Update on Web and TV in W3C

http://www.w3.org/2011/Talks/0721-webtv-harmonization-ka/

Kazuyuki Ashimura <ashimura@w3.org>

21 July 2011

W3C in a nutshell

- An industry consortium works for Web technology standardization
- Specifications & guidelines for Web interoperability
- Tim Berners-Lee is the Director.

W3C Hosts

3 research institutes collaboratively run W3C

US: MIT

Europe: ERCIM

Japan: Keio Univ.

Keio Univ. Shonan-Fujisawa Campus

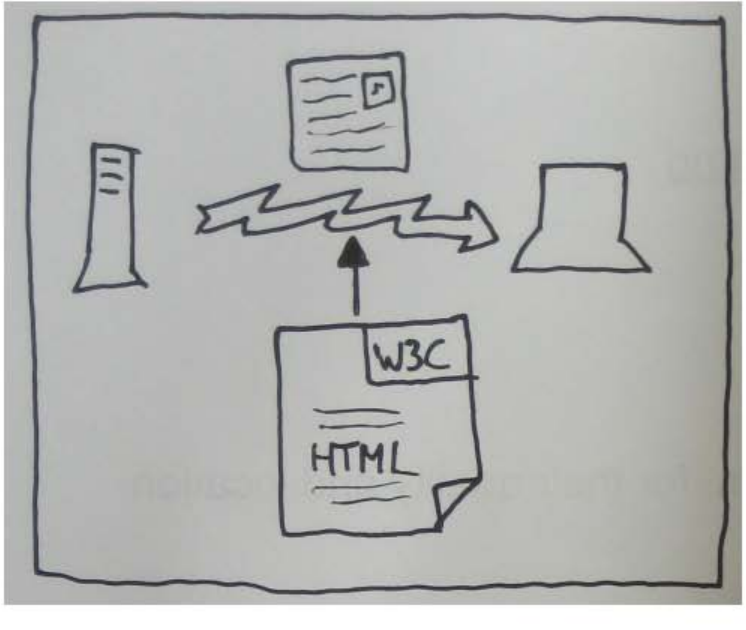
Graduate School building 4th floor τ45 room

- Please drop in on us :)
- Contact: keio-contact@w3.org

Characteristics of the Web

One Web!

- Open
- Global/Accessible
- Implementable



Web tecnology for whom?

Me, you and all of us...

Interoperable?

Input/Output of various devices

Multilingual?

Processing variety of languages

Multi-Modal?

Combination of various UI modalities

Accessible?

Needs of various users/cases

W3C Web and TV Interest Group

Launched in February, 2011

Charter: http://www.w3.org/2010/09/webTVIGcharter.html

DOs:

- Provide a forum for technical disucussion on smarter integration of Web and TV
- Review existing work including the relationship between Web services and TV services
- Identify requirements and potential solutions to ensure the Web will function well with TV

DO NOTs:

- Generate specifications for Web and TV integration
- Define profiles of existing Web standards for Web and TV

Four co-Chairs from various industries

Browser Vendor:

Giuseppe Pascale (Opera Software)

Device Manufacturer:

Hyeonjae Lee (LG)

Telecommunication:

Masahito Kawamori (NTT/ITU-T)

Broadcasting:

Yosuke Funahashi (Tomo-Digi)

Two Workshops so far

Tokyo in September, 2010 and Berlin in February, 2011

Topics:

- Web and CE devices (Second-Screen, DLNA, etc.)
- HTML5 extension (esp. Dynamic Adaptive Streaming on HTTP)
- Accessibility
- Content Protection
- Existing IPTV stds., e.g., HbbTV
- Binary data, e.g., EBML
- Metadata

Various Stakeholders, e.g.:

Broadcasters:

BBC, BSkyB, EBU, Fuji Television, NHK, Nippon Television, TBS, Tomo-Digi, TV Asahi, TV Tokyo, WOWOW

Browser Vendors:

ACCESS, Opera, Microsoft

Cable Operators & Video service providers:

CableLabs, Comcast, Netflix, Time Warner Cable

Consumer Electronics Manuafacturers:

Canon, LG, Mitsubishi, NEC, Panasonic, Philips, Samsung, Sony, Toshiba

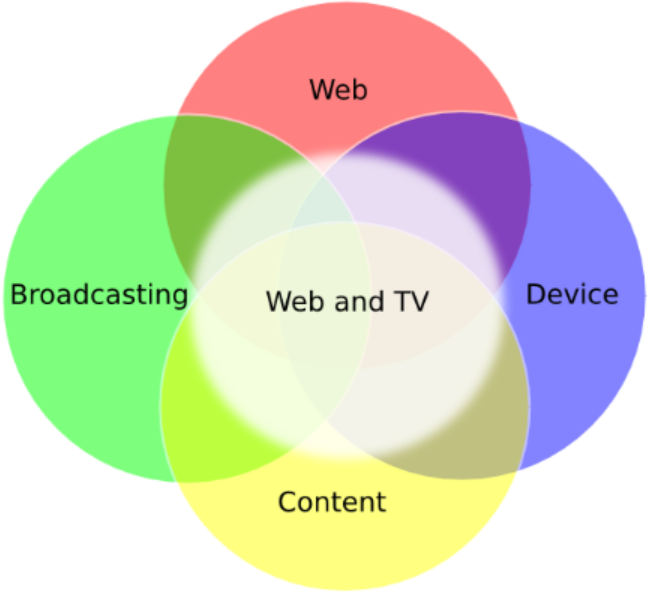
Telcos:

KDDI, KT, NTT, Orange, Slovak Telekom, T-Systems

And the Third Workshop in Hollywood! (Public event)

19-20 September, 2011:

- To continue the global conversation on key issues in Web and TV convergence
- Focus on the needs of content creators and distributors
- Call for Participation: http://www.w3.org/2011/09/webtv/



Also the group's f2f meeting (Member-only event)

21-22 September, 2011

- Collocated with the Third Web and TV Workshop
- Discuss the Interest Group Report
- Provide the requirements to W3C Working Groups
- And start to define new standards for Web and TV integration

Initial Draft Interest Group Report

http://www.w3.org/2011/webtv/wiki/Web_and_TV_Interest_Group_Report

- Initial requirements arising in the Web and TV Interest Group
- To be updated as new use cases and requirements emerge or mature

Topics:

- Second-Screen Scenario (harmonization of multiple devices)
- Metadata
- Content Protection
- Accessibility
- APIs for TV control

Two Task Forces for detailed discussion

- Clarify Use cases/Requirements for Web and TV integration
- Categorize how to standardize: New WGs? or Existing WGs?
- Provide input to W3C Working Groups

Home Networking Task Force

Objectives:

- Clarify requirements for user interfaces that facilitate access to services provided on traditional broadcast medium, local IP network and the Internet

Resources:

- Task Force Charter:

http://www.w3.org/2011/webtv/wiki/HNTF/Home_Network_TF_Charter

- Wiki:

http://www.w3.org/2011/webtv/wiki/HNTF

- Email Archive:

http://lists.w3.org/Archives/Public/public-web-and-tv/

Media Pipeline Task Force

Objectives:

- Clarify requirements for the HTML5 video, audio and media interfaces for Web and TV
- Propose APIs that meet those requirements

Resources:

- Task Force Charter:

http://www.w3.org/2011/webtv/wiki/MPTF/MPTF_Charter

- Wiki:

http://www.w3.org/2011/webtv/wiki/MPTF

- Email Archive:

http://lists.w3.org/Archives/Public/public-web-and-tv/

And some more expected Task Forces...

- Broadcasting service
- Accessibility

Next steps

- Create expected Task Forces, i.e., Broadcasting service and Accessibility
- Continue discussion on use cases and requirements for Web and TV integration
- Update the Interest Group Report by September 15
- Review the report during (1) the third Web and TV Workshop in Hollywood on September 19-20 and (2) the collocated group f2f meeting on September 21-22
- Clarify suggestions for the other W3C groups and the other standardization organizations on what/how to standardize

Collaboration with the other SDOs

- ITU-T is one of the most important players as the Web and TV Interest Group Charter says:

> ITU-T's work includes Multimedia Application Framework for IPTV services. For example, H.762: Lightweight interactive multimedia framework for IPTV services (LIME) gives a subset of HTML, CSS and ECMAScript for use in IPTV terminals.

- Note that as listed on the W3C liaisons page , Masahito Kawamori, one of the W3C Web and TV Interest Group co-Chairs, is the liaison contact for the ITU-T SG 16 (and IPTV-GSI).
- So we should be able to collaborate with each other and consider how to build even stronger harmonization between us.
- For example, it would make sense for Masahito to launch the Task Force within the W3C Web and TV Interest Group and moderate it, given both the ITU-T and W3C are interested in "Accessibility for IPTV".

In addition

It would be great

if your company/organization could join the W3C and participate in its Web standardization activity directly :)

Thanks!

If time permits...

Would talk about W3C activities related to "Web and TV"

- Device APIs: APIs for TV control
- Geolocation: Position detection
- HTML5: User interface for TV
- Internationalization: Global service
- Multimodal Interaction: Multimodal/Multi-device interaction
- Semantic Web: Metadata
- SVG: Vector Graphics for user interface
- SMIL/Timed Text: Synchronization of devices/contents
- Media Annotation/Media Fragment: Fragments of video contents
- Voice Browser: Speech interface
- Web Accessibility: Accessibility for Web and TV
- Web Applications: APIs for TV services

Especially two of them, HTML5 and Multimodal Interaction...

HTML5

HTML5 ≒ HTML + CSS + JS APIs

- Video & Audio
- Canvas
- Drag & Drop
- Web Storage
- Web Sockets
- Web Workers

Now it's a Last Call WD!

- Top page news: http://www.w3.org/News/2011#entry-9105
- HTML5 LCWD: http://www.w3.org/TR/2011/WD-html5-20110525/

HTML5 Demo

- Audio:

- HTML5 in general
- Drag & Drop

HTML5 Issues

Extensibility:

No Namespaces... (Are JavaScript APIs enough?)

Multi-devices:

Mice, Keyboards, Displays, Microphones, Tablets, etc. (How many?)

Profiling:

Are all the features really needed for any devices? (Modules or Widgets?)

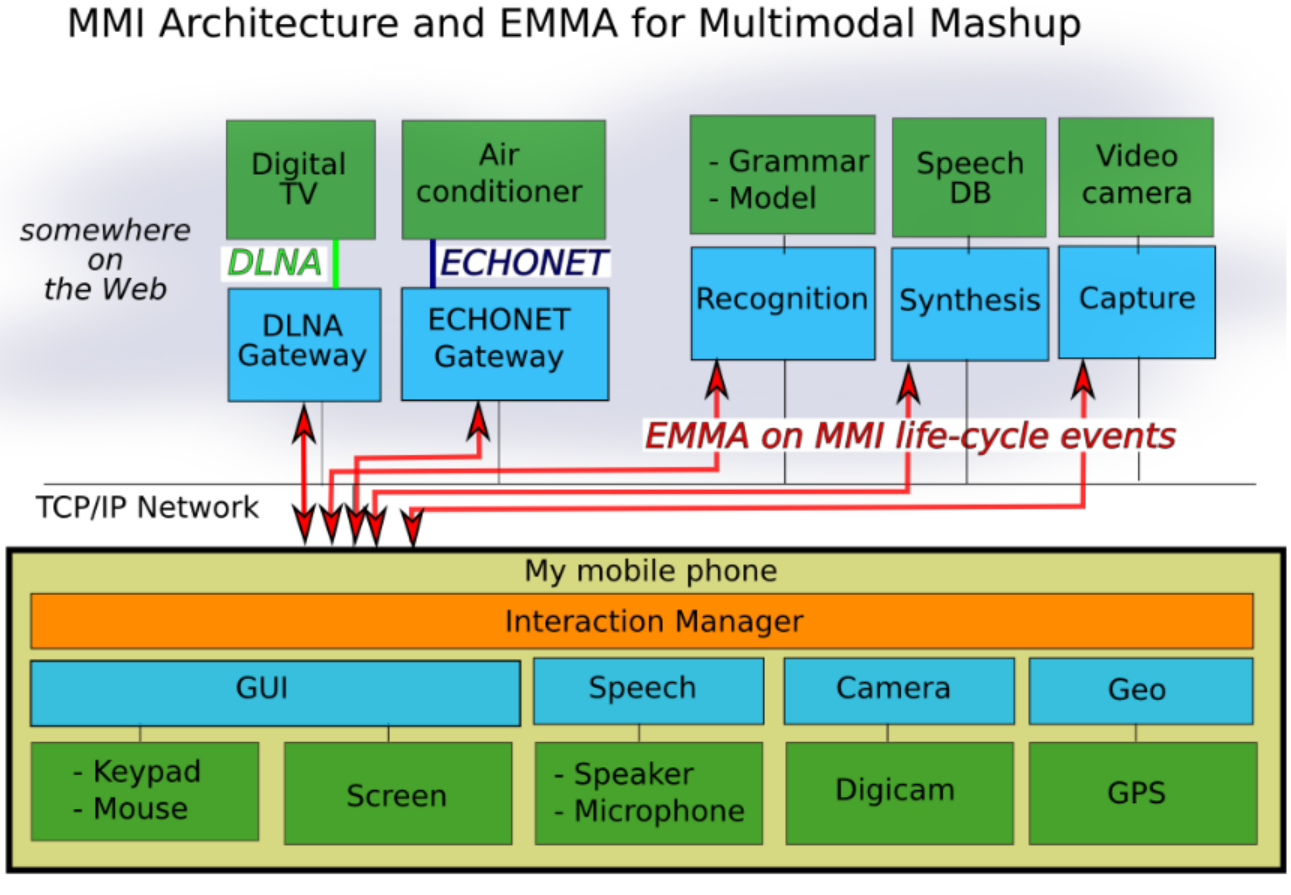
Multimodal Interaction

Ex. AT&T's speak4it

"Why type on that little keyboard, when you don't have to?"

"Say it, find it, just speak for it!"

Multimodal Mashup



Merits of Multimodal Interaction

- Integration of multiple modalities on multiple devices using a universal messaging mechanism (MMI Architecture) and a standard data format (EMMA)
- Linking Consumer Electronics devices at home, e.g., IPTV, and "Cloud Services"
- Re-use of existing hardware and software resources
- Defining application lifecycle directly using a set of "Lifecycle Events"

MMI Issue

Difficulty of implementation:

- Lack of implementation guidelines and authoring tools
- Created a dedicated Task Force for interoperability testing to clarify concrete implementation guidelines
- Also started to generate a library to integrate HTML5 browsers into the Multimodal Interaction Architecture
- Members include Deutsche Telekom, France Telecom, Openstream and NTT