

HbbTV Local TV Portal



The German DVB-I Project

HbbTV Local TV Portal - 10 Years in the Service of Local TV Stations The German DVB-I Project

Prague, 10. November 2022

Rainer Biehn

Services

- ▶ TV-Playout
- ▶ HbbTV Local TV Portal
- ▶ FM Network
- ▶ Measurements
- ▶ Consulting & Studies

Products

- ▶ HbbTV Rating Monitor
- ▶ HbbTV Catch-up TV
- ▶ Accessibility Apps
- ▶ TPEG ON AIR
- ▶ TPEG Editor
- ▶ TPEG Analyser

Projects

- ▶ Digital & Hybrid Radio
- ▶ National & international research projects
- ▶ DVB-I
- ▶ 5G Media Initiative

Events

- ▶ Workshops
- ▶ Trainings

Founded **1994** Located in **Munich**

Shareholder



90%



10%



bmt at a glance

Bayerische Medien Technik GmbH is the competence centre for realising projects in the field of digital broadcasting.



bmt-online.de

<https://de.linkedin.com/company/bayerische-medien-technik>

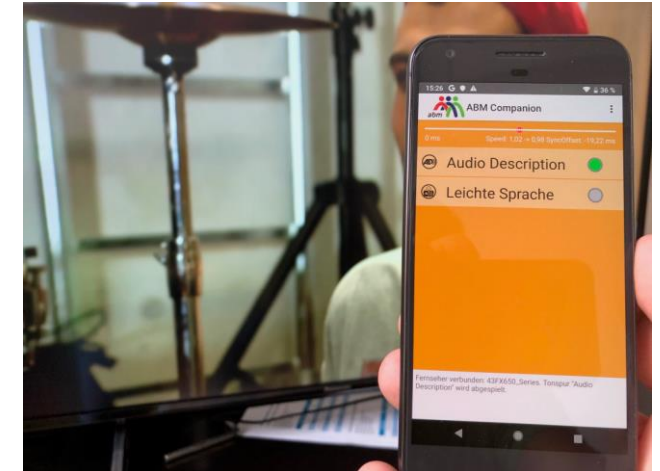
<https://twitter.com/BayMeTech>

<https://www.youtube.com/@bmt-online>

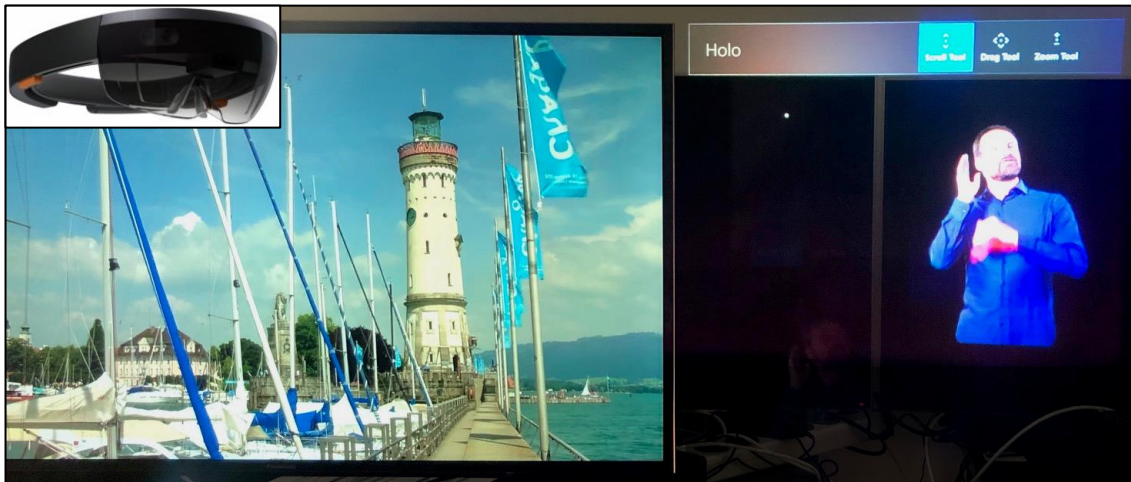


About bmt

- Winner of 2 HbbTV Awards for inclusive application in 2019
 - Best technology innovation in an HbbTV product or service
 - Best Multiscreen HbbTV Experience



Additional audio services on 2nd screen



Sign language interpreter in HoloLens

HbbTV Local TV Portal

Goal

- Easy findability and
- permanent availability of
- local TV content even
- without satellite distribution.



Coverage

SAT



DVB-T2 HD / freenet TV connect



Previous versions

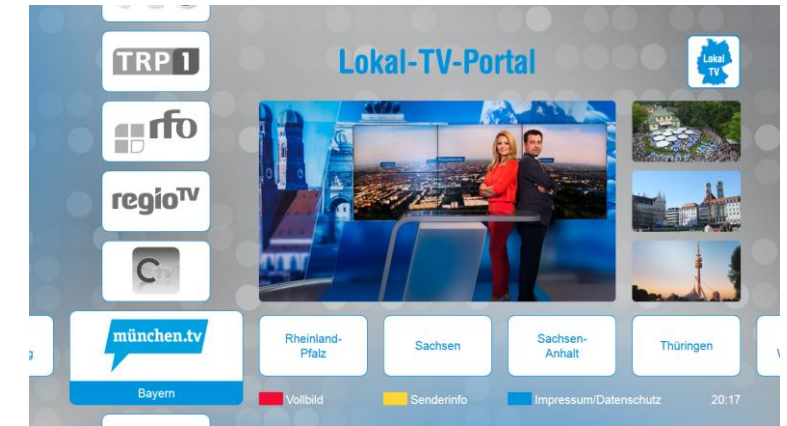
2012



2014



2017



2022



regio
Schwaben



niederbayern
Passau

niederbayern
Landshut

niederbayern
Deggendorf - Straubing




-
emberg

 Bayern

 FRANKEN
FERNSEHEN



 Berlin

 Brandenburg

 Rheinland-Pfalz

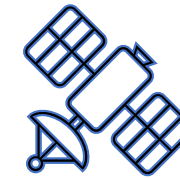
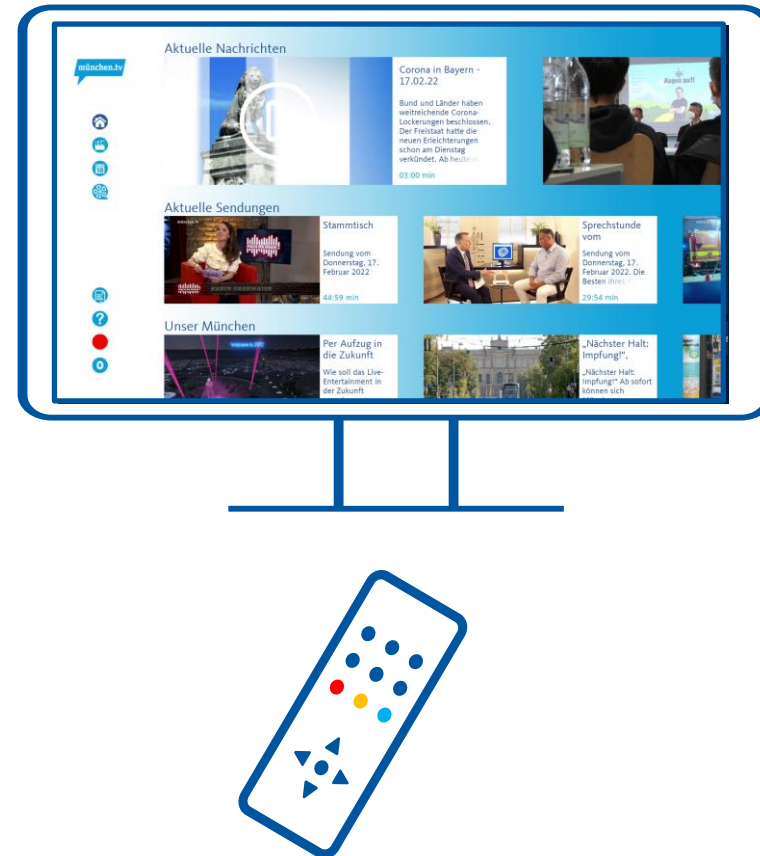
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How it works

Content in HbbTV-App:

- IP-Stream (MPEG TS, DASH)
- HbbTV media library
- Usage of Sat signal if available
- Programme information
- Imprint/Privacy statement



DVB-S2 Still image channel

Transponder 23

ASTRA 1L, 19,2°Ost, 11552 MHz

Sendername: Lokal-TV-Portal HD

DVB-T2 HD + Internet:

In programme listing

Sendername: Lokal-TV (connect)

A total of over 70 programmes

- Bavaria
- Baden-Württemberg
- Berlin
- Brandenburg
- Saxony
- Saxony-Anhalt
- Thuringia
- Rhineland-Palatinate



Programme providers

Baden-Württemberg



Bayern



Berlin



Brandenburg



Rheinland-Pfalz



Sachsen



Sachsen-Anhalt

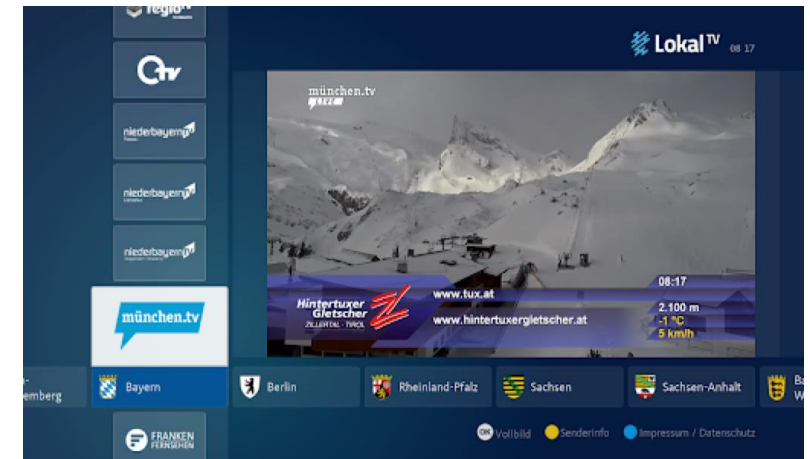


Thüringen



Features

- HbbTV-/DASH-Streaming
- Use the left/right keys to select the desired federal state; use the up/down keys to select the programme you are looking for. Press < OK > or the < red > key to display the full screen of the TV signal.
- Restart with last selected programme
- The < yellow > key allows you to display further information on the selected TV programme as well as its content and broadcast area.



Further Platforms



Samsung SmartTV with Smart Hub

TIZEN™

webOS

androidtv

firetv

Further information: www.lokal-tv-portal.de



The image shows the LokalTV portal website and a television displaying the portal's interface. The website features a navigation bar with the LokalTV logo and links to 'DAS PORTAL', 'PROGRAMME', 'EMPFANG', 'NEWS', and 'KONTAKT'. The background of the website is a scenic view of a city. The television screen displays the portal's interface, including a sidebar with logos for 'OKTV', 'OK', 'naheTV', and 'OK54', a central video player showing a man speaking at a podium, and a bottom bar with regional logos for 'Rheinland-Pfalz', 'Sachsen', 'Sachsen-Anhalt', 'Baden-Württemberg', and 'Bayern'. A blue callout box in the foreground contains the text 'Überall daheim. Mit dem Lokal-TV-Portal haben Sie spielend Zugang zu vielen Lokal-TV-Programmen und Offenen Kanälen in Deutschland'.

Überall daheim.

Mit dem Lokal-TV-Portal haben Sie spielend Zugang zu vielen Lokal-TV-Programmen und Offenen Kanälen in Deutschland

The German DVB-I Project

Goals of DVB-I

- Easy access to linear audio and video via the Internet just as user-friendly as traditional TV broadcasts on TV sets.
- Structured service lists which enable a uniform user interface
- Additional services
 - HbbTV
 - programme guides
 - accessible services
 - genre-based and event channels.
- Hybrid combination with DVB-S, DVB-C and DVB-T



Goals of the German DVB-I Project

- Temporary cooperation to develop a common understanding and demonstrate the potential of DVB-I
- Demonstrating a vision for a national market scenario
- Identify technical gaps and requirements in the standard
- Gathering experience with the aggregation of service lists
- Development of business models and technical solutions for private content providers or platform operators
- Paving the way for further activities for a possible launch of DVB-I services in Germany
- Participants are broadcasters and manufacturers of TV sets and software



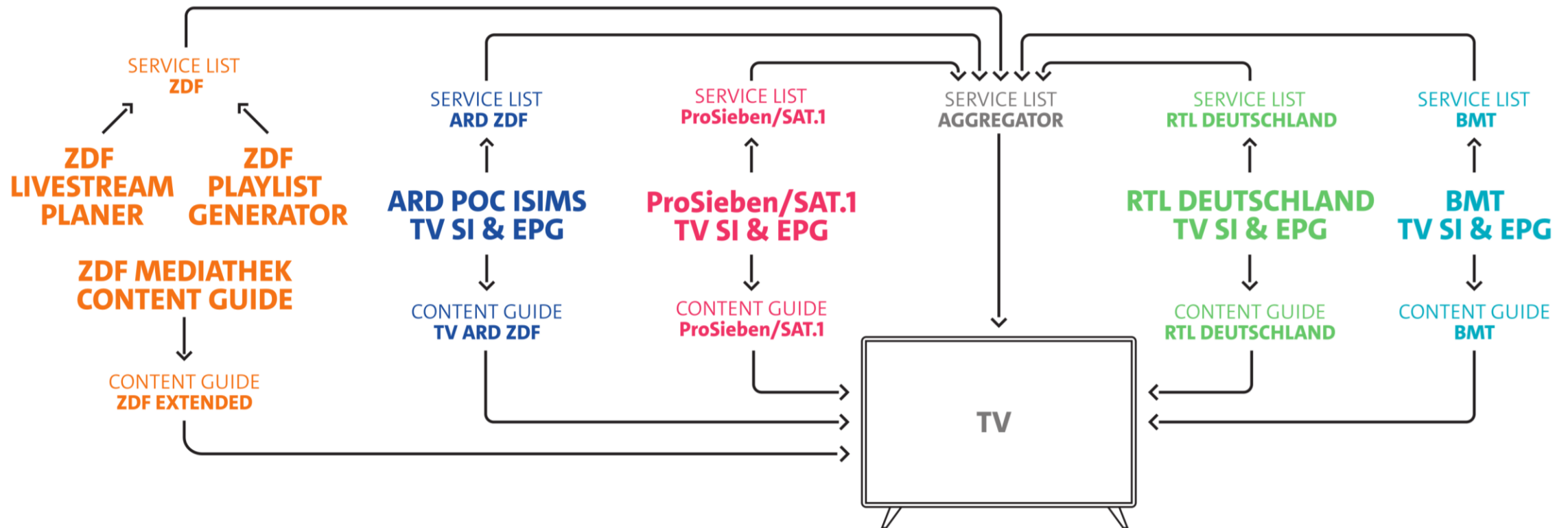
Participants



Pilot architecture and features

- HbbTV as integral component of services
- DRM and subscription to ensure business models of private programme providers
- Additional event channels for temporary addition to service list during an event
- Region-specific LCN tables for adapted channel sorting based on user location
Selection can be based on postcodes or region lists
- EPG with link to the media libraries provides direct access to content missed or pre-published
- Playlist-based channels can combine different items to a linear channel that can be freely navigated
- Uniform service list for the German market that could also meet regulatory requirements
- Hybrid services with DVB broadcast and MPEG-DASH; prioritisation of service instances and switching
- Integration of radio services with Visual Radio elements
- Service List Aggregation & Discovery via Central Service List Registry (CSR)

Service list architecture and aggregation




Regionalisation

- Media regulation in Germany has recently published a list of services of general interest (public value)
- Public TV programme of user's region shall be sorted to LCN 7 and private one to LCN 8
- Need for adapted service lists
 - Client-side filtering
 - Server-side filtering (A177 rel. 4)




```
<?xml version="1.0" encoding="UTF-8"?>
<ManualServiceList>
  <RegionList version="1">
    <Region regionID="München">
      <RegionName>München</RegionName>
      <PostcodeRange from="80331" to="80339"/>
      <PostcodeRange from="80538" to="80999"/>
      <PostcodeRange from="81241" to="82549"/>
      <PostcodeRange from="83550" to="85778"/>
    </Region>
    <Region regionID="Augsburg">
      <RegionName>Augsburg</RegionName>
      <PostcodeRange from="86150" to="86989"/>
      <PostcodeRange from="89312" to="89447"/>
    </Region>
    <Region regionID="Franken">
      <RegionName>Franken</RegionName>
      <PostcodeRange from="90402" to="91807"/>
      <PostcodeRange from="92283" to="92369"/>
      <PostcodeRange from="96152" to="97258"/>
    </Region>
  </RegionList>
</ManualServiceList>
```


Regionalisation

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Regionalisation



Channel list update

Configure the desired channel list update options

<https://dvb-i.bmt-technik.de/demo/regionalisierung/>
Select channel list URL

Select postcode

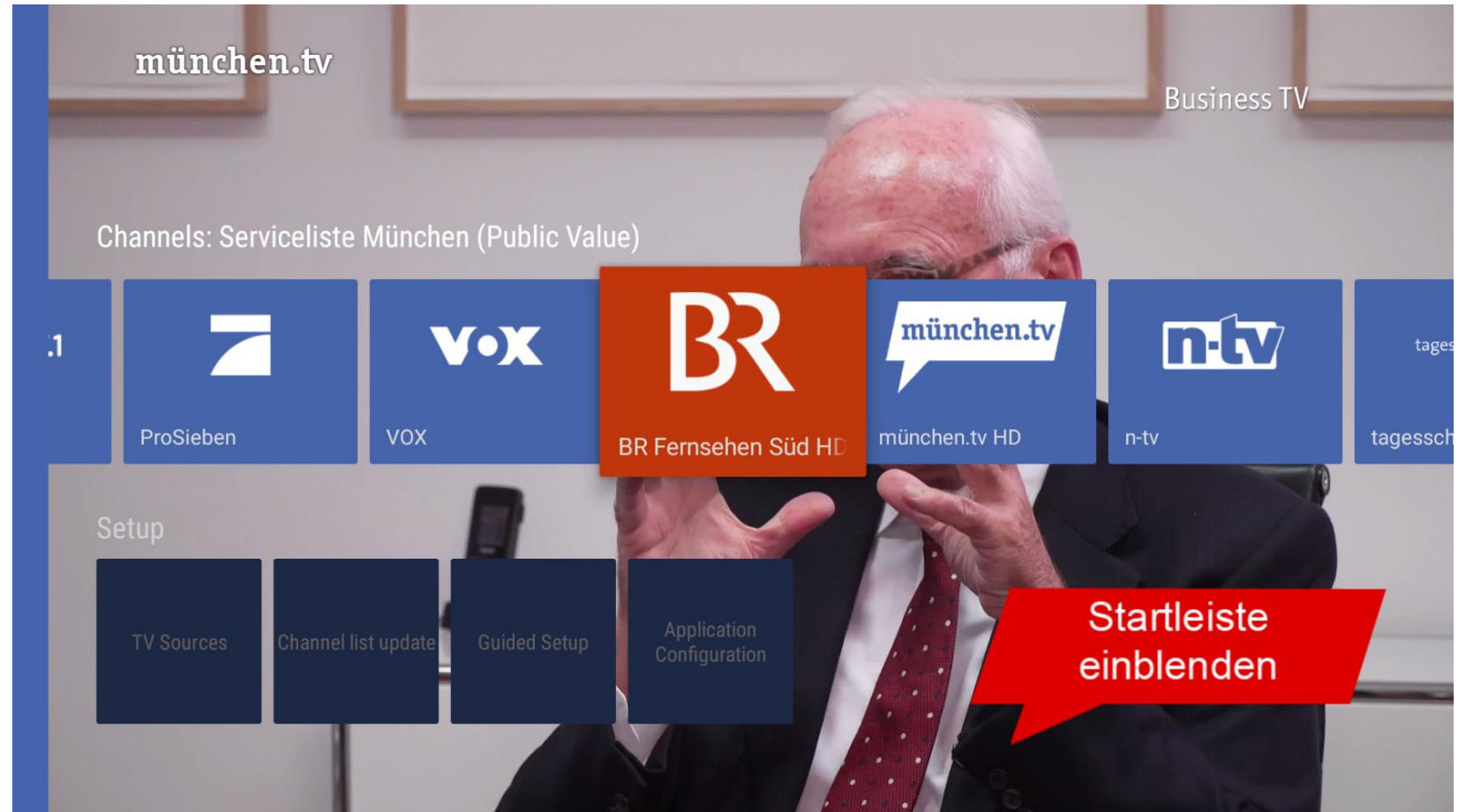
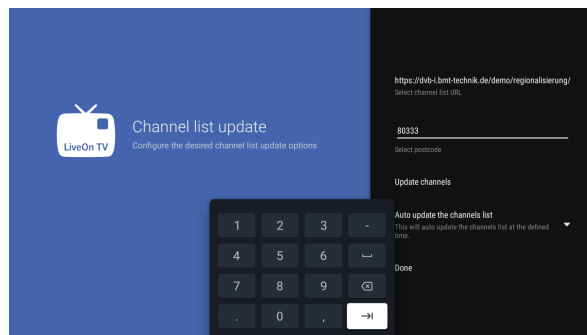
Update channels

Auto update the channels list
This will auto update the channels list at the defined time. ▼

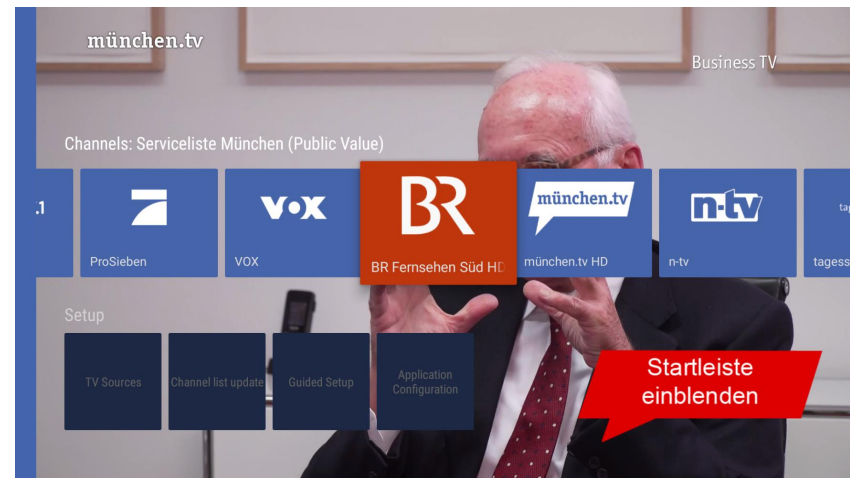
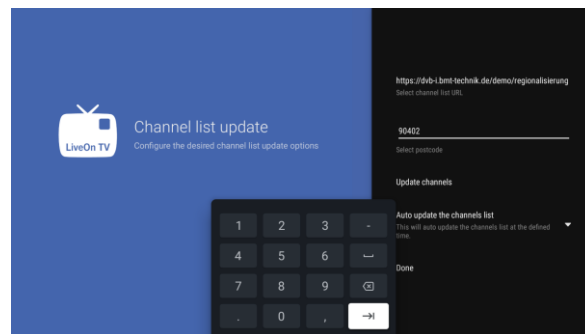
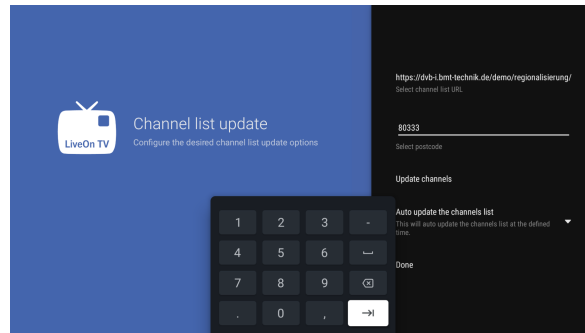
Done

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Regionalisation



Regionalisation



Next steps

- Synchronisation of requirements with Mediaset Trial (Italy)
- Feedback of results to DVB TM-I/CM-I, DTVP
- Further development of service lists
- Comprehensive DRM & subscription concept
- Publicly available Android App
- User tests
- DVB-I Industry Forum (start at EBU Horizons Nov. 2022)

Thank you for your attention!

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