



# IRT Position on Future Internet PPP

## 2<sup>nd</sup> Usage Area Workshop

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Collaborative Research

### Who we are

- Central R&D institute of public broadcasters in Germany, Austria and Switzerland – a media technology company
- Looking ahead for our associate owners – preparing them for the future
- Strong R&D activities along the chain:
  - Production and workflow
  - Playout and distribution
  - Innovative services for consumers
- Representing and supporting our associates in various fora, standardisation groups and regulatory bodies



# Future Internet PPP

Usage Area Content

## HbbTV:

HTML page

The screenshot shows the ARD website interface with several annotations:

- Media selection:** A red arrow points to the 'ARD Programm' menu, which includes 'TV', 'Radio', and 'Interaktiv' options.
- Current program in coop. TV stations:** A red arrow points to the 'Alle Sender jetzt' button, which shows 'Um 20:15 Uhr'.
- Search button:** A red arrow points to the 'Suche' button in the bottom navigation bar.
- Live TV program:** A green arrow points to the 'Jetzt auf „Das Erste“' section, which displays the current program 'Die Schokoladenkönigin' at '20:15 - 21:40'.

The main content area is titled 'TV - heute, 31. Juli 2009' and features a 'Tagestipps' section with two program recommendations:

- Das Erste** heute, 21:40 Uhr: **Polizeiruf 110** Bei Klingelzeichen Mord
- Das Erste** heute, 23:25 Uhr: **Einfach raus** Fernsehfilm - Deutschland 1999

Below the main content, there are several program listings with a 'Tipp' icon:

- Das Erste** 20:15 - 21:40 Uhr: **Die Schokoladenkönigin** Spielfilm - Deutschland 2005
- EinsPlus** 20:15 - 20:30 Uhr: **Rainers Küchenklassiker** Omas Küche aus dem Osten
- EinsFestival** 20:15 - 21:00 Uhr: **Die Murretiere von Kasach...** Tierdokumentation
- EinsExtra** 20:15 - 21:00 Uhr: **Kontraste** Moderation: Astrid Frohloff

At the bottom right, there are several action buttons: 'Ausblenden', 'Verkleinern', 'Mediathek', 'ARD-Text', and 'Startseite: 0-Taste'. A red arrow points to these buttons with the text 'Action buttons (archive)'.

Media selection

Current program in coop. TV stations

Search button

Live TV program



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## Workshop questions and IRT's responses (1)

### 1. Use case scenario for large-scale experimentation on FI platform in 2013:

- **Consumption of individually attractive AV media content at my leisure, anywhere, anytime, on any AV device**
- **Simple → fun to use → consistent experience across devices**
- **Low cost**
- **High quality (QoS) matching that of SD-/HD-/3D-TV as appropriate**
- **Reliable mass distribution of high data-rate AV content**

### 2.+ 3. *Required/expected functionality+technologies of FI Core Technology Platform*

- **Transparent cloud and CDN technologies for distribution and storage**
- **Privacy-conserving profiling functionalities and context awareness**
- **Better integration of metadata, preservation throughout production and distribution chains**

## Workshop questions and IRT's responses (2)

4. *Experimentation environment and prototype implementations for FI-PPP*
- **Intelligent delivery concept – dynamic between two extremes:**
    - > *unicast connection* (=streaming point-to-point for each individual user)
    - > *broadcast reception* (= content push point-to-area and thus to an undetermined high number of users)
  - **Transparent combination of unicast, multicast, broadcast, P2P/P4P, CDN and managed IP(TV)**
  - **“Distributed distribution”**: distributed storage and access - minimizing network load as well as distribution cost over-all
  - **Content is tailored according to the actual terminal and network**
  - **Concept precludes access to personal data like profiles without prior consent by the end-user and generally preserves the end-users' privacy**
  - **Consumer devices: various types of terminals including hybrid broadcast/broadband devices (ideally suited to serve as seeders of BC content in intelligent, mashed-up delivery concepts)**

### Workshop questions and IRT's responses (3)

#### 5. *Potential role of IRT in application-driven usage area of FI-PPP*

- **Strong knowledge in Hybrid Broadcast/Broadband TV technology and, more important, on applications for HbbTV terminals and services**
- **Provision of Broadcast test networks interlinked with LTE**
- **Wide expertise in playout servers, test content, test equipment, etc.**
- **Direct link to public broadcasters of Germany, Austria, Switzerland**
- **Pushing for open solutions and standards to include public and private stakeholders**

We stay interested in the FI

## Contact point

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