

11.8 The Device Independent Web

Dr. Stephane Boyera, W3C

The Device Independent Web



The Device Independent Web

OUTLINE

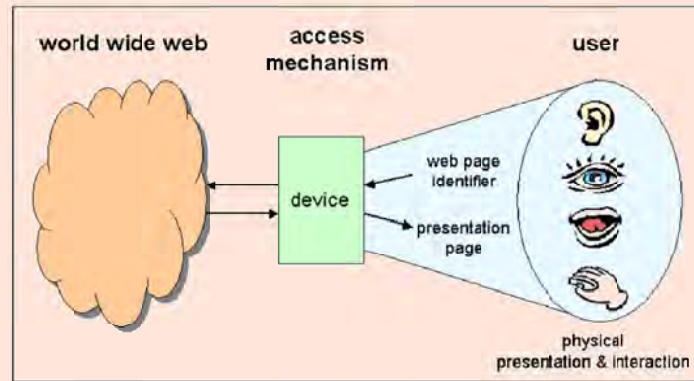
- User's dream
- Author's challenges and dream
- Device Independence Framework
- Standardized markup on devices
- New Authoring Techniques
- New Content Adaptation Techniques
- W3C Working Groups
- Conclusion

http://www.w3.org/2005/10/infra/MWT_42/all.htm (2 of 28) 07/10/2005 13:32:08

The Device Independent Web

The User's Dream

The web should be accessible by anyone, anywhere, at anytime, anyhow



<http://www.w3.org/2005/04/20/050420-08.html>

The Device Independent Web

Problems for Content Authors

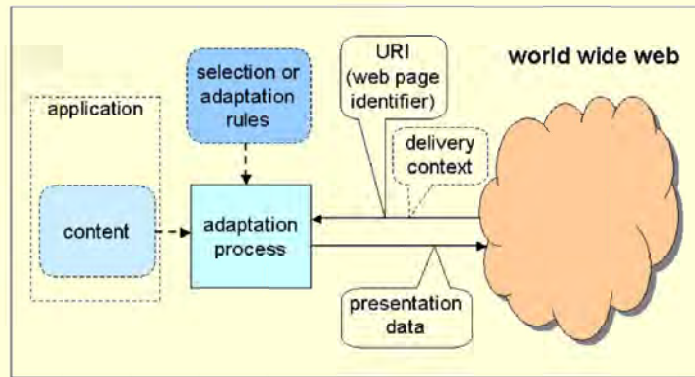


Source: RusselBeattie.com

The Device Independent Web

Author's Dream

Write once, Render everywhere : avoid duplication of information



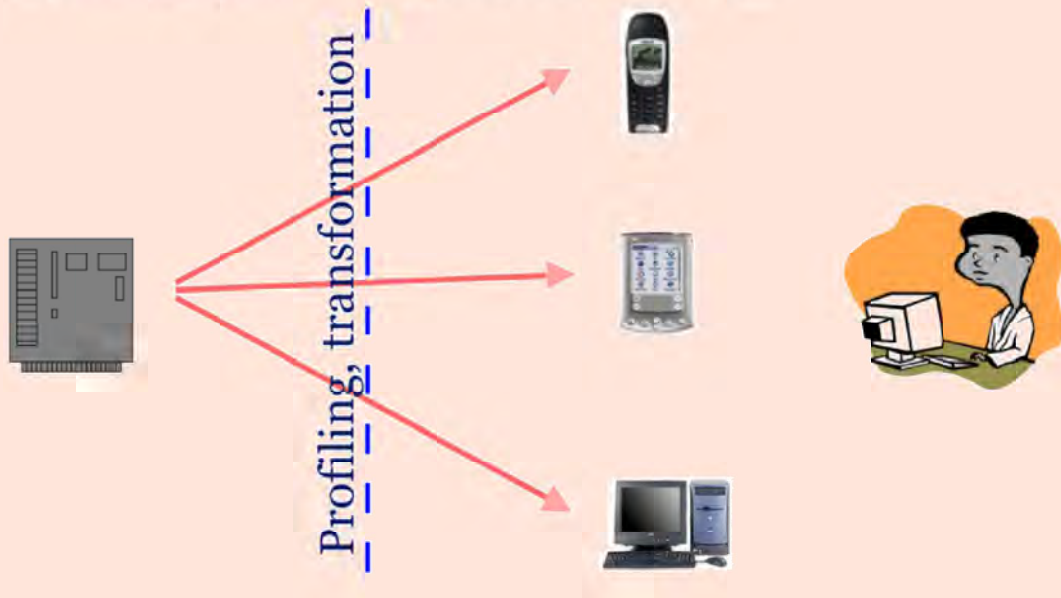
<http://www.w3.org/2004/10/presentations/02-10-06/02-10-06-11-02-06>

Challenges

- Taking Advantages of existing equipment
 - voice + gui (pda, phones, ...)
 - pen (tablet pc, pda, ...)
- One Web : Avoiding fragmentation of the Web
- Allowing everybody to access all ressources, independently of their disabilities, their equipment, their location, their environment, ...
 - Environment
 - Context
 - User Constraints and Preferences

What do you need to achieve Device Independence ?

1. Standardized markup for a wide range of devices
2. New authoring technologies for multi-channel/multi-device authoring
3. Authoring Guidelines and best practices
4. Improved content negotiation between UA and content servers to help adaptation



http://www.w3.org/2005/10/iso24471_02-11.htm (8 of 28/27/10/2005 13:32:08)

Markup Languages on User Agents

- What do we need ?
 - standardized markup languages that would run on a wide range of devices
- What do we have ? : modularization and profiling on W3C Specifications
 - XHTML / XHTML Basic / XHTML Print
 - SVG / SVG Mobile profiles / SVG Print
 - SMIL / SMIL Basic
 - CSS / CSS TV Profile / CSS Mobile Profile / CSS Print profile
 - XForms Basic
 - Smil 2.1
 - ...

Authoring Techniques

- What do authors need ?
 - reuse generic/cross devices informations/contents
 - rewrite platform-specific/dedicated parts
- What do we have ?
 - Since 1994: Separation of content and presentation using CSS
- What do we need now ?
 - content selection
 - multiple layout definition
 - Extended metadata for content adaptation
 - A profile with all needed modules for DI Authoring

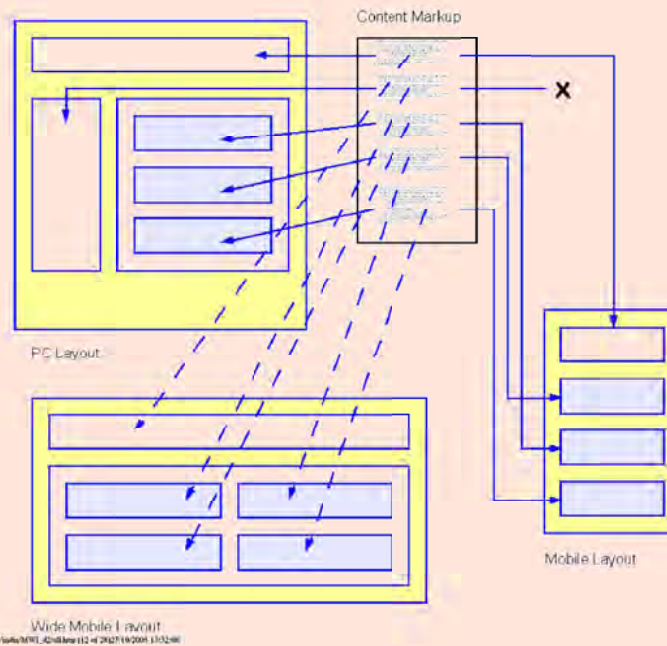
Content Selection

- Aim :
 - express alternate contents or ressources
 - express conditions for delivery
- Technology : DSelect 1.0


```
<sel:select>
  <sel:when expr="di-cssmq-width('px') > 200">
    <object sel:solid="pic42" src="bigimage"/>
  </sel:when>
  <sel:when expr="di-cssmq-color() > 4">
    <object sel:solid="pic42" src="small_colour_image"/>
  </sel:when>
  <sel:otherwise>
    <p sel:solid="pic42">Many people had to be evacuated.</p>
  </sel:otherwise>
</sel:select>
```
- Status: Last Call

Layout

- Aim : give authors a macroscopic layout language



CC/PP (2)

An instance : UAProf (OMA)

- Dedicated to convey phone characteristics
- A specific Vocabulary describing :
 - Hardware
 - Software
 - Network
 - Browser
 - WAP
 - Push
- A transport protocol : HTTP
 - with specific headers (x-wap-profile)
 - not providing inline the profile but a reference to it (URI)

The Device Independent Web

Metada for Content Adaptation

- Aim: provide a standardized way to describe content characteristics for adaptation
- Current Investigation
 - Defining the role of the content (and an ontology of roles)
 - copyright
 - navigation
 - ...
 - Capturing the relationship between pieces of content
 - explain
 - illustrate
 - alternative to
 - must accompany
- Status: Under investigation

The Device Independent Web

A Repository of Devices information

- A publicly available distributed repository to retrieve device information
- Work items :
 - A vocabulary (essential properties involved in content adaptation)
 - A profile identification technique
 - A trust model
 - A set of tools to ensure validity and accuracy of data

Authoring Guidelines and Best Practices

- Aim : Help the author
 - to select the most appropriate technologies to achieve their goals
 - to use above technologies to achieve DI
- Principles :
 - High level rules
 - Illustrative examples with standardized markups
- Evolving recommended technologies as they are available
 - Definition of a baseline device

Further Information

Contact for MWI : [Philipp Hoschka](#) and [Stéphane Boyera](#)

Contact for DI Activity : [Stéphane Boyera](#) and [Max Froumentin](#)

[MWI Home Page](#)

[Device Independence Activity Home Page](#)

[Device Description Working Group Home Page](#)

[Best Practice Working Group Home Page](#)

[MWI Sponsoring Information](#)

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Conclusion

Opportunities available now :

- Join W3C and :
 - Work in DIWG
 - Participate in MWI BPWG and MWI DDWG
- Become a MWI Sponsor to drive the work :
 - Defines priorities in the technical work done in MWI
 - Participate in the MWI marketing & outreach activity

W3C Working Groups

- Device Independence Working Group :
 - New authoring technologies: DSelect, Layout, Metadata for Content adaptation, language profile
 - technologies for capturing and accessing the Delivery Context : CC/PP, DCI
- Mobile Web Initiative - Best Practices Working Group
 - Authoring guidelines and Best practices
 - MobileOK
- Mobile Web Initiative - Device Description Working Group
 - Device Information Repository
- Mobile Web Initiative
 - Training
 - Marketing & Outreach

Delivery Context Interface

- Dedicated for client-side adaptation
- Managing Static and Dynamic Properties
- Accessing and Updating properties through a DOM interfaces