THE WEB AND TV

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Chris Wilson, Google
Olivier Thereaux, BBC
Kazuyuki Ashimura, W3C

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THE WORLD WIDE WEB CONSORTIUM

• Lead Web to its Full Potential

• 330 Members (70 Full Members)

• Web ecosystem: users, developers, browsers, etc.

• 60 staff in US (MIT), France (ERCIM) and Japan (Keio)

TIM BERNERS-LEE
WEB INVENTOR AND W3C DIRECTOR
“Tim Berners-Lee, the soft-spoken Briton who invented 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 televisions) that offer access to Web content.”

_Boston Globe, 15 May 2011_
HOW DOES W3C WORK?

• Focus is to create standards that lead to commercial benefits

• W3C accepts inputs from all and provides outputs to all

• Each company brings their expertise, perspective

• Work organized into 4 “Domains” Interaction, UbiWeb, Accessibility, Technology and Society

• 50 Working Groups. Each has engineers from member companies with staff support

• Liaisons with many organizations: IETF, OMA, DLNA, ISO JTC1/SC 29/WG11 (MPEG), ITU-T Group 16 IPTV, Open IPTV Forum, SMPTE, more.

• W3C Recommendations under Royalty-Free Patent Policy

• W3C is ISO/JTC-1 PAS Submitter
OPEN WEB PLATFORM

A platform for innovation, consolidation, and cost efficiencies.

• Web pages are more beautiful, interactive and intelligent
• HTML5 provides cross-browser interoperability and all major browser vendors plan to support it
• Video is a first-class citizen
• Simplifies data integration
• Numerous devices
• Tools for social networking (privacy, security, identity)
• The most interoperable platform in the industry
A NEW WAVE of TRANSFORMATIONS

Just as the Web has transformed everything...

...It will transform everything
NEW MEMBERS IN LAST 18 MONTHS

LG  Comcast  Mstar
NEC  Facebook  Zynga
Sony  China Unicom  Netflix
KDDI  Motorola Mobility  Rakuten
Baidu

Devices  Telco  Social Networking
Storage  Games  On-line Marketplace
Semiconductors  Mobile  Consumer Electronics
Broadcasting
THE WEB TRANSPORTS AND ENHANCES TV

- Analog-to-digital conversion is nearly complete
- User generated content commonplace on Internet
- Convergence has started, but where will it take us?
  - 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, ...)
  - Device manufacturers
THREE KEY MESSAGES

1. Television and entertainment industries being transformed
   • How will the experience change?
   • What will consumers see differently?
     • Lower cost? Selection? Better viewing? Interactive?

2. Open Web Platform is the platform to support the transformation

3. After the Workshop, W3C Members will begin the process of designing what is needed to support convergence
   • What are the specific elements to be standardized first? A year later?
WHY THIS WORKSHOP?

- W3C Asked to Get Involved as Web and TV Converge
- Three Workshops in Three Regions because TV is huge but also regional:
  - Asia
  - Europe
  - US
- W3C Launched Web and TV Interest Group in February
  - Review progress: Web and TV Interest Group Report
  - Confirm right direction
  - Identify missing pieces
HIGHLIGHTS FOR THIS WORKSHOP

• Goal: Make Video/TV First Class Web Citizen
• Focus of Workshop III: Content Providers (session 1)
• Hot Topics on Agenda:
  • Multiscreen
  • Synchronized Metadata/Subtitles
  • DASH and codecs
  • Content protection and DRM
  • Home networking
  • Accessibility
KEY PARTICIPANTS

**BROADCASTERS**
BBC, ESPN, Fuji Television, HBO, MTV Networks, NBCUniversal, NHK, TBS Television, Tomo-Digi, Turner Broadcasting, WOWOW,...

**CONTENT CREATORS**
Disney, Movielabs, Netflix, Universal Pictures, Warner Bros,....

**AUTHORING TOOL VENDORS**
Adobe, ...

**INFRASTRUCTURE PROVIDERS**
Akamai, Canon, Cisco, Ericsson, Harmonic, Huawei, Intel, Motorola, MStar, NDS, Neulion, Neustar, Nokia, Oracle, Qualcomm, Sony Ericsson, ST Microelectronics, Texas Instruments, Zixi, ...

**BROWSER VENDORS**
ACCESS, Apple, Espial, Google, Microsoft, Mozilla, Opera, ...

**TELECOM OPERATORS**
AT&T, Deutsche Telekom, France Telecom, Rogers, SK Telecom, ...

**SET-TOP MANUFACTURERS**
EchoStar, ...

**CABLE OPERATORS**
CableLabs, Comcast, Cox Communications, Time Warner Cable, ...

**TV MANUFACTURERS**
LG, Technicolor, Panasonic, Samsung, Sony, Toshiba ...

**RESEARCHERS**
ETRI, Fraunhofer, ITRI, KAIST, Telecom ParisTech ...

The major players are in this room!
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CRITICAL WORKSHOP SUCCESS FACTORS

- Have open dialog
- Have technical dialog
- Get to know each other
- Seek consensus

Discussion will fuel Web and TV Interest Group Meeting that follows the Workshop.
W3C ROLE TODAY AND IN FUTURE

• We are here to help, and facilitate

• We want to get to know you – come see us at the breaks

• Our relationship (in some cases) starts here – but should continue for years to come

• Next big meeting: TPAC 2011
  • 31 Oct – 4 Nov in Santa Clara
  • Seeking breakout session topics!