Orion: Software Development in the Browser

Slides from
Boris Bokowski
IBM Ottawa Lab
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What is Orion?

• Software development in the browser: edit code, navigate code, search, versioning/SCM...

• Not an IDE in the Browser - a set of linked web pages

  • This makes adding functionality easy: link to new pages, potentially from different servers

• Current target: client-side web developers, working with JavaScript, HTML, and CSS
Why Orion?

- Me-too-argument: (Almost) everything else is already web-based
- More arguments later
SW development in the Browser

• Bug tracking (Bugzilla, JIRA, Trac, Lighthouse, RTC)

• Builds (Jenkins/Hudson, CruiseControl, Bamboo, BuildForge)

• Code review (Bugzilla, Gerrit, GitHub)

• Documentation, Code Snippets

• Code repositories (GitHub, ViewCVS, Ohloh, Code Search, RTC)

• Debugger (Firebug, Web Inspector)
What’s missing? Not much:

• Code Editor
• Navigator
• SCM (Commit, Compare, Merge, etc.)
• Indexing/Search
• Unit tests
Demo
Code Editor

• Fast
• Scalable
• Works in all desktop browsers
• Faster than desktop Eclipse editor!
Orion Design Principles

• Regular Hyperlinks, back button, bookmarking, link sharing.

• Functionality on separate pages. Page = Task+Resource.

• Performant and Lightweight. Speed trumps power.

• Components should have value on their own.

• Low barrier of entry for adopters. Don’t require technology buy-in.
Integration Possibilities

• Hyperlinks as an integration mechanism.

• OSLC, OAuth: Consume and produce server APIs.

• Client-side plug-ins: adding commands to existing UI.

• Integrate with browser debuggers: Firebug, WebKit Inspector

• Host additional UI components, e.g. OpenSocial Gadgets.
Additional thoughts: Why Orion
Development Tools

• We build our own tools.

• Not many other professions are like that.

• We enjoy writing tools!
Command Line

• Edit-> Compile -> Run

• but also:

```
find . -type f -name '*.png'
|  sort
| perl -n -e 'chomp; /\.[^\./]+\../.png$/; print "\ t<section
 class="auto">\ <hgroup><h1>" . $1."</h1></hgroup><img src="content/" .
 $_. "">
</section>\n";'</p>
```
Command Line

- Experts can add tools.
- Powerful integration through file system and pipes.
- Scripting.
- Distribution is a problem.
IDE
IDE

• Hard to add tools.

• Deep integration but complex APIs.

• Distribution is a problem (still).
The Web

• Easy to add tools, reachable by URL.

• Distribution problem is solved!

• Integration - How do these tools work together?

this is what Orion is about, and why we need to start now
Why now?

• Online IDEs are up and coming (e.g., Cloud 9 IDE) and to influence the direction, we need to play

• We need to fail, learn from mistakes, try again - some things are similar to what we know about IDEs, some things not

• IBM are interested in community-building and are contributing code as a seed. We want this community to form at the Eclipse Foundation
The Web is the Platform!

• highly distributed content
• scalable computing power
• simple connectivity -- links
• trivial update mechanism
• powerful rendering engine
• large, active community

• artifacts all over the web
• large scale analysis possible
• no central “IDE”
• refresh the page
• look and feel easy to adapt
• innovation by everyone
Sign up at eclipse.org/orion
Thank you!

Questions?