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Steps consumer electronics manufacturers have taken and are taking to support the roll out of access

Barrier-free Digital Television
25 May 2011, Brussels

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Introduction

DIGITAL EUROPE

- ➢ Preeminent advocacy group of the European digital economy acting on behalf of the information technology, consumer electronics and telecommunications sectors.

- ➢ Objective is to improve the business environment for the European Digital Technology Industry.

- ➢ Membership is made up of 63 leading corporations and 40 national trade associations from 29 European countries.

- ➢ Represents more than 10,000 companies all over Europe with more than 2 million employees and over EUR 1,000 billion in revenues.

- ➢ Brings together more than 1000 Technical, legal and policy experts to device solutions to legislative and regulatory issues affecting the digital technology Industry.

LIST OF MEMBERS

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Adobe, Acer, Agilent, Alcatel-Lucent, AMD, APC by Schneider Electric, Apple, Bang & Olufsen, Bose, Brother, Buffalo, Canon, Cassidian, Cisco, Corning, Dassault Systems, Dell, Epson, Ericsson, Fujitsu, Hitachi, HP, IBM, Ingram Micro, Intel, JVC, Kenwood, Kodak, Konica Minolta, Lexmark, LG, Loewe, Microsoft, Mitsubishi, Motorola, NEC, Nokia, Nokia Siemens Networks, NXP Semiconductors, Océ, Oki, Oracle, Panasonic, Philips, Pioneer, Qualcomm, Research In Motion, Ricoh, Samsung, Sanyo, SAP, Sharp, Siemens, Sony, Sony Ericsson, STMicroelectronics, Technicolor, Texas Instruments, Thales, Toshiba, Xerox

Austria: FEEI; **Belgium:** AGORIA; **Bulgaria:** BAIT; **Cyprus:** CITEA; **Czech Republic:** ASE, SPIS; **Denmark:** DI ITEK, IT-BRANCHEN; **Estonia:** ITL; **Finland:** FFTI; **France:** ALLIANCE TICS, SIMAVELEC; **Germany:** BITKOM, ZVEI; **Greece:** SEPE; **Hungary:** IVSZ; **Ireland:** ICT IRELAND; **Italy:** ANITEC; **Lithuania**: INFOBALT; **Netherlands:** ICT OFFICE, FIAR; **Poland:** KIGEIT, PIIT; **Portugal:** AGEFE, APDC; **Romania:** APDETIC; **Slovakia:** ITAS; **Slovenia:** GZS; **Spain:** AETIC, ASIMELEC; **Sweden:** IT&Telekomföretagen; **United Kingdom:** INTELLECT; **Belarus:** INFOPARK; **Norway:** ABELIA, IKT NORGE; **Switzerland:** SWICO; **Turkey:** ECID, TESID, TÜBISAD; **Ukraine:** IT UKRAINE

Vision

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Digital Europe's Vision for e-Inclusion

➢ Help members of disadvantaged social groups to participate on an equal footing in the digital society.

➢ Increase access and making ICT and CE solutions more widely available or easier to use.

➢ Assist people to use ICT and CE devices and services to make their lives richer and facilitating individuals' use of ICT.

Background

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Towards accessible Digital TV

➢ What? Broadcasting activities moving from analogue to digital technologies.

➢ Why? Digital TV delivers better quality, more choices to consumers and options for enhanced accessibility features.

➢ When? Digital TV switchover already started and to be completed by 2012 for all of the European Union

➢ And? DTV presents opportunities as well as challenges / barriers that need to be overcome in concert with government, manufacturers and broadcasters

Accessibility Features

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Accessibility Features of Digital TV

➢ **Accessible navigation in TVs** – on-screen menus, channel information and available services require **"visual"** interaction. They would need to be made to **"speak"** and as **easy-to-understand as possible** for people with sight, intellectual or reading disabilities**,** and for all.

➢ **Accessibility services in programmes –** for a better viewing experience TV sets and programs need to offer:

► **Audio description** - a narrative describing the action on the screen. Necessary for a person with a visual impairment, welcomed by anyone

► **Subtitling and sign language interpretation -** for hearing impaired and non-native speakers to enjoy TV programmes

Accessible Digital TV Cooperation

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Cooperation

➢ Cooperation between the Users and the Industry (equipment manufacturers) facilitated by Digital Europe and EDF with EC support

➢ National governments have a role (policy, regulation, awareness raising, switchover help schemes)

➢ The European Commission has a role (policy, regulation, awareness raising, funding for R&D)

➢ Content providers need to provide for the required signals, not only in a few European countries, e.g. Audio Description

Cooperation Platform

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Cooperation

- A forum of Digital Europe Members, User Groups and the EU Commission to openly identify, discuss and agree how to meet accessibility needs
- Result: Industry Self Commitment and industry action to make its products accessible to users
- Industry Self Commitment, signed by Microsoft, Panasonic, Philips, Samsung, supported by Sony
- Television products according to self commitment entering the market from 2009
- Publication of Achievement Report in 2010
- Recommendation to EBU and national regulators to follow DVB standards for audio description (2010, 2011)

Industry Self Commitment

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Industry Self Commitment covers accessibility basics:
- ➤ User Documentation, Unpacking and Installation
- ➤ Receiver User Interface issues, Remote Control
- ➤ Receiver Functions (to improve accessibility of TV services)
- ➤ Support for decoding/presentation of specific services elements and information that can improve e-accessibility of TV services, i.e. Audio Description, Subtitling
- ➤ The self commitment also agrees on elaborating more advanced features, i.e. text-to-speech for DTV

Industry Examples

Self commitment: Some results

Audio Description, Key Beeps, and Accessibility Menus
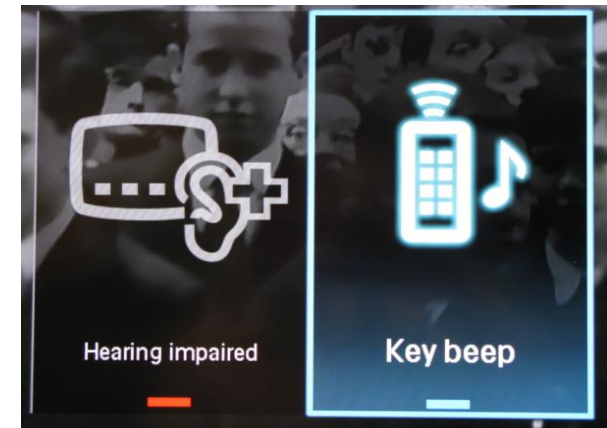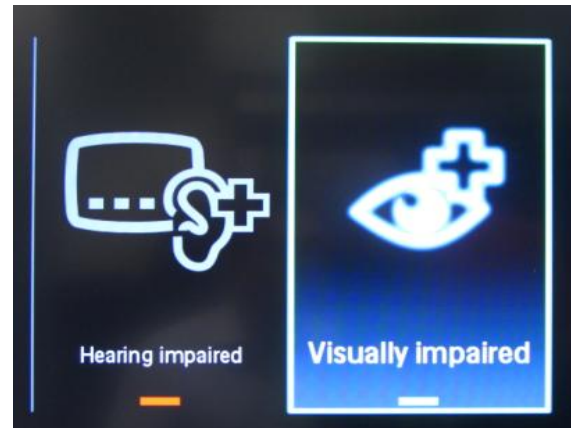
Industry Example: Option Menu

Subtitle Set-up

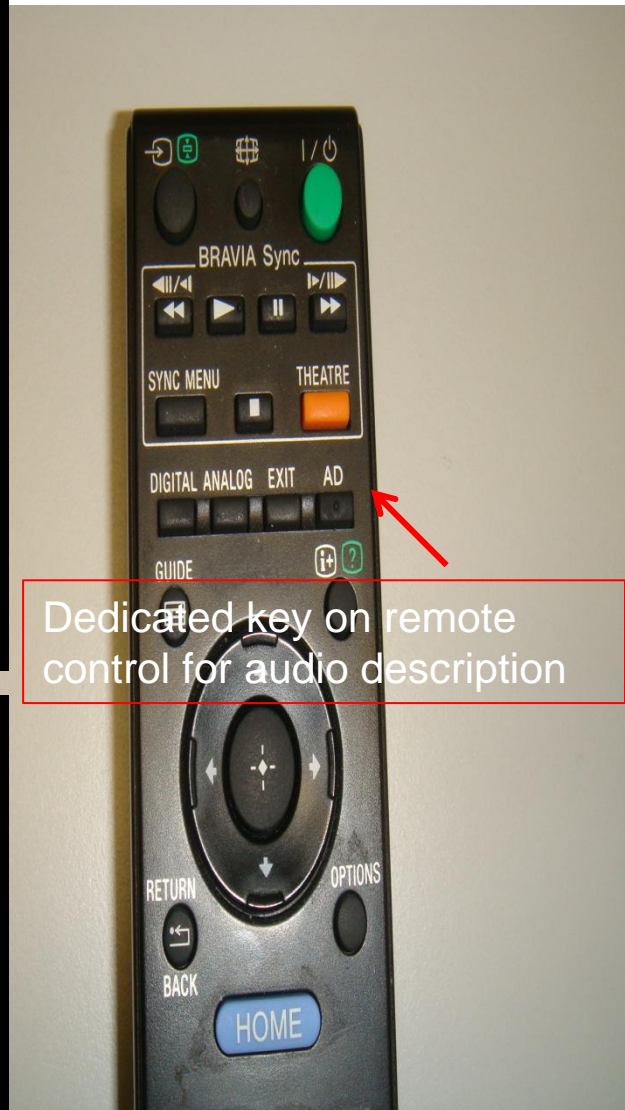|	
Subtitle Setting	For Hard Of Hearing
Primary Preferred Language	French
Secondary Preferred Language	Spanish
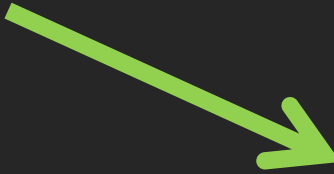
Change   RETURN Back

Audio Set-up

Audio Type	For Hard Of Hearing
Primary Preferred Language	Spanish
Secondary Preferred Language	Spanish
Audio Description	Off
Mixing Level	0
Dynamic Range	Compressed
MPEG Audio Level	0

Change   RETURN Back

Dedicated key on remote control for audio description

Industry Example: Option Menu

Option Menu

Audio Description	Off
Multi Audio	eng
Monaural Audio	No monaural audio
Subtitle Language	eng
Volume Correction	
Safely remove USB	

Select
Change · EXIT
· RETURN

Dedicated key on remote control to access Option Menu

Marcaroni   11:51
11:50 - 12:05
‹ Now ›   Exit info   All DVB Channels

Hanes Meical sydd gan Marcaroni a'i ffrindiau heddiw - Meical a'i ddillad tu chwith, ben i waered! Today's story's about Meical - the boy who's dressed back to front and upside down! [S]

STTL TEXT Multi Audio

Indication of available accessibility services taken from SI Data

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Text-to-Speech (TTS)

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TTS Specification

➢ High level agreement between Digital Europe (DE), European Disability Forum (EDF) and European Blind Union (EBU)

➢ Objective: Person operating the broadcast receiver using the speech interface should have access to similar information as with a graphical user interface

➢ Option on the Media Renderer to speak out textual information

➢ Text-to-Speech functionality for a broadcast receiver with text-to-speech system one device, i.e. a receiver with an integrated text-to-speech generator or may be two devices, i.e. a receiver interfacing with an external text-to-speech device

➢ Documents submitted for formal standardization to IEC (International Electrotechnical Commission) and UPnP (Universal Plug and Play Forum)

Text-to-Speech (TTS) Example

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Text appearing, e.g. service information or menus, on the screen will be spoken out loud

Next Steps

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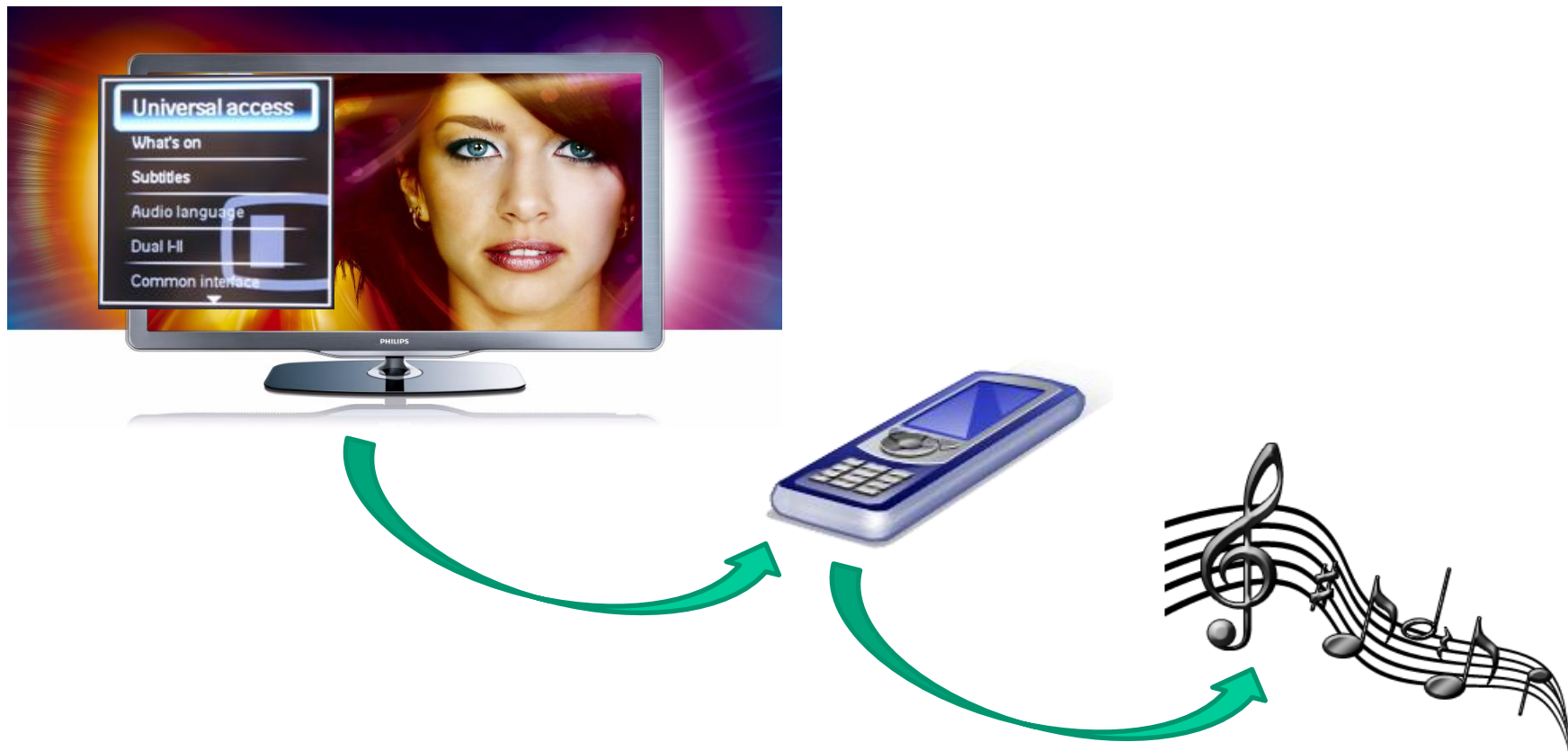
HybridTV

➢ Would enable additional access to specific accessibility services, e.g. an online version of the movie with audio

➢ HybridTV service platforms come in place in the coming years

➢ Services may then be made just making use of the available platform

➢ The service application is determining the accessibility features, i.e. are provided by the broadcaster

Example HbbTV

Resolving Barriers

No large market demand accessible products and no possibilities for manufacturers to initiate such demand. Can you help in creating market demand?

Economy of scale is very important to drive down development costs and cost of technology itself. Therefore market fragmentation must be avoided. Follow best practice of UK market?

Technology for e.g. audio description is in place in receivers. How can the whole value chain, i.e. content providers and broadcasters, be stimulated to provide for accessible content?

Conclusion

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- Successful cooperation manufacturers and interest groups

- First phase of cooperation (self commitment) already lead to real products in the market

- Support of Broadcasters required, i.e. for Audio Description

- Good progress on specifying advanced features (TTS)

- Market development and one EC market required

Messages

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All parts of the value chain are important and necessary in the process of delivering accessible DTV to viewers with disabilities. Accessibility can only be delivered if every part of the value chain is accessible and interoperable. For instance, if a TV set is made accessible through voice output but there are no TV programmes with audio description, a blind user cannot enjoy TV.

The EDF and DIGITALEUROPE cooperation illustrates how joint work can deliver concrete results (e.g. TTS specifications). It is necessary to actively involve all stakeholders, especially from the broadcasting side to produce sufficient content for accessible DTV, as well as TV operators. To deliver accessible DTV in reality, it is necessary to have the active support of national regulators in member states to implement the legal obligations arising from the AVMS Directive (article 3(c)). For instance, quotas of audio described programmes and programmes translated into sign language have been introduced in Spain and the UK, this represents an example of best practice.

To avoid fragmentation it is essential to deliver accessible DTV in accordance with the single market principles especially by following the European standards (DVB/ETSI) as well as other relevant standards (IEC/ITU).

Thank you.

Please contact us for further details

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