

The Expanding Web Platform

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Jeff Jaffe <jeff@w3.org>



Web is Platform for Innovation



Photo: LeFevre
communications

“The point about the Web is it’s a platform. It should be, for the next generation, for the people who are students now, for people who are children now, they should find that the Web is a canvas that they can draw wonderful things on.”

Tim Berners-Lee, September 2008



Open Standards Lower Cost

- Free to use, implement
- Avoid vendor lock-in
- Wide deployment lowers barriers to entry



W3C Approach to Standards

- Work directly with industry, research leaders
- Engage global community; liaisons
- Maintain vendor neutrality
- Coordinate work via expert staff
- Provide safe IPR environment
- Balance speed, quality, transparency, accountability



Agenda

- Web is established platform for IT
- Factors driving platform expansion
 - Recent innovation and advances
 - The burgeoning future
- How W3C and the IT industry manage the expanding Web platform



HTML5

- Native video support...but no RF codec yet
- Web Applications: drag-and-drop, offline storage, canvas, ...
- Device APIs, geolocation
- See **live demo of technologies** (HTML5, CSS3, SVG, MathML)



Importance of HTML5

- **Steve Jobs**, Apple: “New open standards created in the mobile era, such as HTML5, will win on mobile devices (and PCs too).” (April 2010)
- **Dean Hachamovitch**, Microsoft: “The Future of the Web is HTML5.”
- **Vic Gundotra**, Google: “We are betting big on HTML5.”



CSS3

- Style and layout
- Transformations (2d, 3d)
- Animations
- Much more to build sophisticated interfaces
- See [live CSS3 demo](#), which illustrates some properties (text-shadow, box-shadow, transform, transition, animation)



The Ubiquitous Web

- Sensors, servers, devices, gadgets everywhere
- Will demand permanent network connection
- Will produce enormous amounts of data (much of it personal)
- Will result in interesting new applications (e.g., robots helping in health care)



Web for All

- Accessibility
- Internationalization
 - Multi-language support
- Machine translation
- Voice
- Security
- Privacy



Expanding Platform: Data, Devices Everywhere

- Web of Data
- Social Web
- Cloud computing
- More Web services
- Sensors, gadgets and all of that
- A critical infrastructure



Semantic Web



Linked Open Data cloud

Vertical: Government Data

- Tim Berners-Lee working closely with UK gov
- W3C Egovernment group grassroots effort
- Open Data Example –
Ordnance Survey (UK map data)



More Vertical Innovation

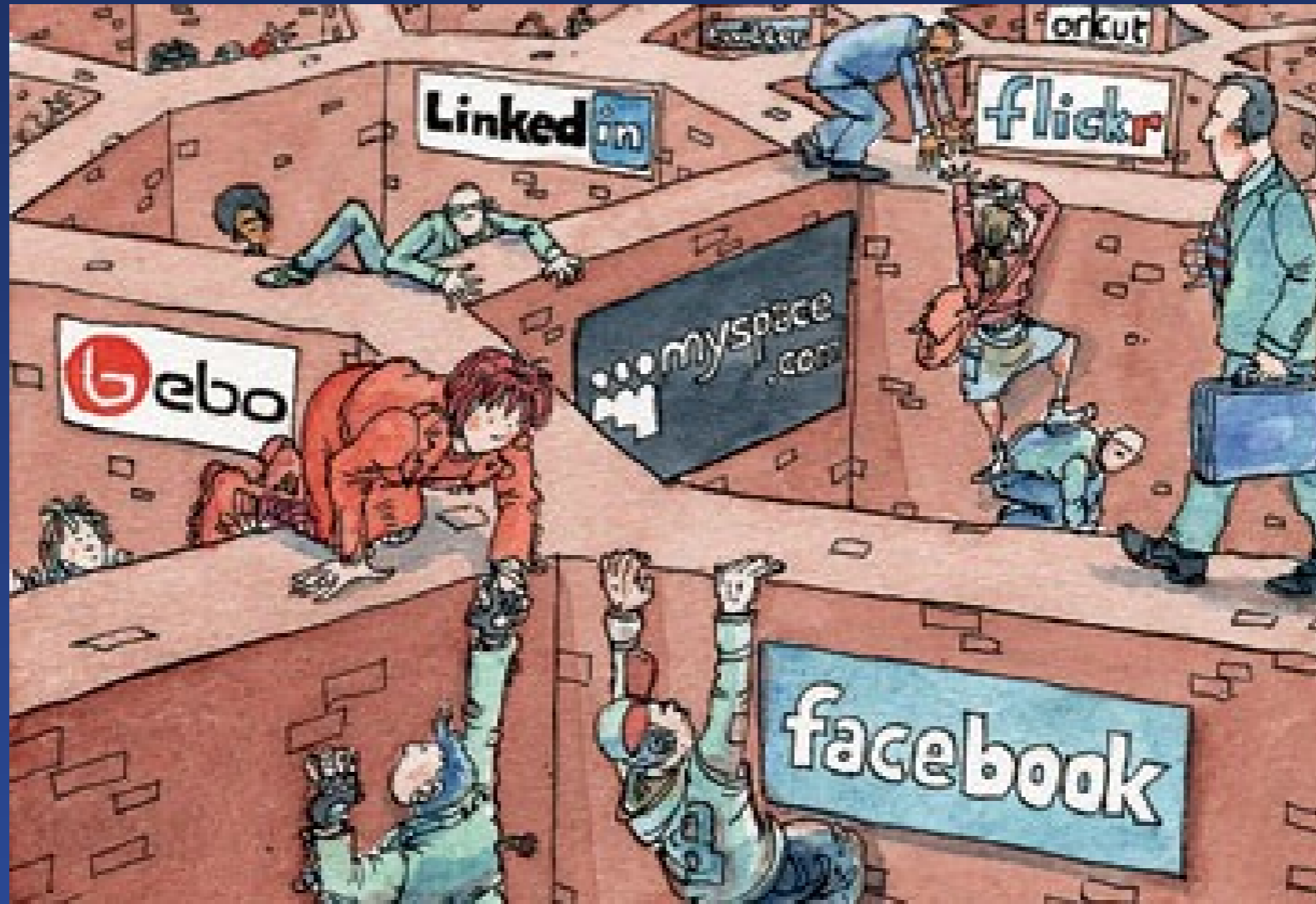
- Extensible architecture supports vertical infrastructure (e.g., health care, finance, energy, government, ...)
- ...and cross-vertical mash-ups
- In the next generation Web there will be many new vertical and horizontal frameworks
- Many of the vertical frameworks will relate to the Semantic Web
 - Every industry will represent itself in a standard way on the Web
 - Metadata and Semantic Web key components
 - First industries are: eGov, Health-Care, Finance





Photo: davidking

Avoid Walled Gardens



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(illustration by David Simonds)
[Economist 2008].

Cloud computing: confusion

- Everyone knows that cloud is the next paradigm for computing
- Noone agrees on the model
 - IaaS, PaaS, SaaS
 - Public or private
 - Consumer or industrial strength
- Many technical problems
 - Interfaces, Identity management



Mobile Web Issues

- Privacy, security issues must be addressed
- **Mobile Web for social development** involves other concerns (use of SMS, relevant content, cost, ...)
- There is just One Web. Core infrastructure must be mobile-ready.



Photo courtesy of
kiwanja.net

Vision for W3C

- Strengthen core mission
- Make W3C the place for new standards
- Drive a global and accessible Web
- Increase the value proposition for users





W3C