Changing the TV-experience through HbbTV - now and in future

1st Winter School on Multimedia Processing and Applications
Dublin, Ireland, January 7, 2014

Bettina Heidkamp-Tchegloff
rbb Innovation Projects, RBB, Germany
Agenda

• Introducing rbb and rbb Innovation Projects
• HbbTV – What’s that? Where? What for?
• Our innovations in HbbTV: From „Science Slam“ to „Subtitles according to your taste“ to „Interactive TV News“
• Looking to the Future of the Hybrid World: FP7 Project HBB-NEXT
RBB Rundfunk Berlin-Brandenburg - Basics

• Public service broadcaster for Berlin and Brandenburg
  - Local catchment area: 30,000 KM² / Population: 6 million

• One TV station, six radio channels, wide range of multimedia services, online, videotext & mobile

• Member of ARD (Europe‘s largest broadcasting network)

• Hosting ARD Digital Play Out Center/Interactive Services
rbb Innovation Projects

• Small team of nine in RBB’s Department “Production and Operation”
• Dedicated to conceiving, testing and implementing novel interactive TV services in the context of European projects (FP7, FI-PPP, eContentPlus, ICT-PSP, ESA Artes)
• Cooperation inhouse with different editorial departments: ARD Digital Play Out Center, rbb multimedia department, news department and others

Current topics:

• HbbTV and accessibility/Interactive TV: Coordinator of FP7 project HBB-NEXT, WP leader in ICT-PSP –project HBB4ALL
• HbbTV and Second Screen: WP leader in PPP-project FIContent2
• HbbTV and Social Media: WP Leader in ICT-PSP Project TVRing
• HbbTV and Interactive TV News: Partner in FP7 project LinkedTV
HbbTV – What’s that?
The Idea

**HbbTV** = Hybrid Broadcast Broadband Television („Smart TV“)

- Pan-European standard for
  - Integration of broadcast and web content
  - Web-like applications for the TV Screen
- Aim: Harmonise (linear) broadcast and (non-linear) broadband delivery of content and services to consumers who use connected TVs / set-top boxes
- Open and business neutral technology platform for hybrid entertainment services based on CE-HTML, DVB, W3C and OIPF
- Major European business initiative
The Consortium

- Founding members: broadcasters and CE companies
- Currently about 70 members
- Common goal:
  - Create services that explore the capabilities of today's CE devices and address changed consumer demands and habits
  - Provide an alternative to proprietary technologies
  - Deliver an open platform for broadcasters to deliver value-added on-demand services to the end customer.
The Consortium – Some members

- Device manufacturers
- Broadcast industry
- Telecommunication industry
- Developers/Programmers
HbbTV – Where?
HbbTV – What for?
Making TV interactive – Consumer Benefits

- Serious return channel option for the first time ever
- Large variety of value-added services, modern look and feel
- Novel services:
  - Catch-up TV: video on demand (VoD) – time independent TV
  - Programme-related services like EPGs and added info
  - Customisation features
  - Voting options for interactive shows (quiz, talk, news)
  - Interactive and programme-related advertising
- Interactive TV free of charge
- Open, horizontal and non discriminative – it's a standard
How I get there: The Red Button Principle
Jump from one service to the next: The Launcher Bar
Good old teletext in attractive new clothes
Missed a programme? Video on Demand PC, Tablet or TV
EPG – Second Screen helps first screen
How its done by whom – example RBB
Our Innovations in HbbTV
Interactive TV Show

• First interactive programme-related service via HbbTV live on air at ARD
• TV-live show „Science Slam“ 31. Mai 2013, 22:00
• Getting additional info and vote for your favourite via remote control
• DTV regional, DVB-S nationwide
• Very successful: 16 percent of all online votes via the TV!
• Programme makers RBB, IRT, innovation projects, ARD POC
Interactive TV Show – Red Button with Add On
Interactive TV Show - Launch Toolbar Widget
Interactive TV Show – Candidate Information and Countdown

WHO IS WHO
Select candidate with arrow keys and open the card of the candidate by pressing [OK]

Nuria Cerda Esteban
for rbb-online

Victoria Kau
for Fritz

Stephan Uhlich
for Antenne Brandenburg

Rita Vallentin
for radioeins

Raul Rojas
for kulturradio

VOTE HERE SOON!
Interactive TV Show – Candidate Information, Countdown Complete
Interactive TV Show – Voting Dialog
„Wissenschaft bühnenreif - Der rbb Science Slam“
Interaktive Sendungsbegleitung via HbbTV
Putting Second Screen on Stage - rbbtext HD on Second Screen
Putting in the Second Screen

- rbbtext (HbbTV) can be used in sync on two devices (TV-Tablet/Smartph.):
  - Simultaneously on both devices: Tab is „extended remote control“, easy navigation, others see what you do on TV screen
  - Only on Second Device: TV programme undisturbed while text is used on Second Device
  - Direct access to weblinks in TV Text Service via Second Screen
The connection

• Done once: User scans in QR-Code on TV via Tablet >> QR-Code links to server = Devices are connected.
• IDs of connected devices are coupled in database: 1st clear which devices belong together.
• Generic framework – more than one service ahead
• Pilot tests with 40 users from this month
Subtitles according to your needs

- Users asked us introduce something like that!
- In addition to teletext and DVB-subtitles
HbbTV Subtitles: On/off + Context-Sensitive Help

- Untertitel an
- Untertitel aus

HbbTV Subtitles: Font Size

Stellen Sie die gewünschte Schriftgröße ein. Mit [OK] bestätigen Sie die Auswahl.

- [ ] Sehr große Schrift
- [ ] Große Schrift
- [x] Mittlere Schrift
- [ ] Kleine Schrift

Funktion mit Zahlen oder Farblisten auf ihrer Fernbedienung aufrufen:

0 Startleiste   1 Hilfe einblenden   2 Bedienung, Datenschutz, Impressum   3 Ausblenden

So sehen Ihre Untertitel aus.
In zwei Zeilen.
HbbTV Subtitles: Background

So sehen Ihre Untertitel aus.
In zwei Zeilen.
The Signer too?

- Possible: further services, e.g. sign language interpreter on demand

- HBB4ALL Project: Improved accessibility on TV through HbbTV just started
Interactive News Service
LinkedNews Service - Motivation

• News, information, any news topic triggers more questions
  • If you are curious enough to watch a news or information programme, you will be curious enough to have new questions after learning/hearing something new
• Modern users – in our case TV viewers – will consult their smartphones or tablets to find answers
• We want to offer relevant answers to the questions we trigger directly related to the TV programme
• Enrichments, i.e. additional information
The LinkedNews Service - the Scenario

While LinkedNews are on the TV Screen (HbbTV-Application), additional information is available on the Second Screen (Tablet).
The LinkedNews Service - What happens on the TV Screen?

Whenever a new entity (person, place, topic) appears on the TV screen for which we offer additional information, there is a small notification on the TV screen.
At the same moment a thumbnail appears on the Second Screen which refers to additional information. Double-click on such an item to find out more about Tim Raue and his restaurant, etc.
LinkedNews Service - Video
LinkedNews Service – Media Fragments

• Currently the LinkedNews Service refers to relevant sources on the web by linking to the complete source

• The Media Fragments technology will enable us to address the relevant fragment of such a source, e.g. a specific 3 minute-interview in a long talk show, etc.
  • Analysis mechanisms will identify fragments and their content
  • Enrichment tools will recommend which fragments are relevant and
  • The LinkedTV Player will refer to these fragments
Looking to the future of the hybrid world: FP7 project HBB-NEXT
HBB-NEXT in a Nutshell

- Advanced services in the hybrid world
- Contribute to successful uptake of HbbTV
- Prototype with novel applications and functionalities
- Duration: 1.10.2011 to 31.3.2014 (30 months)
HBB-NEXT: Applications

- TV Service Customization
  - bundles access to a range of customizable services
- Application Store
  - multi-modal authentication with voice and face recognition
- Interactive TV Show
  - Vote on TV
- Group EPG
  - Tailored content recommendations
- Gesture Control
- 3D Video Hybrid Delivery
- Immersive Second Screen Synchronisation
Meet us in Munich at our Final Workshop!

• Exploring the Future of Connected TV
• Novel applications and innovative research
• Institut für Rundfunktechnik, Munich, 27/02/2014
• Presentations, Demos, Discussions
Thank you!

Bettina Heidkamp-Tchegloff
Produktions- & Betriebsdirektion / Innovationsprojekte
Tel. +49 331 97993 50040
Fax. +49 331 97993 50049
bettina.heidkamp@rbb-online.de
www.rbb-online.de/innovationsprojekte
www.hbb-next.eu