Innovation & ‘hackability’ of the Open Web

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Agenda

- The Web is a wonderful accident
- 1.2 billion citizens or 1.2 billion customers?
- Tools shape society, vendors shape tools
- Open Source for Open Standards
Standards?
Phone system

- which has been improved and built-upon over time (fax machines then aDSL, VoIP and mobile)

- No need to know what brand of phone you use, nor the network you subscribed to. Just dial the number!
Another example: e-mail

- You can use Windows, Mac OS X, Linux, *BSD, Blackberry, Gmail, Yahoo Mail, Hotmail...

- ...and send messages to anyone you know who has an account, without taking care of what system he/she uses.
Counter Examples

- Instant Messaging (IM)
  - ICQ, AIM, MSN, Y!M and dozens of other local providers.
  - Rarely interoperable
  - Battle between users and networks for interoperability.
- Office documents, .DOC/OOXML vs ODF
Phone & IM vs Web

- Phone systems are built by industrials
- Users are just consumers
- Same for Instant Messaging
- The Web and e-mail were built by the users using Open Standards
In a connected world, standards empower users and enable participation.
A few key concepts

- The **Web Server** has the Web pages you want.
- The **Network** carries data between the two.
- **Your computer** has a **Web browser**. It’s a piece of software that **displays** Web pages.
- **Search engine**: A Web server that helps you find the pages you want.
The Web and its original standards

- **HTML**: how to structure a document (just a Web page)
- **HTTP**: how to send a document over the network
- **URL**: how to identify a document (What name to give to the page)
Additional standards

- **CSS**: how to present a document
- **JavaScript**: how to embed logic in a document (making the Web page ‘smart’)
- RSS & Atom: how to list new documents
- Microformats: how to embed machine-readable data inside the document
Things we find in Web pages (1/2)

- **Text & Links**
- **Pictures** (sometimes animated)
- **Tables** (useful for data)
- **Forms** (to key in data, needed for applications)
- **Scripts** (putting intelligence into pages)
  - But they’re quite slow to execute
Elements of a Web page
Things we find in Web pages (2/2)

- **Plug-ins** (Java and Flash applets)
  - They are islands of information in the page
  - Plug-ins need to be installed separately
  - They’re not Open Standards nor Open Source
Plug-ins have been useful

- Heavy reliance on Plug-ins to mitigate the limitations of the Web
- But a heavy price in terms of freedom to participate and innovation:
  - You can’t improve Flash
  - Hard to combine Flash with other elements in the Web page
  - People without Flash can’t use your content
Things we can’t do with the Web in 2008

• Draw on the screen
  • (we can display images sent by the server, though)

• Display video
  • (We can use a Flash plug-in for it, though)

• Do a lot of computer-intensive computation
Things we can do with the Web in 2009

- Draw on the screen
  - (we can process images locally now)
- Display video
  - (No more need for a Flash plug-in for it)
- Do a lot of computer-intensive computation (Yay, JIT-Tracing!)
The Open Web does more than you think
It’s not just about Mozilla

- Mozilla Firefox 3.x Beta
- Apple Safari 4 Beta
- Google Chrome 1.0/2.0
- Opera 10
- IE 8 Release Candidate

Include JIT-Tracing, some SVG, Native video, HTML 5’s Canvas

None of the above
Paul’s demos

• JIT Tracing + Web Workers Thread: much faster JavaScript
• Native Video in an Open Format
• Canvas: drawing on the screen
• CSS 3 (@font-face): better layout
• SVG Filters: special effects on pages
• All of this can be combined together
Building a hackable World
Hackable?
The Web is not TV
You don’t have to passively consume
The Net is a platform

- People can build on it
- They don't have to ask for permission
- They should not have to pay to participate
- They should not have to own equipment from a specific brand to participate
- *When people participate, wonders happen!*
Examples?
Wonders...

- Kutiman’s remix - http://thru-you.com/
- Open Source in general
Hacking your page

• Changing the **look**: [http://userstyles.org/stylish/](http://userstyles.org/stylish/)
• Changing the **content**: GreaseMonkey scripts
• Changing the **interaction**: Ubiquity
• Changing the **browser**: Add-ons
Olivier's demo
It's up to each of us to make this participative and innovative world happen
Thank you!

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Example: TidyBug

• cleans up the show-bug page on bugzilla.mozilla.org.

• hides empty fields, making it easier to see the fields that are populated and reducing the amount of scrolling needed to see the comments.

• http://www.squarefree.com/2009/02/26/tidybug/
Before

After
To be fair...

- Flash is mature technology and widely distributed