Requirements for a Web and TV environment

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Overview

- Context
- Requirements for a Web and TV environment
- Current implementations
- Standards
Context: home around the TV

Connected picture frame

Connected TV
  + printer
  + new sensors
  ...

Desktop computer

Laptop

Tablet

Mobile phone

PDA
R1: Apps to run on all devices

- Connected picture frame
- Desktop computer
- Laptop
- PDA
- Connected TV
- Tablet
- Mobile phone

Common ground: HTML + CSS + ES « Very close » to W3C Widgets ➔ OK
No complex network setup

⇒ Need a discovery and service protocol: UPnP/ DLNA – Bonjour – WS Discovery – SIP-based …
Ex: see mobile phone pictures on TV, then display on picture frame, then store on desktop.
R3: Services accessible from all devices

An EPG widget runs on TV only
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An EPG widget runs on TV only
An EPG service, built on communicating widgets, runs on any device
=> Distributed documents (pervasive, ubiquitous)
=> Service adaptation by distribution
R3: Services accessible from all devices

An EPG widget runs on TV only
An EPG service, built on communicating widgets, runs on any device
- Distributed documents (pervasive, ubiquitous)
- Service adaptation by distribution
R4: Services to move to best device at any time

Connected picture frame
Connected TV
Service starts on TV
Desktop computer
Laptop
Tablet
Mobile phone
PDA
R4: Services to move to best device at any time

Connected picture frame
Desktop computer
Laptop
Connected TV
Mobile phone
PDA
Tablet

Service starts on TV
Interactivity appears
R4: Services to move to best device at any time

Service starts on TV
Interactivity appears ➔ move to tablet
R4: Services to move to best device at any time

Service starts on TV
Interactivity appears ➔ move to tablet
Tablet gets preempted ➔ move to office
Keeping current service state
Why should it make any difference that one part of a service is hardware, native code, or widget?

- Services as cooperation of any type of part
  - Framework for native code behaving as a widget
  - Compile widget to native code
  - Native app « equivalent » of a widget
R6: No standard dependency

True for network and codecs, why not for other stds:
- Widgets in HTML or SVG or BIFS (for 3D)
- Discovery with UPnP or Bonjour or SIP or WS Discovery
- HTTP streaming or RTP
GPAC and WebKit players

HbbTV (xHTML+CSS+ES+huge OIPF API +DVB+MPEG TS+DSMCC+codecs), SVG, W3C Widgets (PC + Interface), UPnP/DLNA, MPEG-U, RTP/RTSP
• « Smaller » profiles
• « Common » Device APIs, including capabilities
• Document discovery, communication and migration:
  - Declarative
  - Not just widgets
Thank you for your attention

- Discussion...