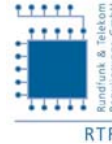


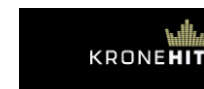


HDTV Development at ORF

Austrian Broadcasting Services Customers & Partners



Shareholder: ORF 60% & Medicur 40% (Raiffeisen)



Why Start in 2008? Obligations for ORF



Start of new Management at ORF in 2007

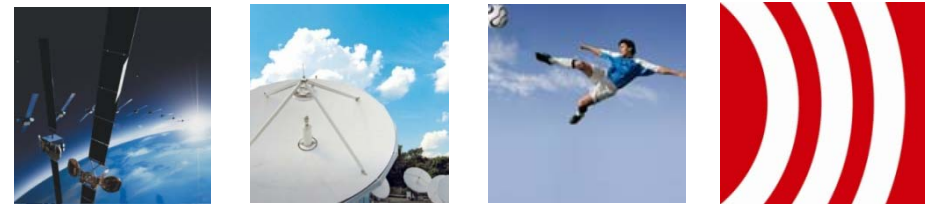
- »»» What would be necessary for **HDTV** at ORF

Incentive for Public to use it

- »»» Increasing number of HD-ready flatscreens and size
- »»» Sport Event EURO 08 Austria & Switzerland
- »»» Olympic Games Peking



Legally no dedicated new HD-Service possible



HD TV



Technology

High Definition for Austria



- Start May 2008 for ORF1 HD in High-Definition via ASTRA 19,2 Transponder 57
- ORS to start full transponder for HD in DVB-S2 at 01.01.10
- Scrambled Service (CryptoWorks/Irdeto) for Austrian territory
- ORF1 HD also for Premiere Customers
- Transmission of ORF1 HD in EBU* Standard 720p/50 with MPEG4/H.264-Format → Difference to ANIXE/Premiere
- Clear need for Certification = Set-Top-Box specification



High Definition for ORF Technical Environment



To Do's:

Engineering, implementation, startup, Test phase:
HD-Control room, HD-Master control

Non-linear Edit for Promotion and Films

Upgrade:

2 OB Vans for HDTV (incl. Cameras)

Mobile HDTV SAT-Uplink

Linear HD-Edit

→ Costs/Efforts

→ ORF invested heavily



High Definition Playout



OB Van



Master control



Control room



Quality?

- Availability of Devices and Cameras → 1080i
- Production of Events → 1080i
- Movies and Series → 1080i
- Archive systems and Tapes → 1080i

→ Currently 1080i necessary as production standard

Next goal migration to 720p → Final Goal 1080p

Transition Phase



How to send the signal to the customers?

- MPEG4, H.264 service bit rate 14MBit/s
- Coding efficiency improved and Moving Pictures more efficient
- As you know all flat screens are progressive!
- ORF followed EBU and IRT → 720p



HD TV



Content

Program activities Implications



- Simulcast of HD and SD is a legal obligation

))) Up scaling of SD Material



))) Twice bit rate of SD

))) As far as we know best SD quality on market

- Euro 2008
- Olympic Games 2008

Demonstrated what a fundamental jump HD Quality represents



Program activities Implications



- Movies and Series

-))) First high material costs, now affordable (economically viable) rate

-))) Most Series/Movies not produced in HD

- Organization and handling of material

-))) In-house handling of material

-))) Content sellers are not prepared

-))) Pioneer work for the market



Program activities Implications



- Own in-house production live (Skiing)
 -))) Increased production, contribution costs
 - Next Steps "Dancing with the stars" Q1 2009
 -))) Further upgrade of technical equipment
- Incremental rollout,
high prestige program with large audiences



HD TV



Market

- Goal: Not to disturb market Information and specification for Set-Top-Box vendors
- Road show in Austria for Dealers, in partnership with ORF/ASTRA
- Certification for Set-Top-Boxes / Test lab
- Promotion Trailers / Promotion Folders for Retailers
- PR / Press activities

→ Smooth Rollout



TV Screens in Austria



Austria: 3.4 Mio TV households, cable 37%, SAT 55%, Terr. 8%

2000-2007 4 Mio TV Devices sold, 600.000 HDTV (15 %)

New sold Devices:

2004 <1% HDTV ready

2005 7%

2006 31%

2007 65%

2008 further increase



HD Boxes in Austria



2006-2007 70k HD Boxes in households (Premiere)

Jan-Jul 35k new sold Satellite, 15k Cable Boxes
Total app. 120k Boxen

App. 2.500-3.500 new HD Boxes per month
10-15% market share from satellite market

Special Austrian DVB-T and SAT market:

In 2007 1 Mio Boxes were sold to 3.4 Mio Households due to ATO!



**HDTV is a further step to enjoy Entertainment in
the 21st century on TV!**

Enjoy HD TV!

