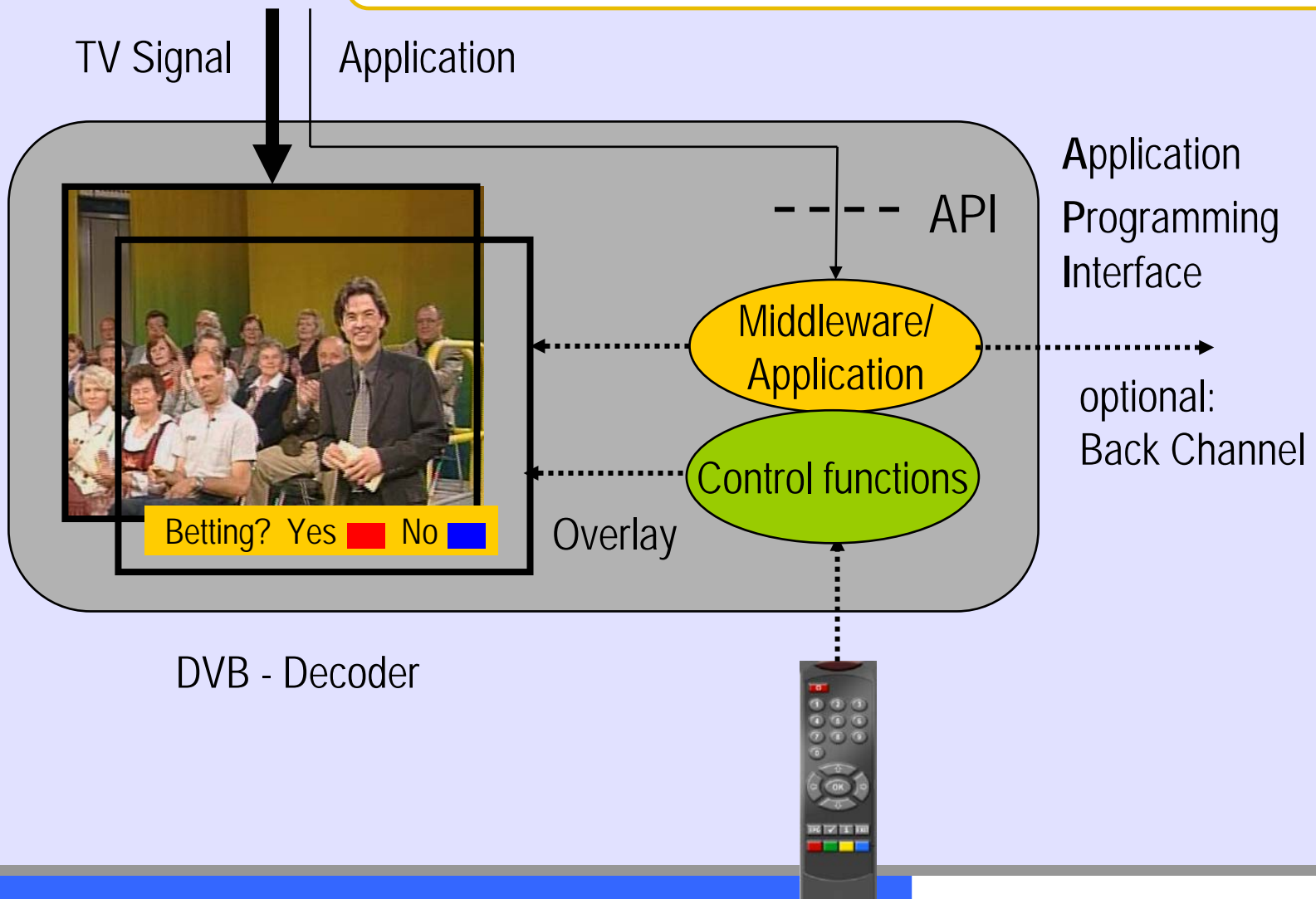


The MHP Knowledge Project

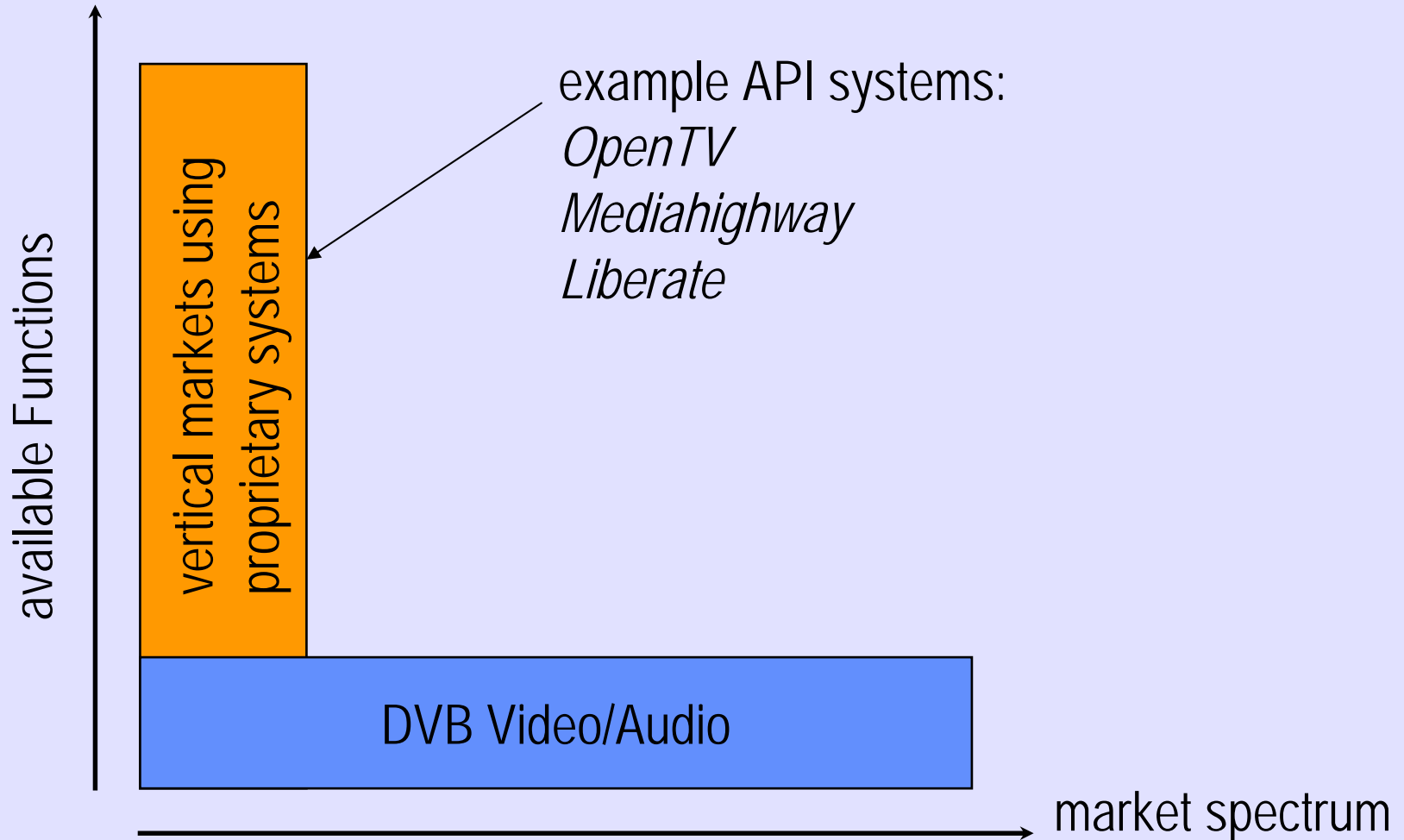
Presentation given by
Truls Langeggen

Telenor Broadcast Holding AS

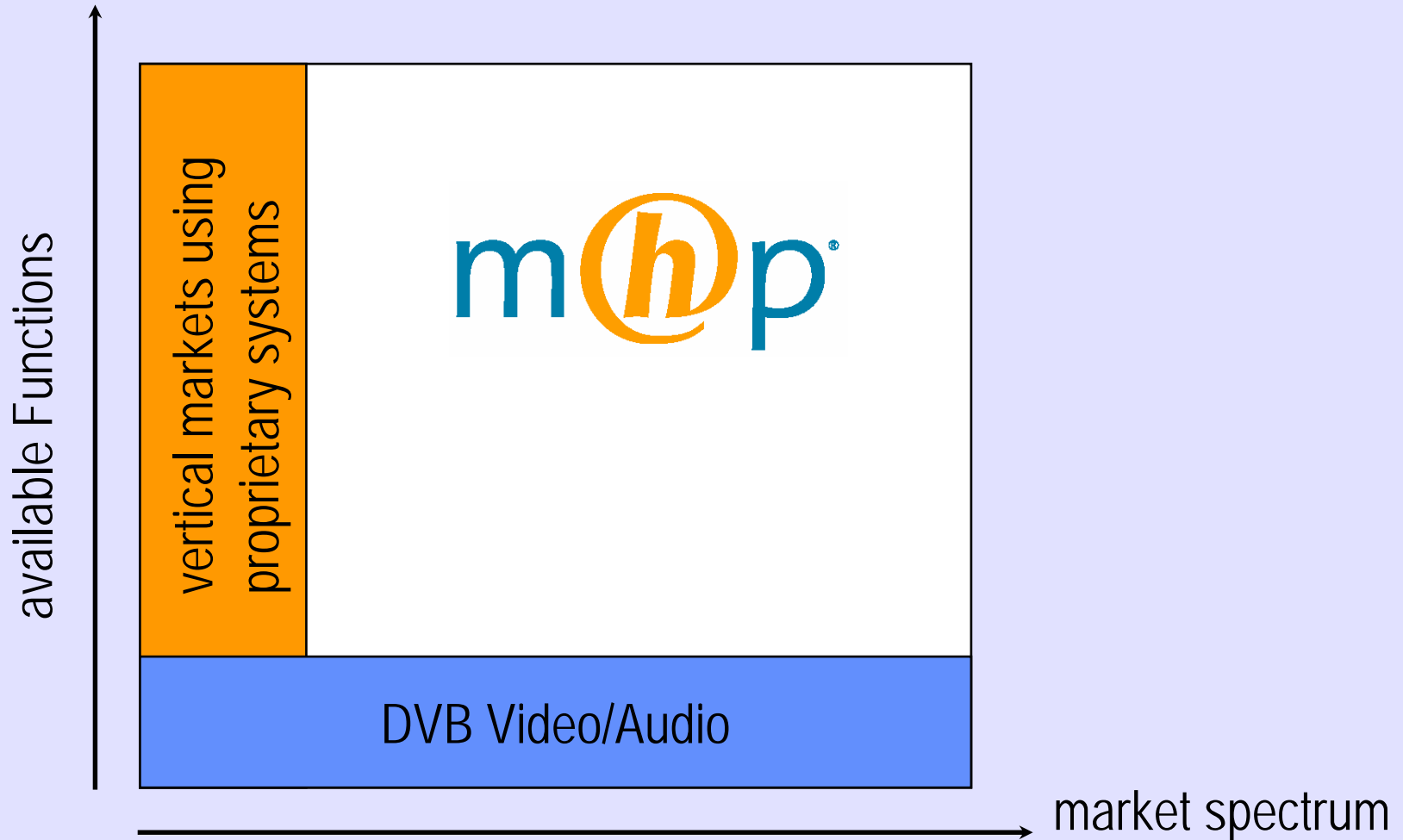
DVB-Decoder with API



Proprietary API systems in vertical markets



MHP allows functionality and interoperability



Recent EU Communication

EU COMMUNICATION ... on interoperability of digital interactive television services (30.7.2004 / COM(2004)54) states that:

- MHP and MHEG-5 is currently the only open standards for APIs adopted by EU standardisation bodies
Desired interoperability reached? -> “doubtful picture”
- No clear case for *mandating* standards at present
- By 2005 mandating MHP will be reconsidered
- A range of promotional actions are proposed to promote the deployment of interactive digital services using the MHP standard

The MHP Knowledge Project

Overall Objective of the MHP-KDB Project:

Strengthen the market impact of MHP by improving interoperability of MHP applications and MHP decoders

- Acronym: MHP-KDB (MHP Knowledge DataBase)
- Co-funded by the European Union (IST 507442)
- Duration: Two years from Dec. 2003 to Nov. 2005

The MHP-KDB Consortium

11 Partners from 5 European Countries:

Panasonic
ideas for life

rbb
RUNDFUNK BERLIN-BRANDENBURG

ita

DW-WORLD.DE
DEUTSCHE WELLE



PHILIPS

DR

The logo for telenor, consisting of a stylized blue and red circular graphic to the left of the word 'telenor' in a blue sans-serif font.

tComLabs

bmt

Institut für Rundfunktechnik

IRT

Co-ordinator: IRT

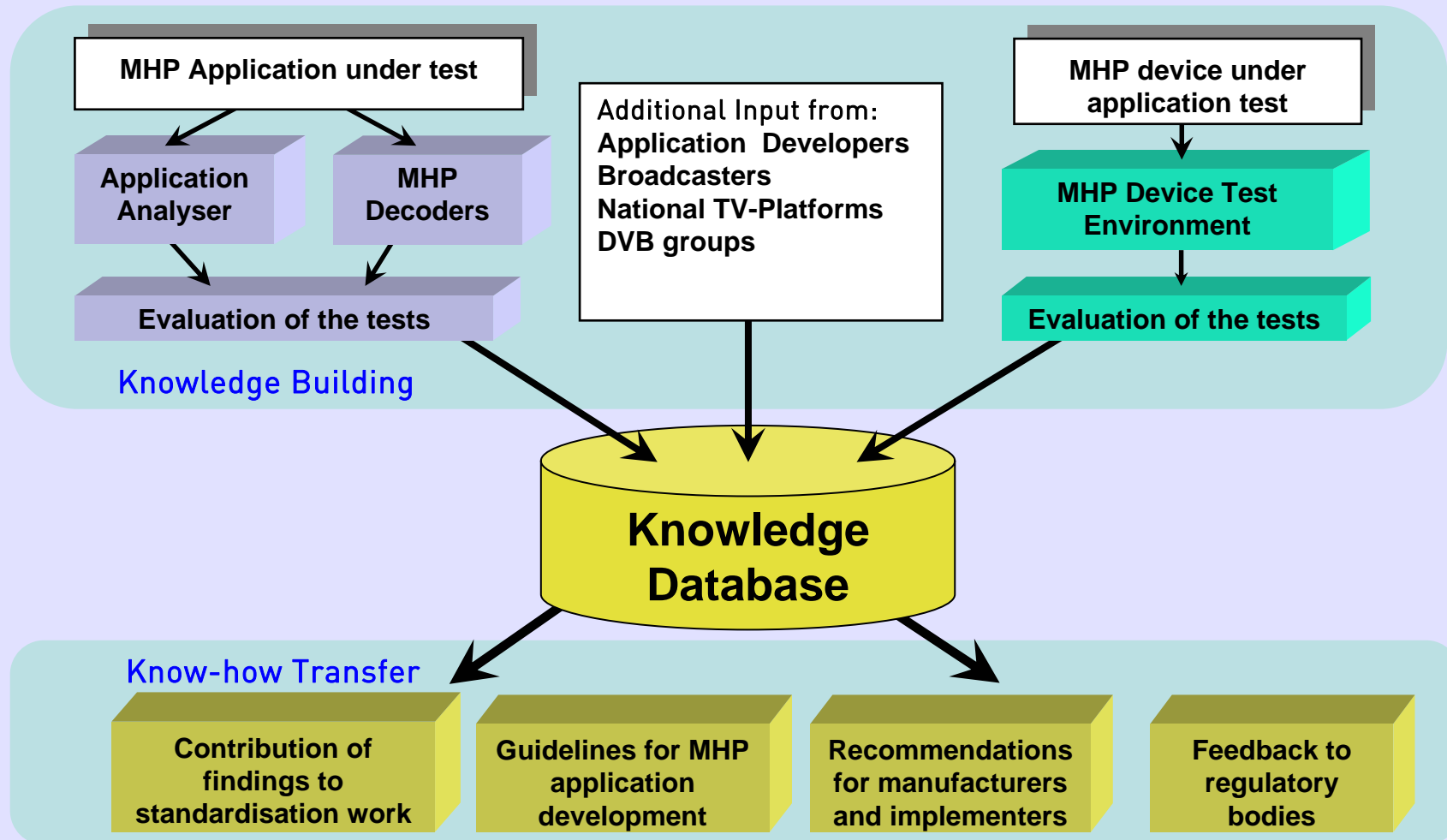
The MHP-KDB Consortium

Role	No	Name	Short name	Country
CO	1	Institut für Rundfunktechnik	IRT	Germany
CR	2	Bayerische Medientechnik	BMT	Germany
CR	3	Danish Broadcasting Corporation	DR	Denmark
CR	4	Deutsche Welle	DW	Germany
CR	5	Instituto Tecnológico de Aragón	ITA	Spain
CR	6	Rundfunk Berlin Brandenburg	RBB	Germany
CR	7	Panasonic European Laboratories	PEL	Germany
CR	8	Philips CE/STB	PCE	France
CR	9	Telenor	TN	Norway
CR	10	tComLabs	TCL	Belgium
CR	11	Universität Duisburg-Essen	UDE	Germany

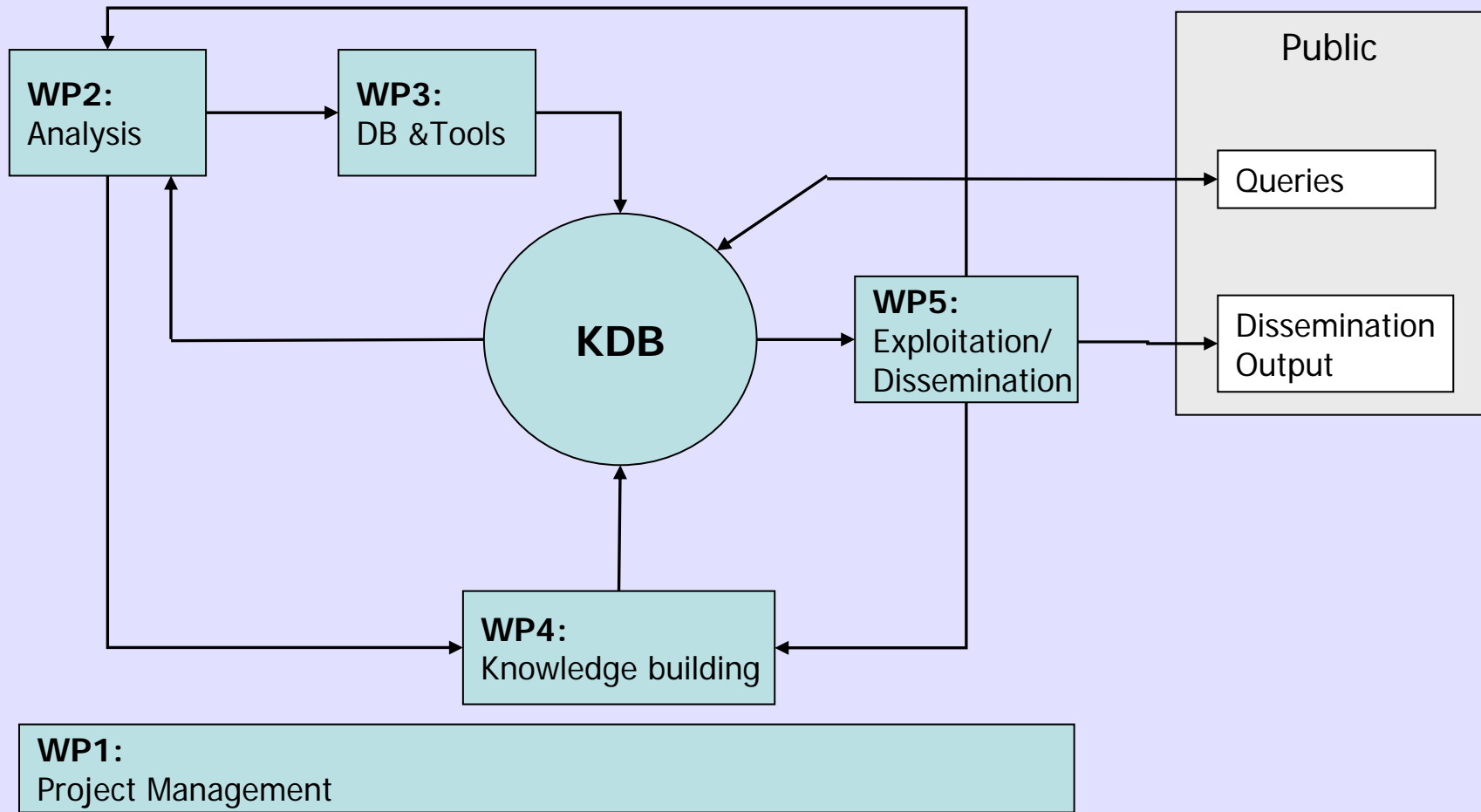
The Main Procedures of MHP-KDB

- Creation of an infrastructure and tools to collect and to gain more MHP knowledge
- Filling the database and writing guideline documents covering all known interoperability issues and possible solutions
- Transfer of the gained know-how over various paths: searchable database, papers, seminars, demonstrations...
- Decide on how the database shall be updated in the coming years

Workflow around the Knowledge Database



MHP-KDB: Workpackage Structure



Status of the Project

What has been achieved

- Analysis of the current status of MHP and areas of interest has been performed
- Database architecture has been defined
- MHP-KDB Portal & prototype of database have been implemented

Current activities

- Tools are being implemented and integrated
- Filling of the database has started (best practise code, ...)
- Testing and refinement of database (GUI, functions,...)

Future Activities

- Knowledge building
- Dissemination (MHP-guide, seminars, demos, etc.)
- Going live
- Updating the data-base

The MHP-KDB Project

Eleven European partners, known for their competence in broadcasting, IT manufacturing and technology research, have joined forces to establish the collaborative MHP-KDB project. It will tackle one of the most pressing issues in the field of digital interactive television: the harmonised usage and implementation of DVB-MHP (Multimedia Home Platform) by establishing, for all MHP-related issues, a single "point of call" (the MHP Knowledge Data Base, or short: MHP-KDB) for know-how and best practice solutions to all companies and organisations active in this field.

The prime focus of MHP-KDB is to improve the interoperability of MHP implementations and MHP applications. Progress in the interoperability of MHP is the crucial factor for the deployment of interactive digital TV in Europe. This progress will guarantee freedom of expression and cultural pluralism as well as access of all European citizens to the services of the Information Society (eEurope 2002 and 2005 Actions Plans).

MHP interoperability will lead to a wide adoption and usage of the MHP standard and pave the way for a whole range of new e-content formats and e-services – including T-Commerce and T-Learning – accessible via the most commonly used media device world-wide: television (with local and remote interactivity)! The results will be beneficial for the whole media industry as well as for the end-user in fostering a standardised API (i.e. digital gateway) to ensure the development of horizontal markets for services and receiving equipment, in line with Directive 2002/21/EC.

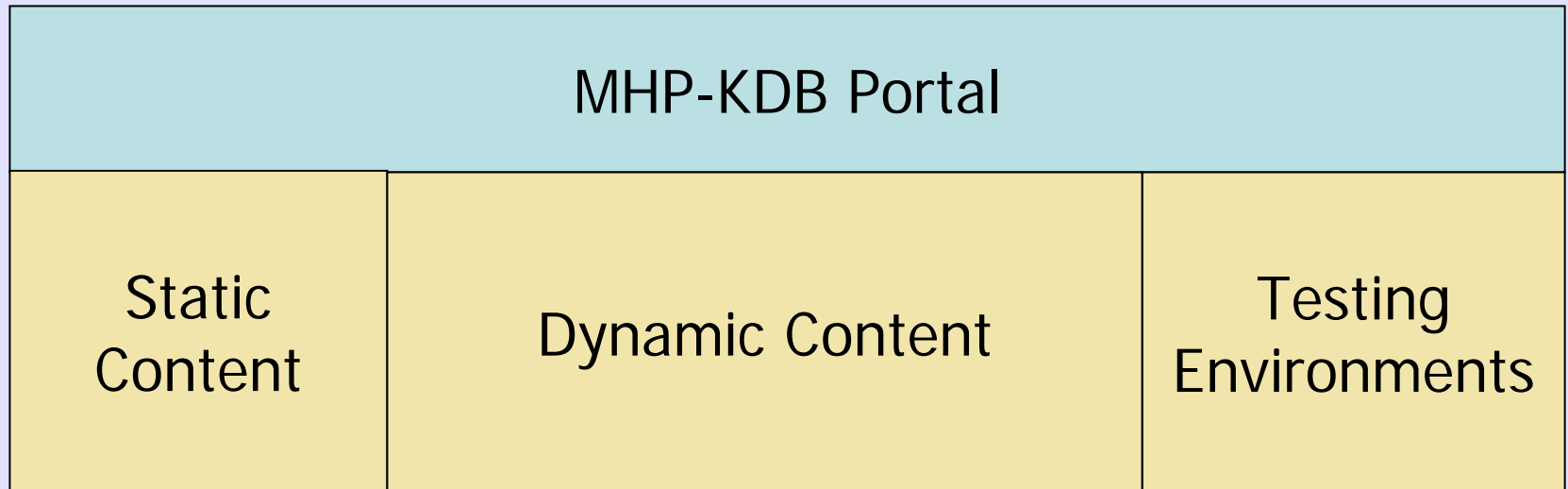


Information Society
Technologies



MHP-KDB Portal: www.mhp-knowledgebase.org

The MHP-KDB portal



- MHP Guide
- Reports
- Q & A

- MHP issues & solutions
- Sample code
- Discussion forum


- Application Analyser
- Test centres

Virtual test centre

MHP KnowledgeDatabase
MHP-KDB

Time remaining: 01:07:45

Logout
Schedule



MHP KDB example5_04a

MPEG1 layer1
MPEG1 layer2
MPEG1 layers

org.havi.ui
javax.media

play audio

exit

```

example5_04a: play audio files
1:2:24.722 [DEBUG] 5_04a: initXlet()-
1:2:24.724 [DEBUG] 5_04a: startXlet()-+
1:2:24.866 [DEBUG] 5_04a: startXlet()-
1:2:24.86 [DEBUG] 5_04a: File: org/mhp/kdb/userinteraction/layer2.mp2
1:2:24.85 [DEBUG] 5_04a: javax.media.TransitionEvent[source=de.irt.mhp.media.
1:2:24.767 [DEBUG] 5_04a: javax.media.RealizeCompleteEvent[source=de.irt.mhp
1:2:24.778 [DEBUG] 5_04a: javax.media.TransitionEvent[source=de.irt.mhp.media
1:2:24.778 [DEBUG] 5_04a: javax.media.PrefetchCompleteEvent[source=de.irt.mh
1:2:24.678 [DEBUG] 5_04a: org.davic.media.MediaPresentedEvent[source=de.irt.m
1:2:24.741 [DEBUG] 5_04a: javax.media.StartEvent[source=de.irt.mhp.media.com

```

Upload MHP-Application

Analyse MHP-Application

AIT Manager

Object Carousel Manager

Stream Event Manager

Record TS

Analyse TS

KDB Entry

KDB Search

Help

PHILIPS DTR 6600

HW: t72xph2
SW: v640_1
App.: 2.8.6

example5_04a\$1.controllerUpdate(): javax.media.RealizeCompleteEvent[source=com.adb.media.content.audio.mpeg.Handler@810e6f8,previous=Realizing,current=Realized,target=Started]

example5_04a\$1.controllerUpdate(): javax.media.TransitionEvent[source=com.adb.media.content.audio.mpeg.Handler@810e6f8,previous=Realized,current=Prefetching,target=Started]

example5_04a\$1.controllerUpdate(): javax.media.PrefetchCompleteEvent[source=com.adb.media.content.audio.mpeg.Handler@810e6f8,previous=Prefetching,current=Prefetched,target=Started]

example5_04a\$1.controllerUpdate(): javax.media.StartEvent[source=com.adb.media.content.audio.mpeg.Handler@810e6f8,previous=Prefetched,current=Started,target=Started,mediaTime=javax.media.Time@810e5e1,timeBaseTime=javax.media.Time@810e5e6]

Philips

Panasonic

Humax

Nokia

ADB

Galaxis

Sony

Power

Menu

V-

V+

Navi

List

Up

Guide

Info

Left

OK

Right

Back

Text

Down

Exit

MHP

Access to KDB Content / Terms of Use

- Written documents & papers:
publicly available
- Access to database:
registered (authorised) KDB-users
- Usage of application modules java source code:
open source, LGPL license agreement
- Access to validation tools / testing environments
free for KDB-users, limited capacity

Dissemination scope

To reach all relevant players through broad dissemination activities as

- **attending trade fairs to present the project and its goals there**
- **organizing workshops to address the relevant market partners**
- **attending third party workshops and seminars as speaker**
- **providing of written guidelines and reports**

are performed in addition to the provision of the database

Dissemination as "Open Source"



All MHP Know-How is disseminated as "Open Source":

- **all MHP Know-How is disseminated free of charge to the public**
- **Source Code pieces are offered as "open source" under the LGPL license**
- **allows commercial exploitation of source code without further obligations**
- **Copyright is with partners (internal and external) who deliver input**
- **written guidelines may be redistributed when making reference**

Target Users

MHP application developers

- Reference models, best practice, benchmark applications
- Free sample source code (LGPL)
- MHP guide
- Knowledge exchange

Decoder manufacturers

- Receive a list of problems occurred with THEIR boxes

Broadcasters

- MHP know-how
- Test MHP services on different MHP decoders

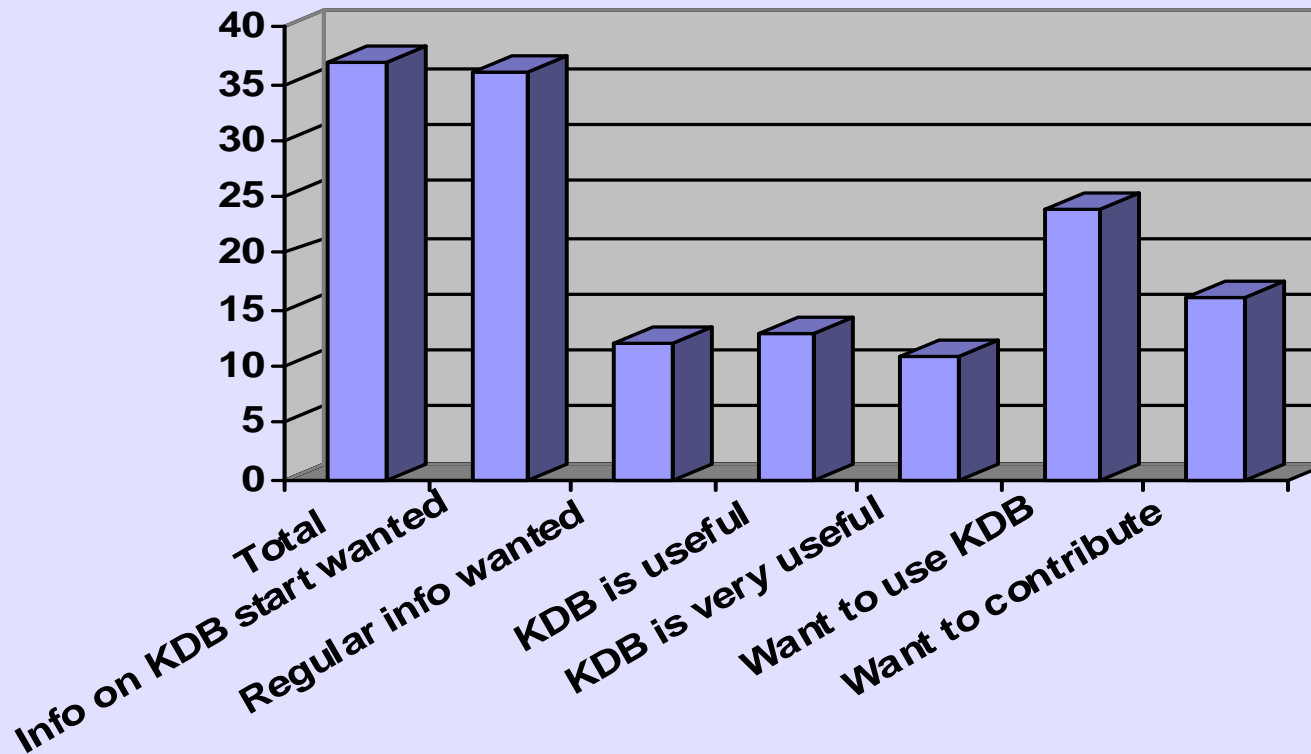
Operators

Dissemination activities so far

- **Initial press release at the time of CeBit 2004**
- **Set-up of a public website in March 2004**
- **CeBit 2004 (March 2004): Philips and Panasonic inform about MHP-KDB**
- **Exhibition accompanying the FKTG Jahrestagung (25-27 May 2004):
IRT presents the MHP-KDB project**
- **MHP-KDB project exhibition within the EBU village at IBC (11-14 Sept 2004)**
- **first public demonstration of database**
- **good feedback on questionnaire**

Results from questionnaire at IBC 2004

■ Visitors



Conclusions (1)

- **Public launch of the database soon (improved usability)**
- **Filling of the database has started**
- **Integration of testing environments is running**
- **The database will be filled with a lot of MHP-related know-how and best practise code**
- **MHP-KDB is prepared to deal with input from the whole MHP community**
- **The project is thus searching for contributions from companies involved in all stages of MHP implementation. All inputs will be of importance to extend the value of the database**

Conclusions (2)

- **The project is considering to initiate a new STREP project for the period 2006 – 2008, extending the database with new content related to**
 - **the new focus will be more at the service level**
 - **generic modules will be developed for individual personal services like e-government, e-health and e-learning**
 - **PDR functionality**
 - **HDTV**
 - **new content based on to day not known applications**
 - **it will be a need for updating functionality and content, based on experience gained by the users**