

Accessibility services based on HbbTV

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HbbTV within ARD

ARD provides a rich number of HbbTV services:

- started 2009 with 6 HbbTV apps
- currently some 40 different (at least differently branded) HbbTV apps
- by far, HbbTV is the technology with the highest reach on big screens for ARD services



Subtitle rendering configuration

(Regular operation)

ARD offers subtitling via HbbTV rendering

- subtitles are transmitted via DSM-CC stream events
- configuration options are offered for font size, background and position



Das Erste 21:00 The Tale 22:15 Tagesthemen

Die Schrift der Untertitel wird in der Standardgröße dargestellt.

Schriftgröße	Position	Hintergrund
<input checked="" type="radio"/> Standard	<input type="radio"/> Oben im TV-Bild	<input type="radio"/> Schwarzer Kasten
<input type="radio"/> Groß	<input checked="" type="radio"/> Unten im TV-Bild	<input checked="" type="radio"/> Umrandung der Schrift
<input type="radio"/> Sehr groß		<input type="radio"/> Rahmen um TV-Bild

Untertitel einblenden, wenn angeboten Vorschau anzeigen

< Zurück Ansicht Untertitel Audiokanal Barrierefreie Sendungen Info Gebärdensprache

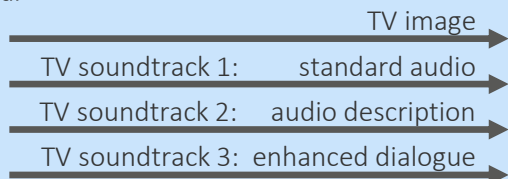
Easy access to enhanced dialogue broadcast audio

(Regular operation)

Enhanced dialogue audio versions via broadcast are not easily accessible on some TV sets.

ARD will add to the settings menu of the HbbTV launcher bar an element that allows to select this audio via a change of the audio track triggered by the HbbTV app.

Broadcast-Signal



Signer service

(Regular operation)



ARD provides a signer service:

- as IP stream started via HbbTV
- combined LinearTV and signer in one stream
- regularly for events of specific public value
- easy access via „Red Button“



EPG for accessibility services

(Regular operation)



accessibility setting menu links to filtered EPG preview



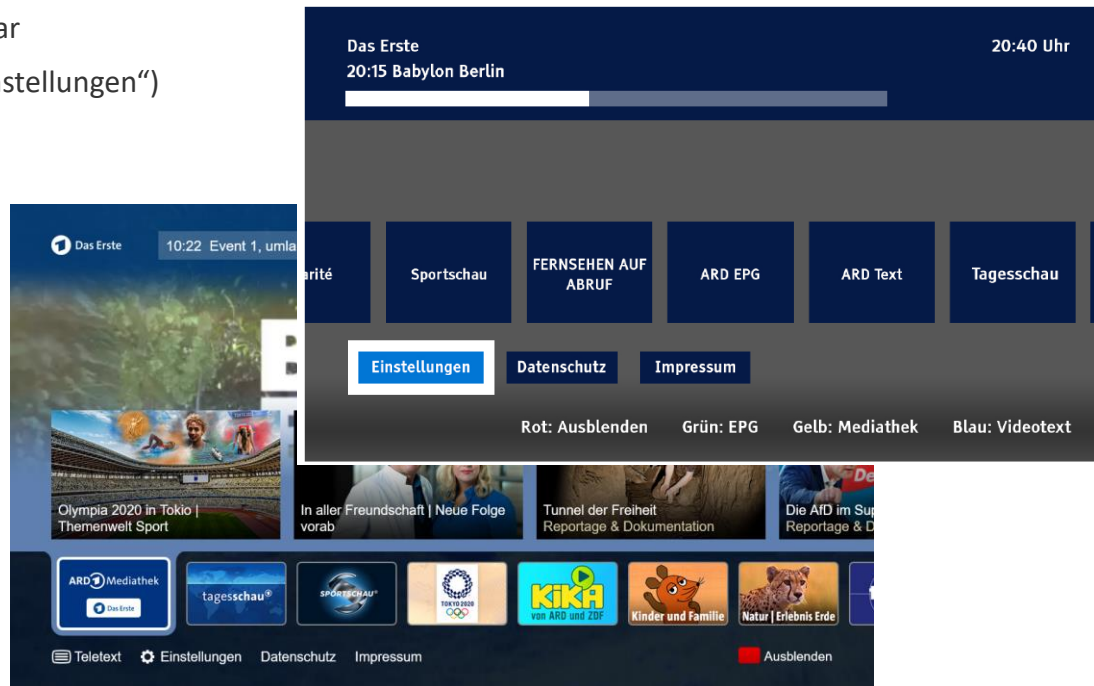
Easily readable version of launcher bar

(Regular operation)



The easily readable version of the launcher bar

- can be reached via the settings menu („Einstellungen“)
- uses a bigger font
- provides high contrast UI
- shows focus very clearly

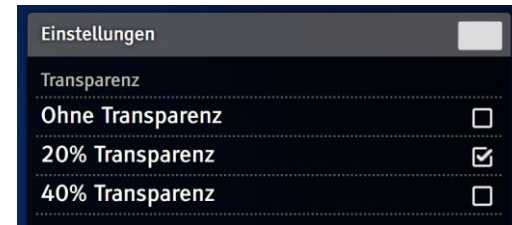


Configuration options for HbbTV teletext

(Regular operation)

ARD rendering options for their HbbTV Teletext services

- colour schema, font size and transparency can be configured



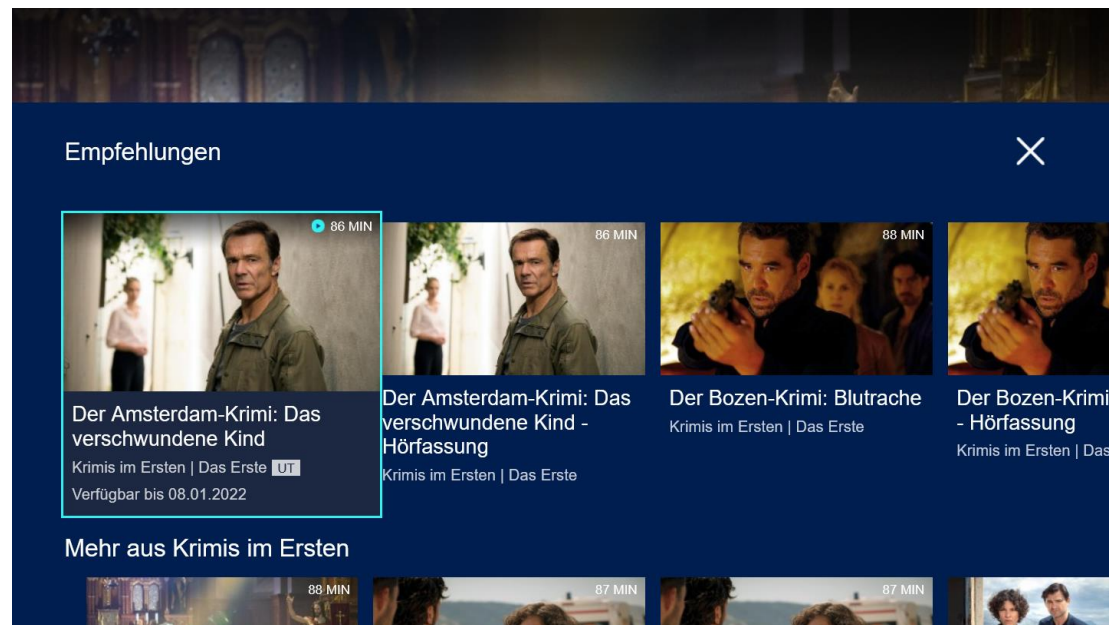
Audio description in the catch-up-tv application

(Regular operation)



ARD provides audio description in the catch-up-tv app:

- via dedicated video versions by now
- GUI will be improved to have one preview image only plus configuration options



Enhanced dialogue & audio description via IP

(Pilot operation)



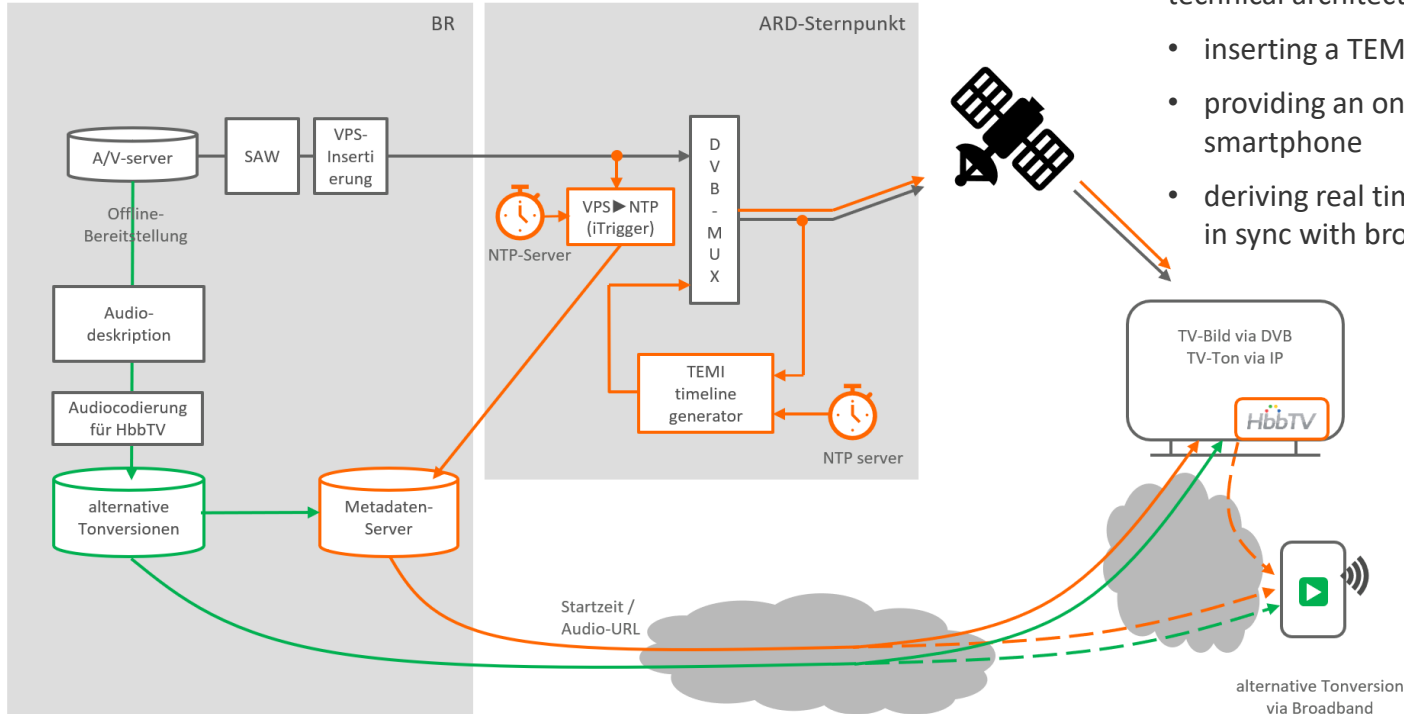
ARD broadcaster BR has launched pilot services delivering in the broadcast context:

- enhanced dialogue audio versions via IP to be played on the TV in sync with the broadcast video
- audio description to be played via a mobile app in sync with the broadcast video for individual use



Enhanced dialogue & audio description via IP

(Pilot operation)



technical architecture for this project

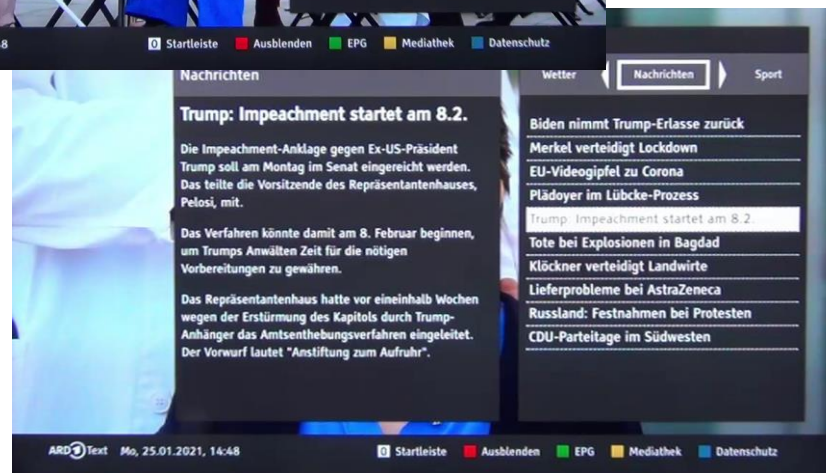
- inserting a TEMI timeline into the DVB mux
- providing an on demand audio for TV and/or smartphone
- deriving real time trigger info to play IP audio in sync with broadcast video

Voice output

(Prototype)

Prototype of the ARD HbbTV teletext service

- allowing full navigation via voice feedback
- top menu as well as headlines are spoken while page is navigated
- voice output reacts very fast on navigation steps
- full news message is spoken when selected
- based on web audio API



EBU work on accessibility services using HbbTV



The TV Platforms group* has developed the document TR 065

**EBU GUIDELINES FOR DELIVERING
ACCESSIBILITY SERVICES USING HBBTV**
A guide to current practice and future possibilities

Purpose:

help organisations who are considering using HbbTV to provide accessibility services

It offers suggestions for how HbbTV can be used currently to provide the main media accessibility services for those with sensory differences

EBU work on accessibility services using HbbTV



The EBU guidelines for delivering accessibility services using HbbTV focus on

- Optional subtitles (closed captions)
- sign language interpretation (SLI)
- audio description (AD)
- clean audio (sound channel with enhanced sound for the components necessary to follow the content)

The report gives background on accessibility features and related user experience, and describes implementation options based on the currently available tools of the HbbTV toolbox.

Deciding on the optimum system for delivering subtitles can be relatively complex, and a 'decision tree' is suggested in the report that may help.

<https://tech.ebu.ch/docs/techreports/tr065.pdf>

2024 plans at ARD:

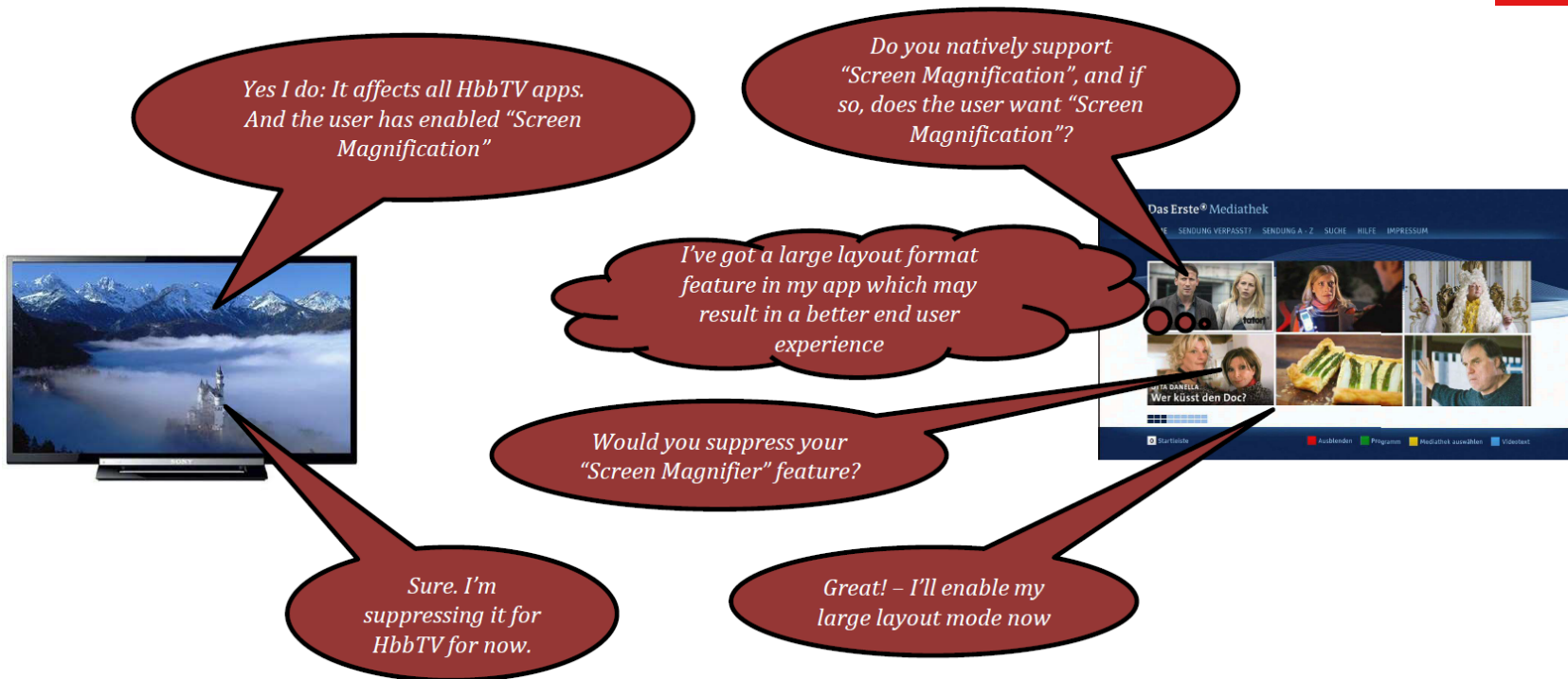
product implementation:

- tying accessibility settings closer to user account to have settings
 - in sync across HbbTV applications
 - in sync across devices

proof of concept

- for HbbTV 2.0.4 features
 - accessibility framework
 - screen reader
 - voice assistants
- testing integration with overall user journey
- technical testing with manufacturers

HbbTV 2.0.4 Accessibility Framework





Thank you for your attention!

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