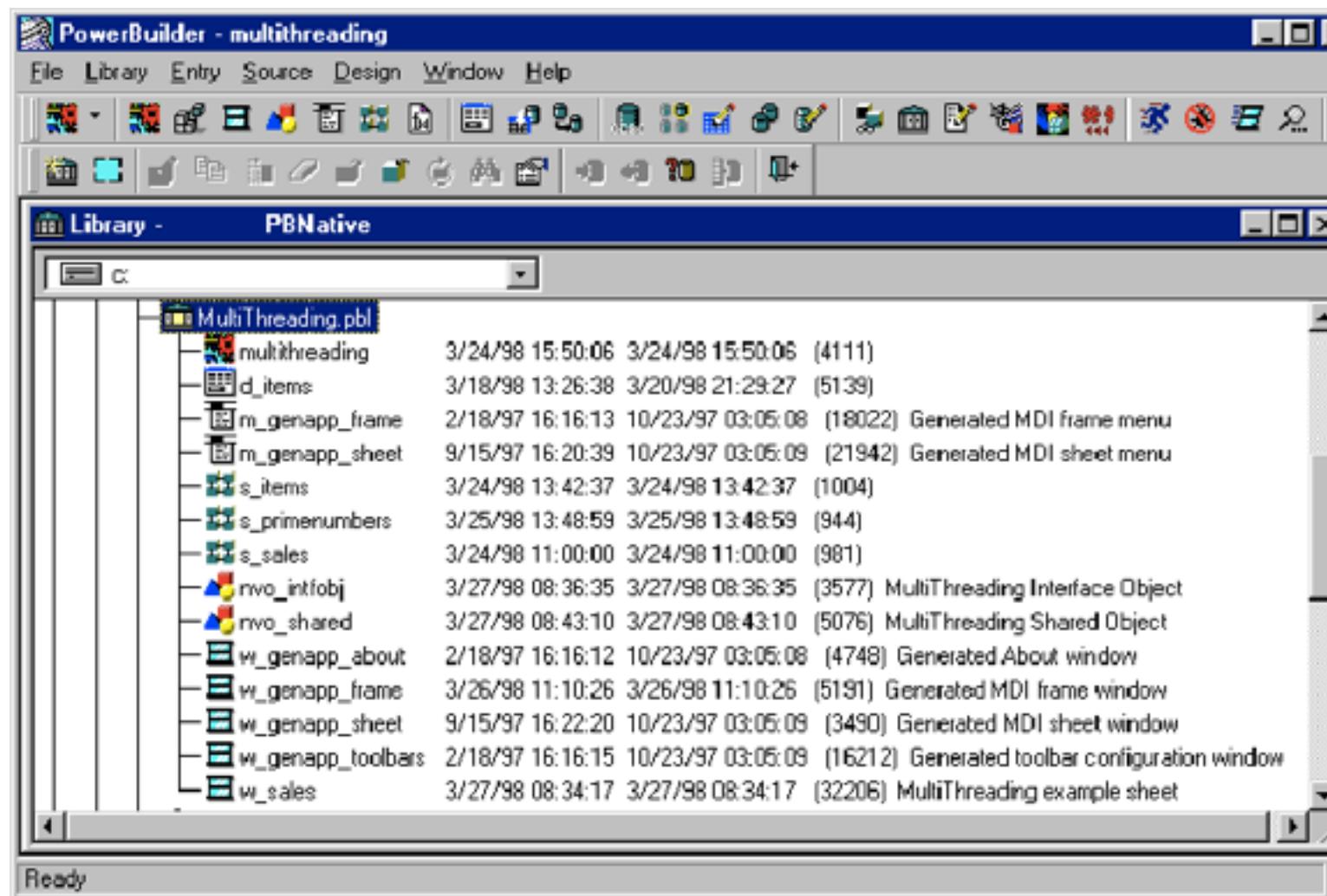




Delphi



Visual C++



PowerBuilder



OUTDATED

A large, dark silhouette of a man riding a circular saw blade, positioned behind the word 'OUTDATED'.

Everything Goes to Web



Web Frameworks

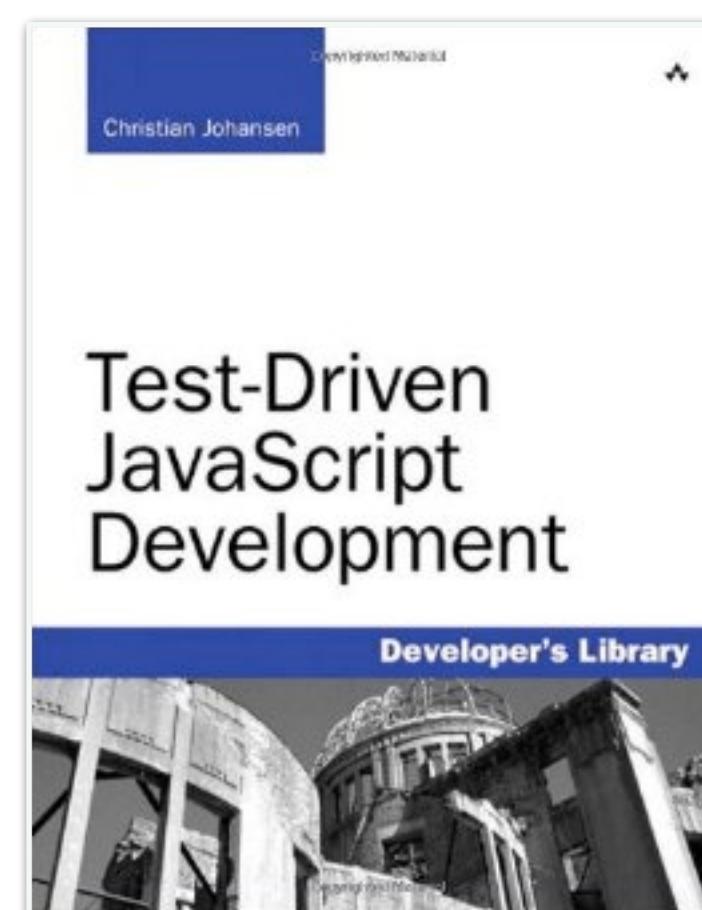


Front-End Web Developer Jobs Demand Trend



JavaScript/HTML Unit Test

don't forget you need unit test for web



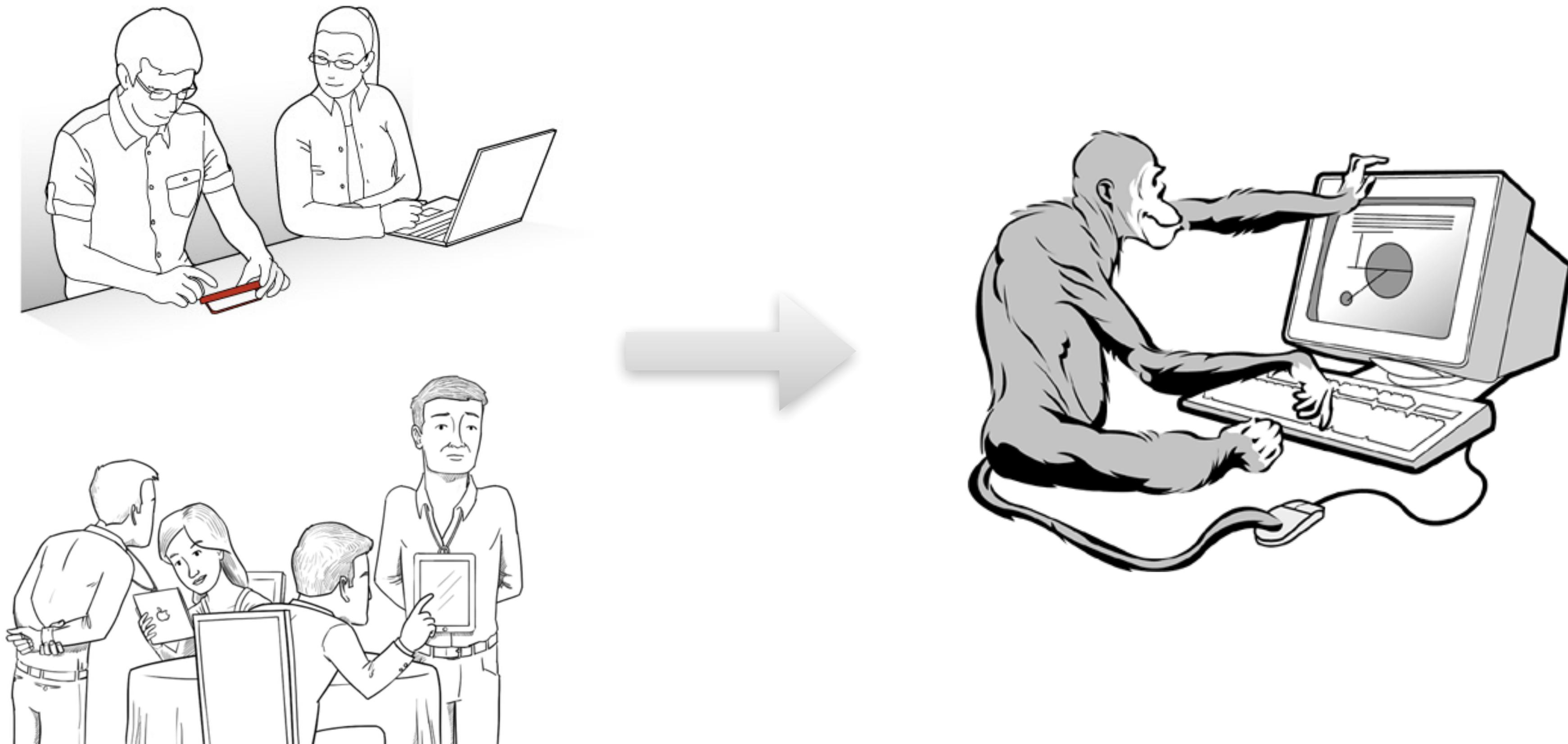
Selenium

browser test automation

<http://www.seleniumhq.org/>



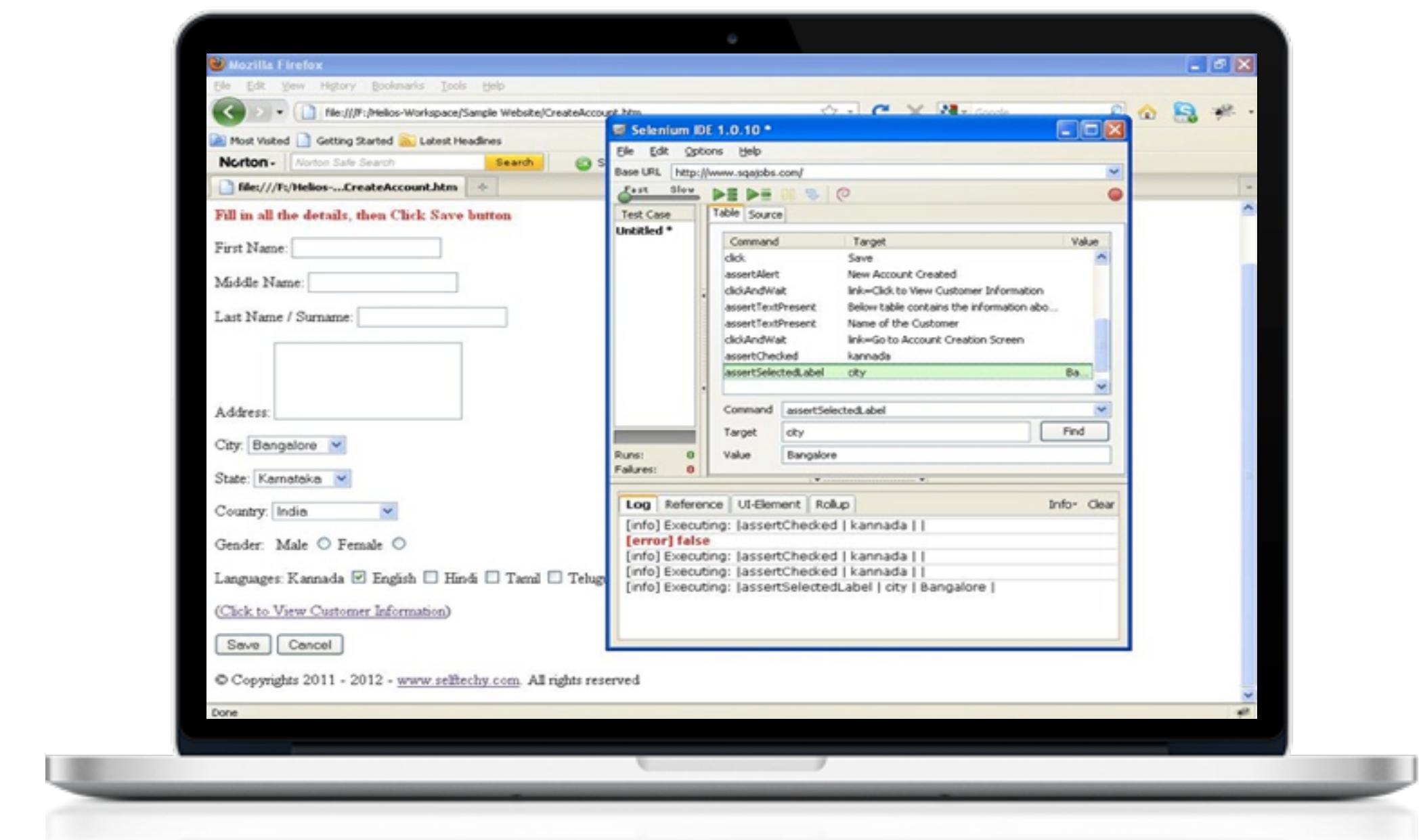
MonkeyRunner for the Web



What does Selenium do?



Browsing Simulation



Browser Assertions

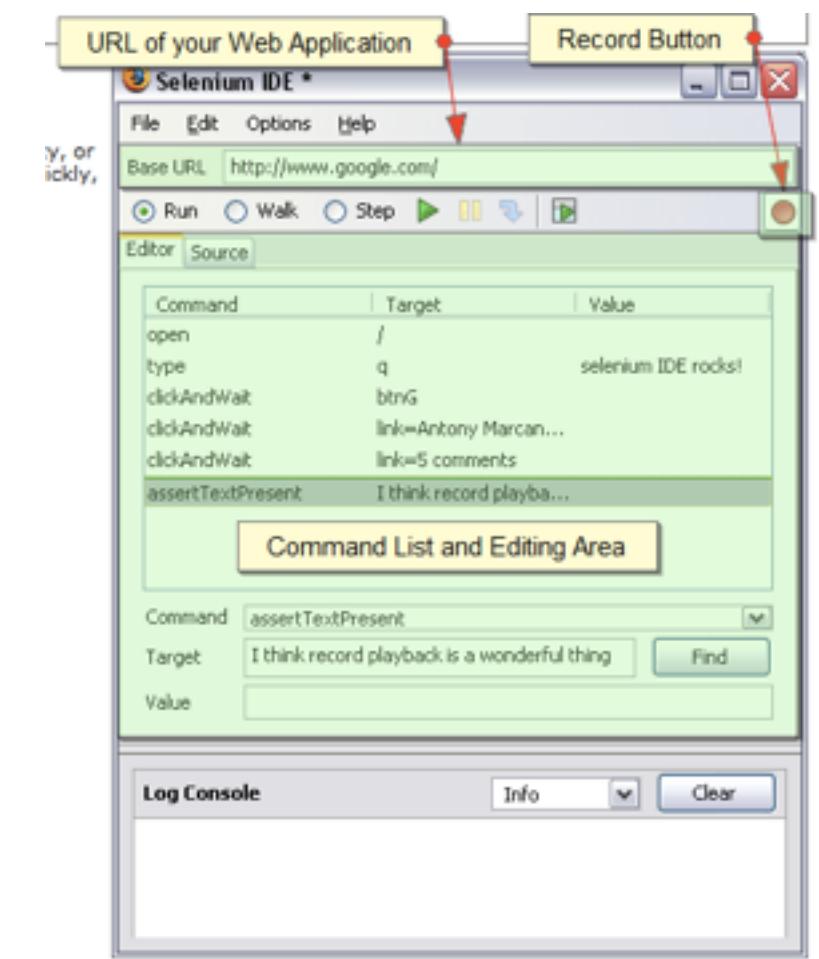
Selenium Highlights



JavaScript-Based



Multiple SDKs



Powerful IDE



Adopted by the Industry

JSoup

HTML extraction and manipulation

<http://jsoup.org/>

jsoup



JSoup Example: Amazon Seller Pricing Automation

Screenshot of an Amazon search results page for "Introduction to Algorithms, 3rd Edition (Hardcover)". The page displays a grid of offer listings with seller information, delivery details, and buying options.

Search Bar: Books

Sponsored Ad: SUB COLD Men's Thermal Compression Shorts

Offer Listings:

Price	Condition	Seller Information	Delivery	Buying Options
\$66.04 +\$3.99 shipping	New Brand New, Perfect Condition.	SuperBookDeals- ★★★★★ 90% positive over the past 12 months. (289,445 total ratings)	• In Stock. • Ships from IN, United States. • International & domestic shipping rates and return policy.	Add to cart or Sign in to turn on 1-Click ordering.
\$66.05 +\$3.99 shipping	New Brand New	PhatCampus ★★★★★ 97% positive over the past 12 months. (41,274 total ratings)	• In Stock. • Ships from FL, United States. • Expedited shipping available. • Domestic shipping rates and return policy.	Add to cart or Sign in to turn on 1-Click ordering.
\$66.19 +\$3.99 shipping	New Brand New, Satisfaction Guaranteed. delivered in 2-4 days. paperback.	MYMARAM Just Launched (Seller Profile)	• In Stock. • Ships from OH, United States. • Expedited shipping available. • Domestic shipping rates and return policy.	Add to cart or Sign in to turn on 1-Click ordering.
\$66.85 +\$3.99 shipping	New All brand new books, shipped from Idaho, USA. Softcover Edition.	Book Horizon Just Launched (Seller Profile)	• In Stock. • Ships from ID, United States. • Domestic shipping rates and return policy.	Add to cart or Sign in to turn on 1-Click ordering.
\$66.96 +\$3.99 shipping	New New Book. Shipped from UK within 10 to 14 business days. Established seller since 2000.	pbshop ★★★★★ 95% positive over the past 12 months. (203,108 total ratings)	• In Stock. • Ships from United Kingdom. Learn more about import fees and international shipping time. • International & domestic shipping rates and return policy.	Add to cart or Sign in to turn on 1-Click ordering.
\$74.99 +\$3.99 shipping	New Brand New book, in excellent condition. Fast shipping !!! Free tracking number and Great Customer Service!!!	ACCUWAVES ★★★★★ 93% positive over the past 12 months. (39 total ratings)	• In Stock. • Ships from GA, United States. • Domestic shipping rates and return policy.	Add to cart or Sign in to turn on 1-Click ordering.
\$75.06 +\$3.99 shipping	New	John Shu Just Launched (Seller Profile)	• In Stock. • Ships from TX, United States. • Expedited shipping available.	Add to cart or

www.amazon.com/gp/offer-listing/0262033844/ref=dp_olp_new?ie=UTF8&condition=new

Web Monitoring and Tracking



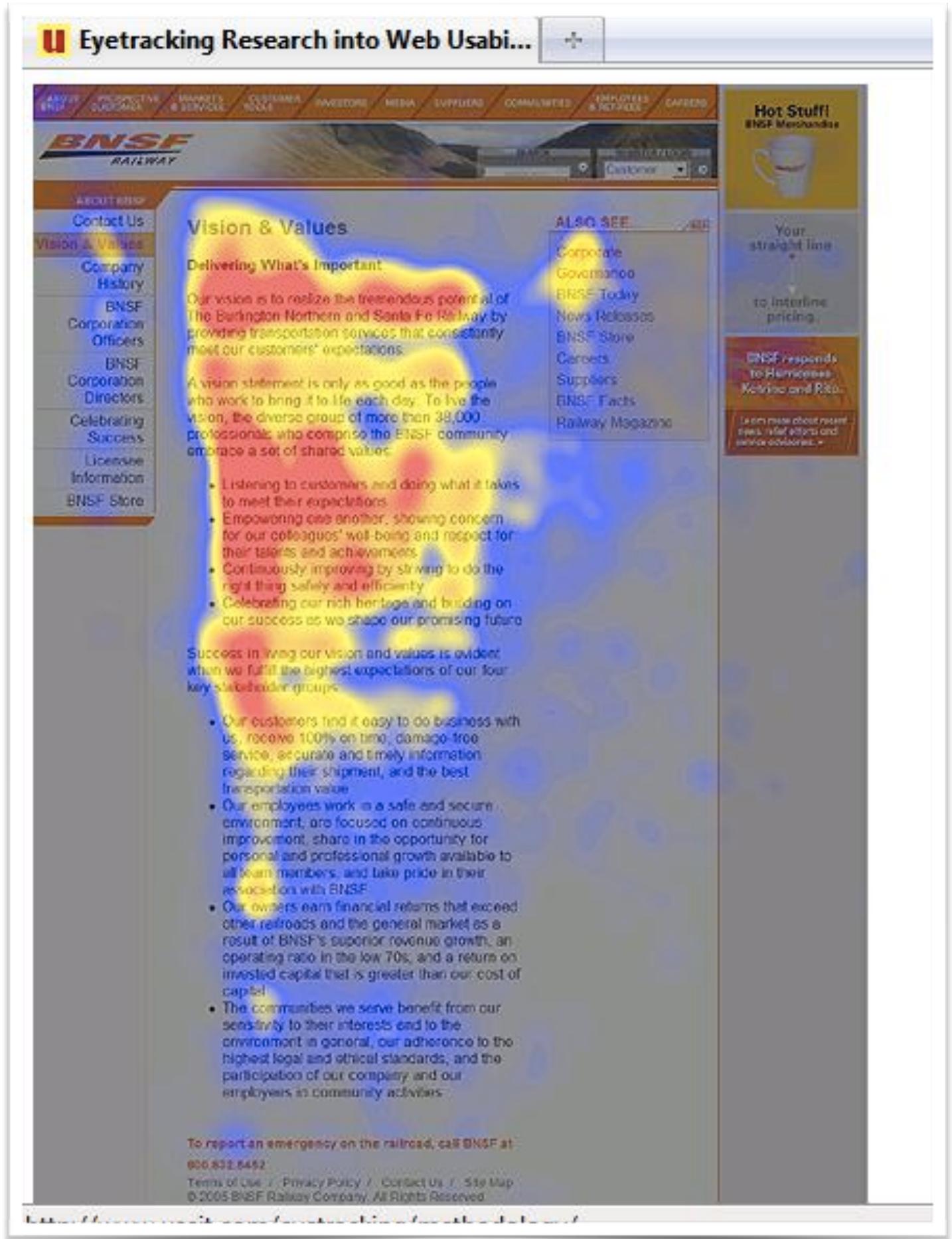
Google Analytics

<https://www.google.com/analytics>



Web User Tracking

<http://mouseflow.com/>



Web User Tracking

example: solar sales

<http://www.acosolar.com/>

The screenshot shows the homepage of the ACO Solar website. At the top, there are language links for "Solar EN" and "Solar ES", a toll-free phone number "Toll Free 213-820 6519 24 Hrs Global Service (Mon-Fri)", a shopping cart icon showing "0 items", and links for "Log In", "Sign Up", "Blog", and "My Quote". On the right side, there are buttons for "Live Support ONLINE", "Email Us", and social media links for Facebook, LinkedIn, Google+, and YouTube. The main header features the "ACO Solar" logo with the tagline "Solar Sales , Distribution & Installation". Below the header is a navigation bar with links for "Home", "Products Online", "System Solution", "Membership", and "Contact". A search bar on the right says "Search solar products". The central content area features a large advertisement for a "500W UPE-OFG-JS500 Solar AC/DC integrated system" priced at "ONLY \$ 620". To the right of the ad is an image of the system components, which include a grey inverter unit with a green control panel, a black solar panel, and a grey battery or power supply unit. Below the advertisement is a section titled "Popular Categories" with a grid of twelve icons representing different solar products and services. At the bottom, there is a section titled "Project Solutions" with several icons related to solar projects.

Massive Open Online Course (MOOC)

Coursera



The screenshot shows the Coursera homepage. At the top, there is a navigation bar with the Coursera logo, a search bar, and links for "Explore Courses", "Categories", "Universities", "About", "Login", and "Sign Up". The main banner features a large image of three people working on laptops outdoors, with the text "Take the world's best courses, online, for free.". Below the banner is a search bar with the placeholder "What would you like to learn about?". The "RECENT NEWS" section contains four items:

- One of Coursera's Most Highly Anticipated Courses!
- 29 New Schools, 92 New Courses, 5 Languages!
- Five courses receive college credit recommendations
- View blog »
Coursera Wins "Best New Startup"

MOOC Example

<https://www.coursera.org/course/mobilecloudprogram>



Douglas Schmidt

May 19, 2014 · 3 likes

Some interesting stats from my Android Patterns and Frameworks [MOOC](#):

- . ~70,000 students enrolled now
- . Students come from 197 different countries
- . 25,000+ (37%) come from "emerging economies" (not sure how that's defined exactly)
- . ~25% come from the USA
- . The next biggest group of students are from India (11%), Spain (4%), UK (3%), Canada (3%), China (3%), and the Russian Federation (3%), Brazil (3%), Germany (3%), Ukraine (2%), Poland (2%), France (2%), and Italy (2%)
- . 86% are men, 14% are women
- . Nearly 70% are not currently students
- . 37% have a Bachelor's degree and 34% have a Master's degree
- . 62% are enrolled full-time
- . 33% are between 20-29, 31% are between 30-39, and 14% are between 40-49 (pretty much no one is 13-19 or 70+)

I'm not sure what all this means, but it's interesting to ponder!

Doug

Like · Comment ·  8  3

MOOC Example



MOOC Grading is ...

