

# W3C

*and*

## The Open Web Platform for Entertainment

*by* Jeff Jaffe, W3C CEO

The

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# WORLD WIDE WEB

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*"Thirty years ago, we couldn't know that something called the Internet would lead to an economic revolution."*

Barack Obama

FEBRUARY 2011

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*Actually, we had some ideas about that ...*



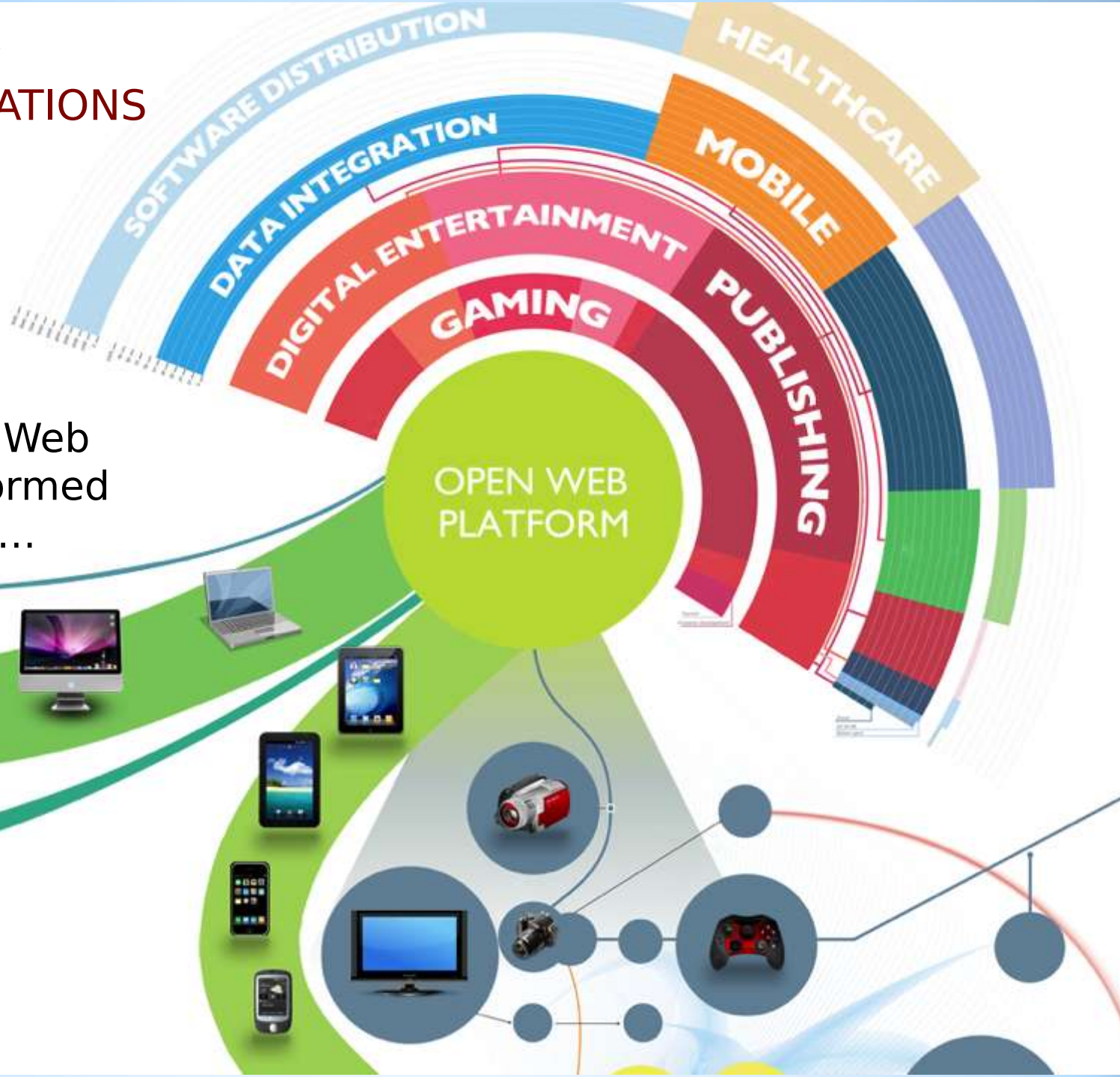
**Tim Berners-Lee**

WEB INVENTOR AND W3C DIRECTOR

# A NEW WAVE *of* TRANSFORMATIONS

Just as the Web  
has transformed  
everything...

...It will  
transform  
everything



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# Agenda

## **Role of W3C**

HTML5 and the Open Web Platform

Momentum

Open Web Platform for Entertainment

# Role of W3C

## World Wide Web Consortium

- 370 Members (83 Full)
- Web ecosystem: users, developers, browsers, etc.
- 69 staff in US (MIT), France (ERCIM) and Japan (Keio)





# W3C Open Web Platform Standards are Royalty-Free

- Standard platform creates level playing field
- Level playing field allows innovation
- Participation allows organizations to shape platform, ensure needs met, standardize best practices



# Role of W3C

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## 30 New Full Members in 26 Months

Amadeus

Astra Zeneca

Baidu

BSkyB

China Unicom

Comcast

Cox

Communications

Facebook

Gemalto

Huawei

Irdeto

KDDI

LG

Motorola Mobility

Mstar

Semiconductor

NEC

Netflix

Nielsen

Panasonic

Qihoo 360

Qualcomm IC

Rakuten

SanDisk

Smart Communications

Sony

Square Enix

Telenor

Tencent

Verizon

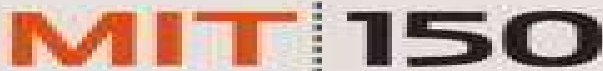
Zynga



# Role of W3C

## W3C #1 out of MIT 150

The Boston Globe



MAY 25, 2012 | BOSTON, CONN.

WORLD WIDE WEB CONSORTIUM: #1 OUT OF MIT150


**SOME WERE INVENTED AT MIT.** Others were simply inspired by time spent at MIT.

**WORLD WIDE WEB CONSORTIUM**

**1** The first sentence on the first World Wide Web site had to explain to visitors what exactly this thing was. It described the Web as a "wide-area hypertextual information retrieval initiative aiming to give universal access to a large universe of documents." Oh. Nobody could have imagined that would one day include classified war documents, videos of talking dogs, and the ability to stream movies and instant messages with friends. Tim Berners-Lee, the soft-spoken Briton who conceived the Web in 1989 while working at a particle physics lab in Geneva, came to MIT in 1994 to help create the World Wide Web Consortium, to help spread technical standards for building websites, browsers, and devices (like cellphones) that offer access to Web content. His greatest act of all was actually something he didn't do: patent his invention or extract licensing fees from those who used his ideas — decisions that helped the Web go global in a few years. "The thing spread largely because it didn't make World Wide Web Incorporated in 1994," Berners-Lee has said. When Queen Elizabeth II knighted Berners-Lee, he said it showed that great things could happen to ordinary people who took on projects that "happen to work out."

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# Web Trends Affecting Society

- Web everywhere
- Devices
  - **85%** - Percentage of handsets shipped globally in 2011 that included a web browser
  - Diversity of device types (eBooks, printers, tablets, televisions, automobiles)
- Apps with rich interactions. People want:
  - Apps in addition to documents
  - Rich media (video, animations, digital photography, music)
  - Location-based services
  - Social

# HTML5: Cornerstone of the Platform

*"The Web is going through a once-in-a-decade technology transition to HTML5 and CSS3"*  
- Gartner

Reach multiple devices

Desktop, mobile, tablet, TV

Powerful and modular

Documents, multimedia, interactivity

Multi-application

eBooks, user interfaces, games

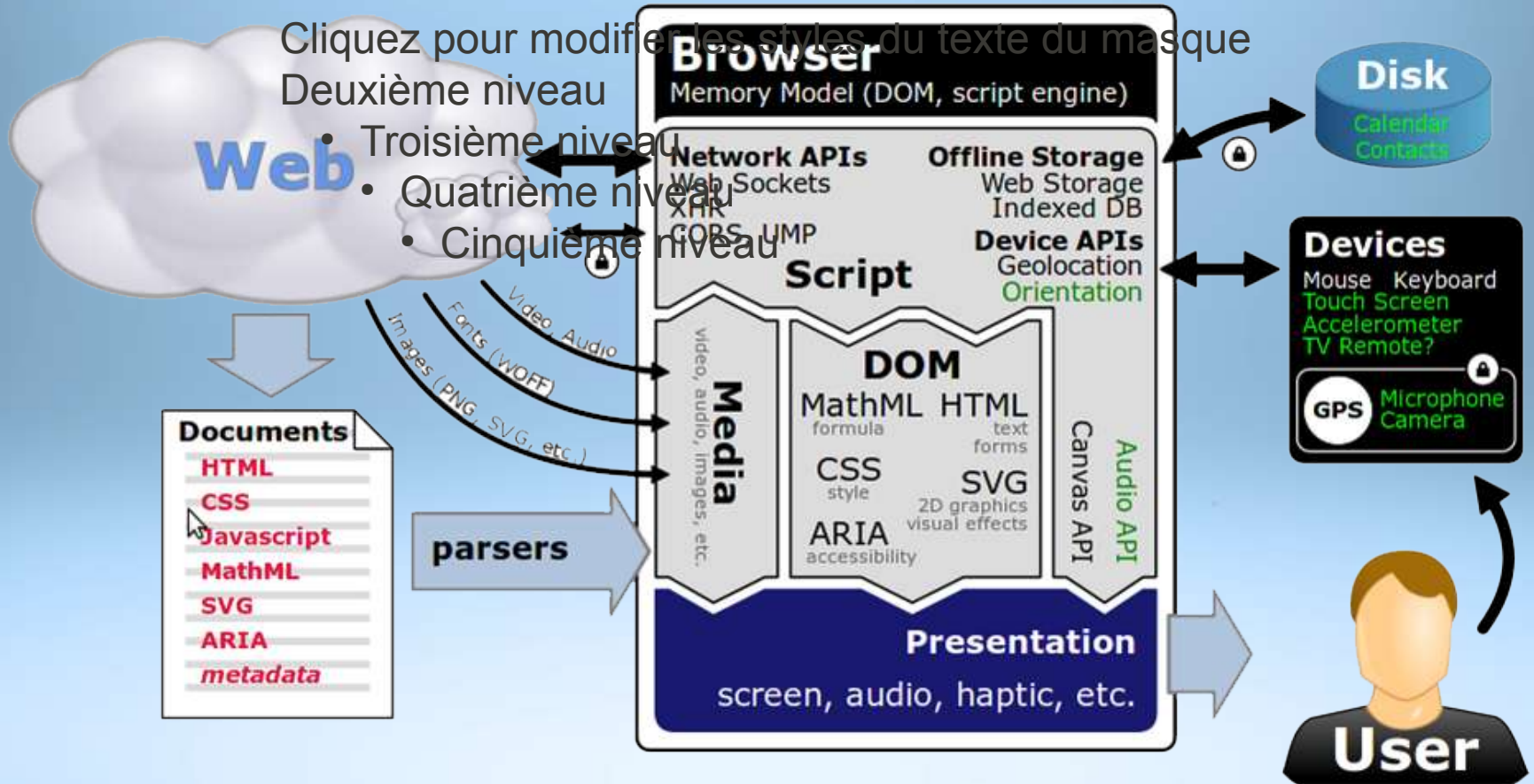
Standard scheduled 2014



# Standard Technologies

<b>Core</b>	Hypertext Markup Language (HTML)
<b>Video/Audio</b>	HTML, WebRTC, Web Audio
Styles	Cascading Style Sheets (CSS)
Fonts	Web Open Font Format (WOFF)
Protocols	Hypertext Transfer Protocol (HTTP)
Dynamic	Javascript (ES), Web Application Programming Interfaces (WebAPIs)
Graphics	Scalable Vector Graphics (SVG), 2D Canvas API
Offline access	WebAPIs: Web Storage, IndexedDB, File API
Device access	WebAPIs: Geolocation, Orientation, Multi-touch, etc.
Performance	WebAPIs: Navigation timing, Page visibility, Timing control

# Web Client 2012





# A Platform for Social Requirements

## Privacy

Tracking protection

## Security

Security story changes with distributed apps and logic on the client

## Identity

New crypto work starting

## Accessibility

By people with range of disabilities

## Multilingual

Support the world's languages



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# Rapidly Growing Support Cross-Device, Cross-Platform

- Major browsers  
IE9+, FF4+, Safari5+, Opera11+, Chrome10+, Blackberry Browser, Silk
- Strong support from diverse browser ecosystem
- Platforms  
iOS, Android, ChromeOS, BlackberryOS, Symbian, Windows Mobile 8
- Libraries  
Webkit (Google, Apple, Nokia, etc.), Gecko (Mozilla), Trident (Microsoft), Presto (Opera)

*“2.1 billion HTML5 Browsers on Mobile Devices by 2016” - ABI Research*



*“34% of top 100 sites using HTML5”*  
binvisions.com



# *“75% of Developers Using or Plan to Use HTML5” – Evans Data*





*“HTML5 is the #1 job trend”*  
.netmagazine, indeed.com



# “Jeff Jaffe in top 10 Influencers in 2011”

## Tom's Hardware

1. **Warren East**, CEO, ARM
2. **Steven Sinofsky**, President, Windows Division, Microsoft
3. Steve Jobs
4. **Mark Zuckerberg**, CEO, Facebook
5. **Sundar Pichai**, Senior Vice President, Chrome, Google
6. **Marc Pincus**, CEO, Zynga
7. **Jeff Bezos**, CEO, Amazon.com
8. **Burt Rutan**, Founder, Scaled Composites



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**Open Web Platform for Entertainment**

## Industry Use of Open Web Platform

# The nature of digital entertainment is Changing

- Past: Static TV viewing on television sets
- Now: Different forms of content
  - Entertainment continues to include television
  - It also includes non-premium video
  - It also includes games, social networking
  - These may stay separate or may be integrated
  - Sharing with family and friends
- New devices
  - Mobility means entertainment everywhere: home, travel, automobile
  - Nielsen report May 2012:  
Computers overtake TVs as preferred video platform of Internet users
  - New forms of interaction through new device capabilities (touch, voice, gesture) and combinations of capabilities (e.g., watching and shopping) - augmented reality
  - Multi-device means new experiences (e.g., second screen)
- New delivery models
  - Data, devices, and rich media mean new advertising opportunities
  - More distribution channels.
  - Everyone can create media

## Web Transports and Enhances TV

- User generated content commonplace on Internet
- Convergence has started, but where will it lead?
  - User content and premium content
  - How much integration of Web content into programming?
  - Internet, wireless, or conventional distribution
  - Device: TV, laptop, handheld
- Different stakeholders have different perspectives
  - Traditional broadcast
  - Telecoms
  - Content providers
  - New entrants (youtube, netflix, hulu, pandora, spotify, ...)
  - Device manufacturers

## Web and TV Interest Group Results

- Home networking / device discovery / multi-screen
  - Joint work on “Web Intents” going on in two Working Groups
- Adaptive streaming
  - Seeking generic solution for any streaming technology to work in the browser and allow fine-grain control.
- Content protection
  - Netflix, Google, Microsoft proposals to HTML Working Group: encrypted media extensions, media source extensions.
  - HTML Working Group and Web and TV IG coordinating.
- Profiles
  - Task force working to harmonize the development cycle of the different stakeholders (CE manufacturers, Content providers, Content Authors)



## Many W3C Groups in this Space

- HTML Working Group (HTML5 video)
- Web and TV Interest Group
- Games Community Group
- Web and Broadcasting Business Group
  - First face-to-face tomorrow.
- Web-based Signage Business Group
- Film Industry Community Group (new)
- Many other groups in other ways

# Social Networking and Gaming will Merge with TV



# Facebook

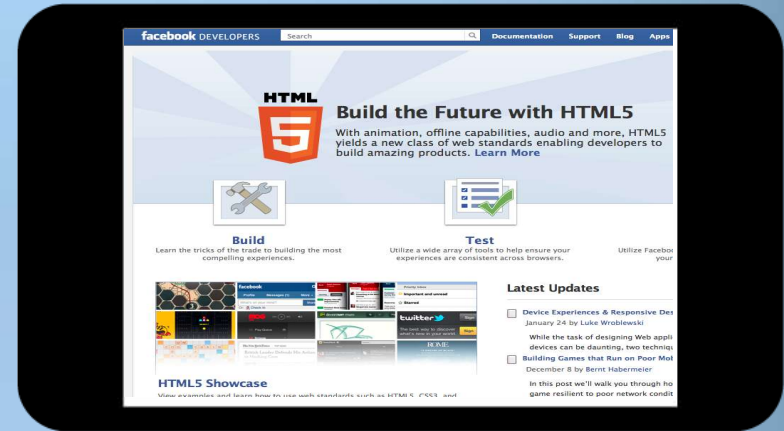
CTO Bret Taylor in July 2011

“Over the long term, people in Silicon Valley really view HTML5 as the future platform ...that’s where we’re putting a huge amount of our investment ...”

Facebook mobile apps built with HTML5 (including native apps)

Facebook promotes HTML5 for mobile and social apps

Nearly 50% of 800 million users access Facebook through mobile.



Drawing  
Video  
History API  
Geolocation



Web storage  
Web sockets  
CSS Transitions  
App Cache

# Core Mobile Web Platform Community Group

CTO Bret Taylor at MWC 2012:

If you click on your "friends" apps you download the app automatically.

Strong integration with social will greatly expand apps on the Web

Need guarantee that these apps will work on broad range of devices

## Facebook launches Core Mobile Web Platform Community Group

To accelerate the adoption of the Mobile Web as a compelling platform for the development of modern mobile web applications

### CG Activities

Identify features developers can depend on

Test suites

# Zynga

Zynga mission: social gaming for all

“The company ... has 60 million daily active users, who play Zynga games for more than 2 billion minutes every day.”

Open Web Platform advantages

No plugins (mobile users don't install)

Play quickly without install; one click away

Significant code reuse between desktop, mobile

User experience-driven live updates; bug fixes

Zynga leverages Facebook social network by using HTML5



Web sockets

Caching

CSS animations

CSS 2d transforms



Touch events

Orientation

HTML5 audio

Timing control

# The Open Web Platform is Transforming Industry

