

Forecast 2007

THE ANNUAL UPDATE FOR EBU MEMBERS



BMC / DMC activities in the current period

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DMC chairman

BMC ? DMC? SMC ?



- After the decision of the Technical Committee, from July 2007 the BMC Committee was split into:

DMC

(Delivery technology
Management Committee)

SMC

(Spectrum
Management Committee)

SYSTEMS:

- Linear and non-linear services and applications
- transport layer (MPEG-TS, IP, ...) and upper layers (middleware, **API**)
 - openness of platforms
 - access to contents (EPG, ESG)
- terrestrial, satellite, and cable // **IPTV** and Open Internet
 - unicast, multicast and **P2P**
- Content protection // **Digital Rights Management**
- Home networks, **PVR** and Mediacentres.

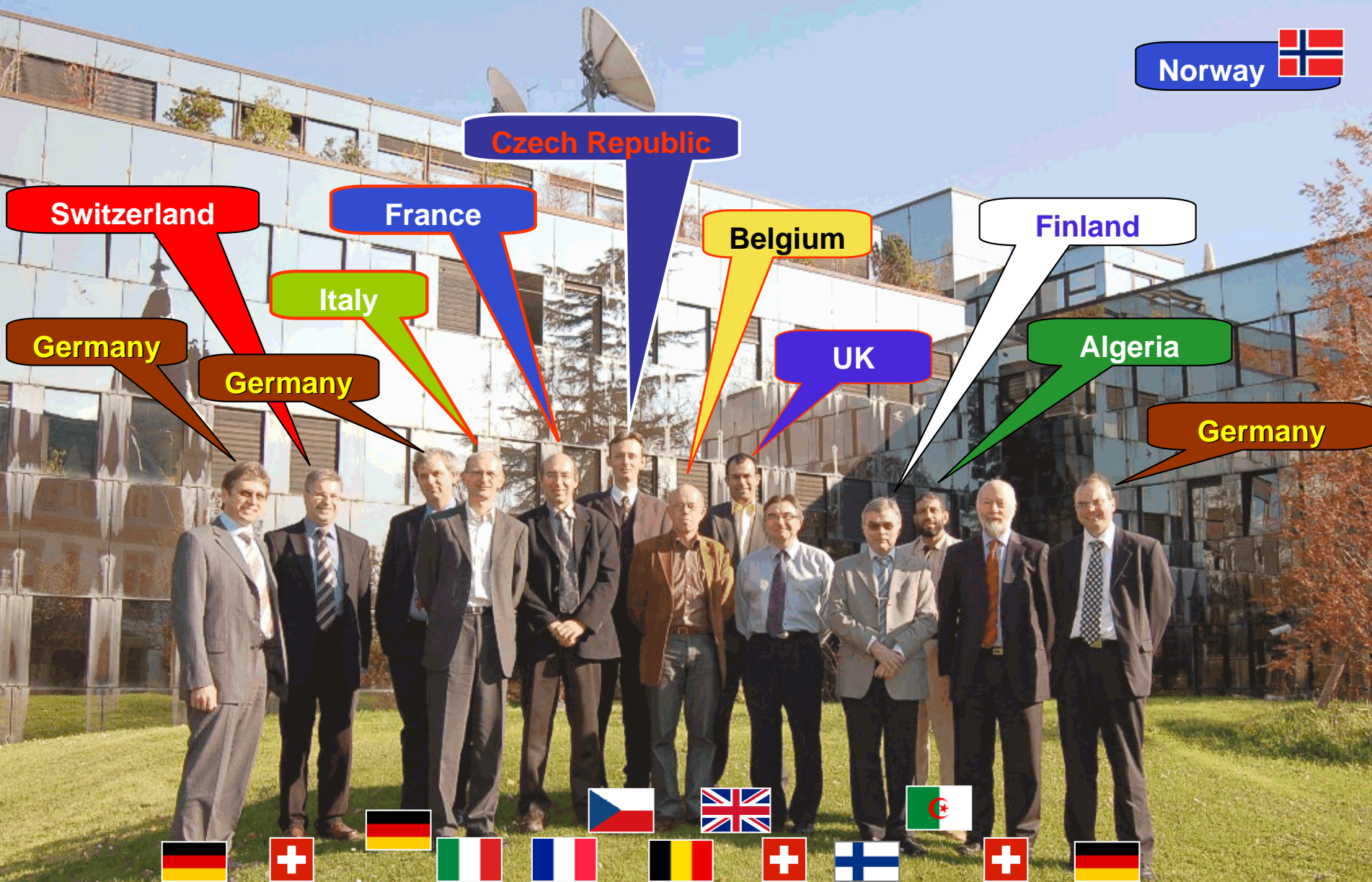
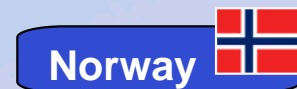
DMC overview



- The DMC will study solutions in relation to:
 - new **broadcast systems** and **new delivery systems**
 - new technologies for **processing and presentation** of audiovisual & multimedia contents (head-end and consumer)
- The DMC will be active on the **technical** front but keeping also into account **economic** (and **political**) implications
- Links with the SMC will be maintained in order to:
 - evaluate the feasibility of new systems
 - to assess the potential impact on existing services

Full Terms of Reference: <http://wiki.ebu.ch/technical/DMC>

The DMC members (15 people – 10 countries)



Ongoing activities ...



- From the last Forecast (2006 edition) three meetings took place:
 - 37th **BMC** meeting (February 2007)
 - 38th **BMC** meeting (14-15 June 2007)
 - 1st **DMC** meeting (6-7 November 2007)
- **Topics on the agenda / Discussion papers:**
 - DVB-T2
 - Digital dividend (in co-operation with SMC)
 - Mobile TV
 - Digital Rights Management
 - DAB/DMB/DAB+ options
 - HD-Radio

Discussion papers (follows...)



- Drafting groups to develop various discussion papers on topics of particular technical and strategic interest:
 1. comparing the use of **IP (Internet Protocol)** versus **MPEG-2 Transport Stream** in DVB and DAB environments
 2. explaining how the **developments in IPTV** are proceeding, and collecting the requirements of broadcasters for broadband service delivery
 3. **HD migration** strategy (from today's **DVB-T** transmission with **MPEG-2** A/V coding towards tomorrow's **DVB-T2 with MPEG-4**)

Current Projects



- Project Groups:
 - **D/MAE** (Multichannel Audio system Evaluation)
 - **D/P2P** (Peer-to-Peer networks)
- Focus Teams:
 - **D/HDC** (Evaluation of HDTV codecs)
 - **D/GAV** (Guidelines for the use of AVC in DVB)
 - **D/DABA** (DAB Audio)
 - **D/HN** (Home Networking)

Project Group D/MAE



Multichannel Audio system and quality Evaluation

- D/MAE report on “EBU evaluation of multichannel audio codecs” has now been **published** (Doc. Tech 3324 – September 2007):
 - 1st phase: 448 kbit/s are required for multichannel sound
 - 2nd phase: 320 kbit/s may be sufficient for the AAC codec (all sequences except applause)
- Next:
 - 3rd phase: started on evaluating cascaded multichannel sound codecs (contribution-distribution and emission):
results by February 2008
- An EBU/EICTA workshop was organized to explore a roadmap for roll-out of MCA services
 - manufacturers expressed concerns about significant impact on products if they have to incorporate a whole range of codecs (DD and AAC/DTS)
 - broadcasters expressed different interest:
 - managing legacy situations for those who already started services,
 - optimizing bandwidth using new - less capacity demanding - systems



Project Group D/MAE



Multichannel Audio system and quality Evaluation

- Is a clear EBU recommendation on one single codec possible ?
 - An “EBU position paper on HDTV audio strategies” is going to be approved by the DMC in the next few days:
 - Dolby Digital (or DD+) and HE-AAC (High Efficiency AAC) are excellent systems (but both have advantages and disadvantages and are complementary thus required by broadcasters to fulfil their mission)
 - It is not possible to reduce the choice to a single system
 - The optimum choice is often subject of commercial judgement that depend on case-by-case market requirements
- Some open questions still remain to provide members a clear guidance on how to introduce MCA
 - Further tests are required for the bitrate range (200 - 400 kbit/s), metadata interoperability, cascading (including emission codecs) and operational behaviour of consumer electronics products.

Project Group D/P2P



Peer-to-peer networks

- The Group has been building a **background paper** on Peer-to-peer technology, so far in the form of a **Wiki**, which will be converted to form a new document in the **Tech 3000** series.
- Development of an **open source P2P system** for use by the EBU Members: it is based on the **'Tribler'** system (from the Technical University of Delft) and adopts a universal, low cost, open source approach
- **EBU Media Portal**
 - Cooperation between EBU and **Octoshape** continued (Eurovision Song Context) and further work may result in an **EBU Media Portal** for Members use (supervised by the Eurovision TV department)
 - Beta **technical trial** is going to be conducted under D/P2P auspices

Focus Team D/HDC



Evaluation of HDTV codecs

- Main activity has been HDTV codecs evaluation
- Main results after 1 year work:
 - 25% improvement in performance in the last year
 - continuously evolving situation and SW upgrades ...
 - 4 of 6 encoders already evaluated ...
 - ... **FULL results will be ready by December**

Focus Team D/GAV



Guidelines for the use of AVC in DVB

- **Scenarios considered**
 - Scenario 1: Terrestrial fixed HDTV H.264 AAC/Dolby/DTS
 - Scenario 2: Terrestrial fixed SD H.264 AAC/Dolby
 - Scenario 3: Terrestrial Mobile SD H.264 AAC
 - Scenario 4: Satellite fixed HDTV H.264 AAC/Dolby/DTS
 - Scenario 5: IPTV fixed HDTV H.264 AAC/Dolby/DTS
 - [Scenario 6: Public Internet TV H.264/WM10 AAC/WMA]
- **Terms of Reference to be reconsidered**
- **an option is to join the two groups D/GAV & D/HDC (being both involved with HDTV stuff and having the same chairman)**
- **Also new issues could be introduced:**
 - **Scalable Video Coding**
 - **Multiple description coding algorithms**

Other groups



- Focus Team **D/DABA**
 - Evaluation of new audio coding schemes based on AAC (Advanced Audio Coding)
 - preparation of the test sequences ongoing
 - next meeting by mid dec. '07
- Focus Team **D/HN**
 - **close the group and open with new ToR about “Delivery Aspects In-home Networks”**

Specialised meetings



- EBU/EICTA workshop on “Multichannel audio for HDTV services” (29 June 2007)
 - about 50 participants from 17 countries (including US as observers)
- IP & Broadcasting 2007 (2-3 May 2007)
 - more than 110 participants from 27 countries



we need your support ...



according to our mandate
Project Groups dealing with
new delivery systems and
platforms will be created

we will be looking for experts
involved in programme
distribution on **alternative
platforms**, new media, ICT
technology, ...

experts are invited!



Thanks for your attention !

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