

### Hybrid Broadband Broadcast: -a Consumer Electronics perspective

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#### High tech trade association

- Digital Europe
  - Consumer Electronics
  - Telecom and Mobile
  - IT
- Digital Europe Broadcast (Renaud Di Francesco, Sony)
  - Address broadcasting issues
  - Consumer perspective: reception emphasis
  - HDTV (Dietrich Westerkamp, Thomson)
    - HDReady and HDTV labels to stimulate market growth, for retailers and consumers
    - 3D next
  - Digital Radio (Andreas Schneider, Sony)
    - Bridge gaps, harness pan-European digital radio reception
    - Value chain approach: programmes/transmission/reception
  - E-book for TV reception in Europe (Nigel Prankard, Panasonic)
    - Implementation guidelines
    - TV receivers
    - Interference resolution
  - TV accessibility (Ulrike Haltrich, Sony; Frank Kamperman, Philips)
  - Free to Air signalling (Hamid Alikhani, Panasonic)





# Large installed base of HDTV sets in Europe

- Successful growth initially stimulated by HDReady, then HDTV label promotion
  - Labels defined by industry in Digital Europe
  - Feature clarity for retailers and consumers
- Good progress of HDTV in Europe
  - Most TV sets sold are HDTV sets
  - 2<sup>nd</sup> HDTV set market growing
  - Most TV households endorsing HDTV
  - June 2009: all broadcasters recognise that HDTV production is today's production, not tomorrow's
    - ◀ - European Broadcasting Union Technical Assembly



# Feeding **D** European HDTV Homes



- more <u>HDTV programmes</u>
- <u>additional services</u> (on-demand, interactive) enhancing the variety and choice of home entertainment
- Broadband as a platform to deliver those additional services
- Includes <u>IPTV</u> (ref to Open IPTV Forum, and success stories of IPTV in Europe)



### Broadband seen from the HDTV set



- Choice of contents
  - and entertainment forms
- Quality of experience requirement
  - for end-to-end delivery of service
  - Option 1
    - + MANAGED networks
      - ► IPTV
  - Option 2
    - + OPEN Internet, multiple operator domains, over the top service
      - → QoE issue
  - NB <u>both</u> will happen





## The interactive home entertainment, at last

- Interactive DTV
  - not new concept, many intents already
  - BUT now is the time
- IP based
  - even broadcast going full IP, anyway
- Need for open standards
  - media driven services on TV, using IP broadband infrastructure
- Home Network
  - IEC TC100 standard, based on DLNA
- The issue of video on the interactive IP networks
  - congestion?
    - You-tube, BBC i-player: complaints by some Internet Service Providers
  - Traffic shaping?
    - Impopular with consumers, tempting for operators
  - Broadcasting to the edge when relevant
    - Classical broadcasting advantage (large audiences)
    - However integration in new integrated service package may provide simplicity of retrieval

