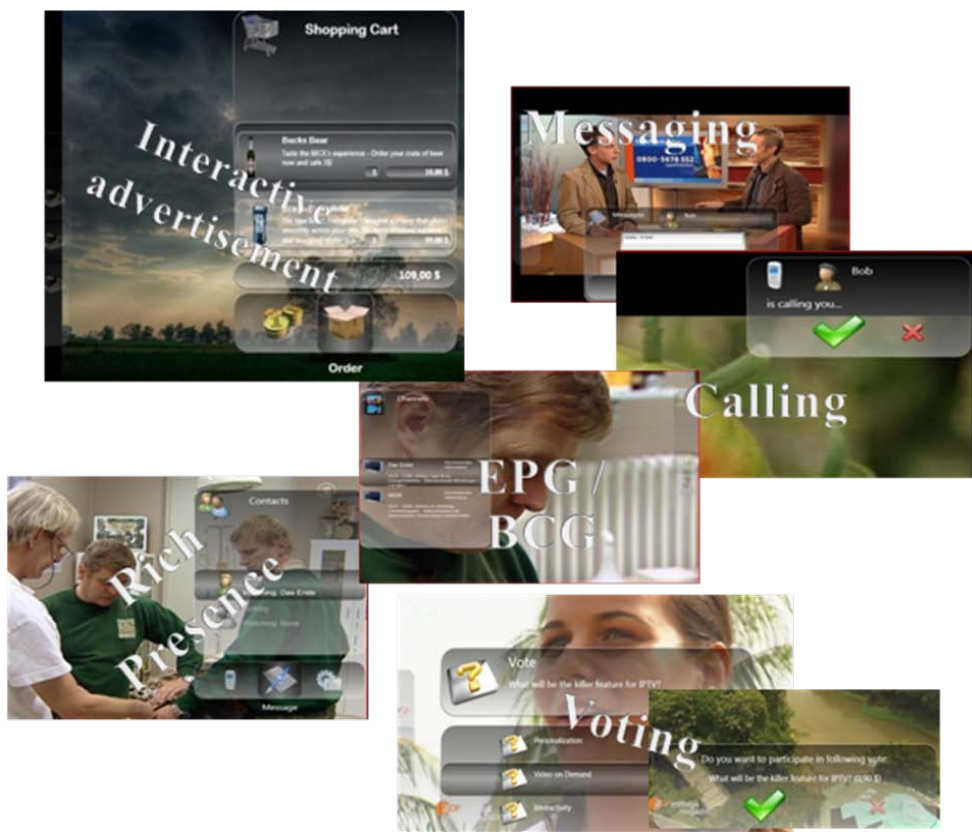


# Interactive Live Demo of Fraunhofer FOKUS Media Interoperability Lab @ uxtv 2008

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## Abstract

IPTV, TV2.0, interactive TV, TV over Next Generation Networks, convergence, triple and quadruple play – all these words become mandatory and part of the language used when getting in touch with a proposed new kind of media: Television and corresponding interactive premium services delivered over IP networks.

The Media Interoperability Lab is Fraunhofer FOKUS' answer to the current evolutions of various black-box solutions in the IPTV market. It represents FOKUS' current activities and strategy in the direction of standardized solutions for IPTV following and inspiring ITU-T Focus Group IPTV and ETSI TISPAN enabling IMS-based IPTV services and connecting them to open communities, Web 2.0 and of course interactive TV on the move and within the home network.

The Media Interoperability Lab is fully fledged to the well known Open IMS Playground which is FOKUS test bed for the latest IMS technology, conform to the latest IMS specifications, and generally reflects the current state of the art in the field of IMS. The Media Interoperability Lab makes use of already available features of this unique infrastructure and demonstrates the interaction between common NGN services and interactive IPTV.

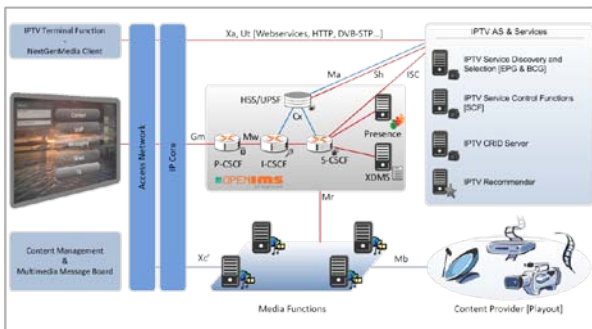


Figure 1: Media Interoperability Lab reference architecture

As depicted in Figure 1 the Media Interoperability Lab consists of distinct building blocks to set-up and demo a complete IMS-based IPTV ecosystem being in-line and from the practical point ahead of current standardization efforts.

- Open IMS Core – The Open IMS Core offers basic or common IMS functionalities as the different Call Session Control Functions (CSCFs), a user database namely the HSS or UPSF and functions to enable Presence functionalities.
- IPTV Terminal Function (ITF) - "Media Client". This IMS based User Agent (UA) is running on PCs and Set-Top Boxes integrating IPTV, NGN, Interactivity and Web2.0 for new Media experiences in the home domain. It is built around the newest visualization technologies based on the Windows Presentations Foundation (WPF) and .NET 3.5.
- IPTV Service Control Function (SCF) – The SCF is a SIP servlet implemented in the FOKUS' SIPSEE (SIP Servlet Execution Environment) which is the FOKUS development of a SIP Application Server (SIP AS) based on SIP Servlet Technology. The SCF provides IPTV Session Handling, managing and forwarding user generated media requests and IPTV subscription handling.
- Service Interactivity Function & Service Personalization Function enabling interactive scenarios as Voting and targeted advertisements based on user groups and profiles
- Following ETSI TISPAN Draft TS 182 027, FOKUS has started to implement a solution that acts as an extended Media Resource Function (MRF) which enables streaming of RTP and RTSP-based IPTV content controlled throughout a SIP interface in the direction of the Open IMS Core incorporating with the Service Control Function (SCF).
- IPTV Application Servers Application Servers and Web Services providing a huge amount of IPTV related features for the creation and roll-out of value added Media Interoperability Lab services in the surrounding area of IMS as the provisioning of personalized Electronic Program Guides (EPG) and recommendation capabilities.
- Community services for fixed and mobile devices using the infrastructure. The purpose of these services is to support context sensitive communities and social networks for personal content sharing, content tagging, knowledge

offering, as well as worldwide and local neighbourhood communication.

- Integration in the Home Domain based on FOKUS solutions for content management and unified access to media stored on a wide range of consumer electronics in the users home enabled by UPnP / DLNA.

### Demo features

Based on the building blocks described above a growing list of services have been implemented showing IMS-based IPTV and the interaction with common NGN services from the user point of view. This demo setup shall also be our contribution to the EuroiTV 2008 demo session. This includes:

- Linear TV
- Video on Demand (VoD)
- VoD Rating & Recommendation Engine
- Best of YouTube content
- Media Discovery in the Home Domain
- Electronic Program Guide (EPG)
- Contact list
- Presence
- Messaging
- Telephony
- Community Services
- Cross-fertilization @ home
- Interactive Voting Scenario
- Interactive Shopping

### Demo prerequisites

(live Ecosystem demonstration):

- **Provided by FOKUS:**
- Standard PC equipment , preferably running Windows Vista for the demo clients (mobile demo setup already existing as used on Embedded World 2008 and IFA 2007)
- Windows Mobile devices to show the interaction with common IMS users (e.g. IP Telephony from a mobile device to the STB)
- Open IMS Core running on standard Linux machines or a Virtual Machine (VMWare image).
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- **Need to be provided by EuroiTV organizers:**
- Beamer, LCD or Plasma displays (2) for presenting single user and user interaction

### - Stable Internet connection

For more information on the FOKUS Media Interoperability Lab please visit:

<http://www.mediainteroperabilitylab.org>

### Affiliations

**MEDIA INTEROPERABILITY**  
**lab**



**Fraunhofer Media Interoperability Lab is part of the of the Seventh Research Framework Programme (FP7) project iNEM4U | interactive Networked Experiences in Multimedia for You ([www.inem4u.eu](http://www.inem4u.eu))**