Technologies for the Convergence of TV and the Web
- The Common Ground of NoTube and HbbTV -

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Outline

• Motivation
• NoTube in a nutshell
• HbbTV in a nutshell
• Similarities and differences
• Connecting HbbTV and NoTube
• Conclusion
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Motivation

- The Web: Potential for novel scenarios for the media industry
- Web and TV for broadcasters:
  - In the past: New distribution channels for live streaming and catch-up TV + additional content, e.g. backgrounds, detailed news
  - Now: HBB (Hybrid Broadcast Broadband) i.e. Connected TVs
- For NoTube: Standards to realise project’s scenarios
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NoTube in a Nutshell

- EU-FP7 Project (ICT)
- 02/2009 - 01/2012
- Focus: Semantic Web technologies for the convergence of Web and TV
NoTube Use Cases

**Personalised Semantic News**
- Personalised news based on semantic annotations
- Linking with related content
- Integration of social networks

**Personalised EPG with adaptive Advertising**
- Personalised EPG (PEPG)
- Adaptive advertising
- Ads insertion in movies

**TV and the Social Web**
- Linking of TV and the Social Web
- Social TV
- 2nd Screen Scenarios
NoTube Core Technologies

NoTube Beancounter

Enriched Programme Data

LinkedMBD

LUPedia

Social Networks

Programme Data (EPG…)

NEM Summit Sep 28th/29th 2011, Torino
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... is an open and business neutral technology platform that combines TV services delivered via broadcast with services delivered via broadband

... also enables access to Internet-only services for consumers using connected TVs and set-top boxes

... is based on existing standards and web technologies including OIPF (Open IPTV Forum), CEA, DVB and W3C
Where is HbbTV today?

- Devices from ~20 manufacturers (recently from Panasonic, Medion and Metz)
- STBs and IDTVs available ranging from €100 - €x000
- All DVB transmission modes (DVB-S/-C/-T) used for HbbTV, DVB-IP under development
- Consortium of 50+ members ([www.hbbtv.org](http://www.hbbtv.org))
- Current specification 1.1.1 from June 2010 ([http://hbbtv.org/pages/about_hbbtv/specification.php](http://hbbtv.org/pages/about_hbbtv/specification.php))
Who uses HbbTV?

- Germany pioneers introduction into market (~since IFA 2010) and provides HbbTV support via DVB-S, -C and -T
- France: wide market launch in 2011 (coordinated through French „HD-Forum“)
- Spain: Introduction in 2011 via a number of commercial partners
- Austria, Switzerland, Netherlands, Danmark, Nordic countries, Czech Republic show great interest and prepare first applications for test cases
- UK: Broadcaster focus on „YouView“-Plattform, but „Freesat“ integrates HbbTV
- HbbTV also meets interest outside Europe (Far East, Africa, Russia...)
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Similarities and Differences

• Similarities of NoTube and HbbTV:
  – Combining Web and TV for novel usage scenarios

• Main Difference:
  – NoTube aims at general solutions across all electronic media services
  – HbbTV Apps are mostly broadcast-centric and programme-related (but broadcast-independent applications also possible)

• Can NoTube’s Use Cases be realised with HbbTV?
Personalised News in HbbTV

- HbbTV allows personalisation
  - Cookies can store IDs etc.
  - Additional contents can come from the Web
- No collection of user data on the terminal level, user preferences can only be shared among cooperating service providers
- Entry point for broadcast related applications: linear broadcast programme
- Broadcast-independent apps only with coop. broadcasters
- PVR does not allow fine-grained playback of recorded news items
Personalised EPG and Advertising in HbbTV

• HbbTV allows personalisation using cookies, but only for one programme or cooperating broadcasters

• Individual personal profiles require additional pairing of device and user profiles through IDs

• Personalised advertising is possible, e.g. in commercial breaks, but limited to available profile information

• Cross-service TV guides are possible with broadcast-independent apps, but app terminates after tuning to non-cooperating broadcaster
TV and the Social Web in HbbTV

- HbbTV allows direct linking to programme-related web portals
- Broadcast-independent applications can be used for accessing existing communities like Facebook, Twitter etc., but access to broadcast services is limited
- Integration of social networks can be realised via third-party gateways
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Connecting HbbTV and NoTube

• HbbTV in NoTube
  – Extend NoTube platform to be HbbTV compliant
  – Exploitation of HbbTV services (free-to-air, but in principle restricted to HbbTV devices)

• NoTube in HbbTV
  – Cross-service constraints apply, but NoTube could provide underlying service technologies for (cooperating) broadcasters
Conclusion

• NoTube and HbbTV share similar objectives
• NoTube scenarios can in principle be realised within an HbbTV environment
• Limitations apply: no cross-service applications of non-cooperating service providers
• Outlook: NoTube project results will be introduced to HbbTV Spec process!
More information?

• Visit us here at the booths of IRT and RAI

• ...and visit us online:
  
  www.notube.tv

  www.HbbTV.org

  www.irt.de
Thank you...

...for your attention!

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