Connected TVs Symposium
TNT 2.0

December 5, 2011

Muriel SANGOUARD

With HbbTV 1.1.1 : broadcasters have the opportunity to provide a wide range of enhanced services to TV viewers

(OK) •Enhanced TV, interactive ads, voting…

● •Portal apps: Guide, informations, games, catch-up TV…

On air since Summer 2011

Broadcasters want to go further
•Premium contents (VOD, Catch-up TV)
•Pay services : TVOD, SVOD
•Streaming live : video services, live channels, event channels…

HD Forum led the initiative for the French market
•To define specifications
•To create a BtoC brand : TNT 2.0

The work started on November 2010
A dedicated working group :
Manufacturers, Broadcasters and Industrials

Technical specifications

Published in July 2011
Input to HbbTV 1.5
Proof of Concept available since October 2011

TradeMark Licence Agreement

TML Manufacturers : under discussion
TML Broadcasters : to be initiated
Target : end of year 2011

Test suites & certification regime

Test suites overview : under validation
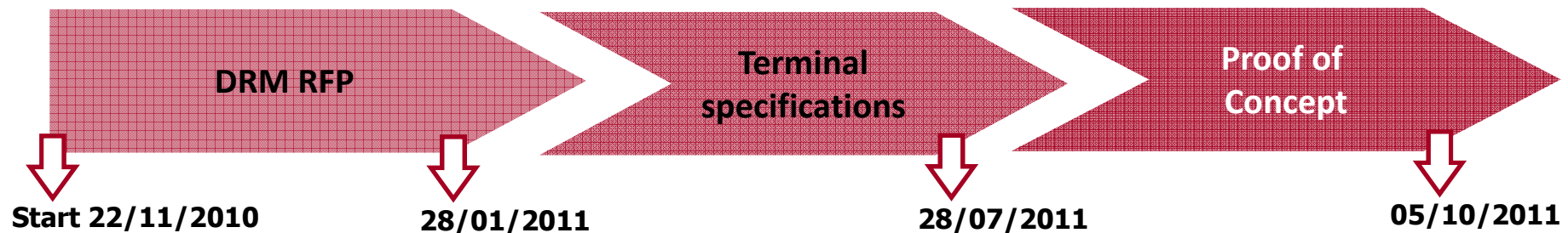Target : February 2011

Communication

Work to be started
Definition of communication messages and tools
towards end-consumers and retailers
Target : February 2011
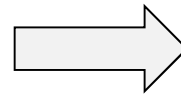
- **Leverage existing awareness to create a brand that stands for :**
  - Simplicity
  - Proximity
  - « internet enabled»

- **Create a unique reference to simplify communication for :**
  - End-users
  - Retailers

a fine-tuned process to achieve specifications in a tight schedule

DRM RFP → **Terminal specifications** → **Proof of Concept**

Start 22/11/2010   **28/01/2011**   **28/07/2011**   **05/10/2011**

Manufacturers and broadcasters were asked :
•To specify DRM needs
•#DRM(s) and preferences
RFP to DRM & CAS vendors
Final decision by HD Forum board : MS Play Ready and Marlin preselected

Dedicated subgroup : Manufacturers, Broadcasters, DRM vendors, TDF
•To specify TNT 2.0 specifications over HbbTV 1.1.1
•To prepare an input to HbbTV 1.5
1st official version : beg. July 2011
Approval by HD Forum board : end of July

To validate global workflow
•HbbTV+DASH+ Common Encryption
•With 2 TVs implementing the 2 DRM solutions
Test streams ready since beg. October 2011

- **HbbTV 1.1.1**
- **Adaptive streaming to address all possible internet connection situation**
- **Common encryption format to simplify and reduce costs of video workflows**

- **One DRM mandatory (Intertrust Marlin and MS Playready pre-selected)**

HbbTV 1.5

TradeMark Licence and certification regime

2 topics by 2 dedicated subgroups
•**TML Agreement** : self certification based on test suites built under HD
Forum control
•**Test suites** : HD Forum selected Farncombe & Digital TV Labs as provider
and pays part of the costs
3 deliverables: Test suites overview / detailed specifications/tests streams

Communication

Promotion tools and messages will be defined
•For end-users
•For retailers
A dedicated subgroup will start its work in the 2 coming weeks

MPEG DASH   Common Encryption

Target is Spring 2012 : enriched TNT 2.0 services on first TNT 2.0 TVs !

Symposium, December 5ᵗʰ 2011

Panel Introduction: Security & Streaming Challenges in the horizontal model

Jean-Marc Racine

Managing Partner, farncombe

WHO WE ARE

Our People

- We are specialised in media and telecommunications

- Our team combines sector knowledge, analytical skills and technical expertise

- Our senior management has practical, executive experience in the industry

Our Practices

- Technology
- Strategy
- Programme Management
- Content Security
- System Integration
- Engineering Services
- Test & Certification
- Design

Our Clients

- Broadcasters
- Pay-TV and Telecom Operators
- Private Equity and Investment Groups
- Regulators and Industry Groups
- Content Providers

AT THE ROOT OF SECURITY: A 'CHAIN OF TRUST'
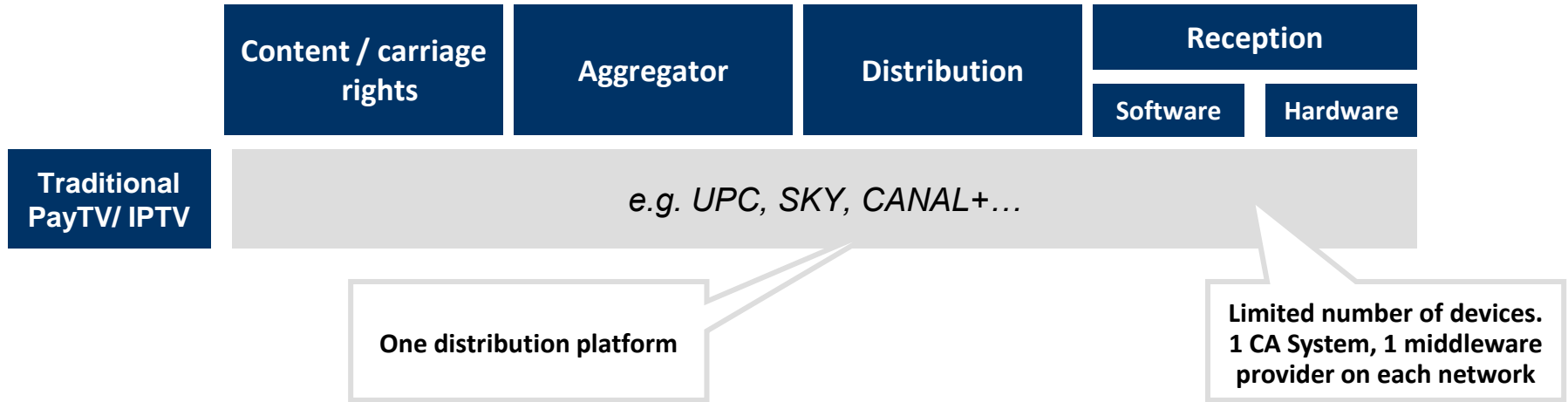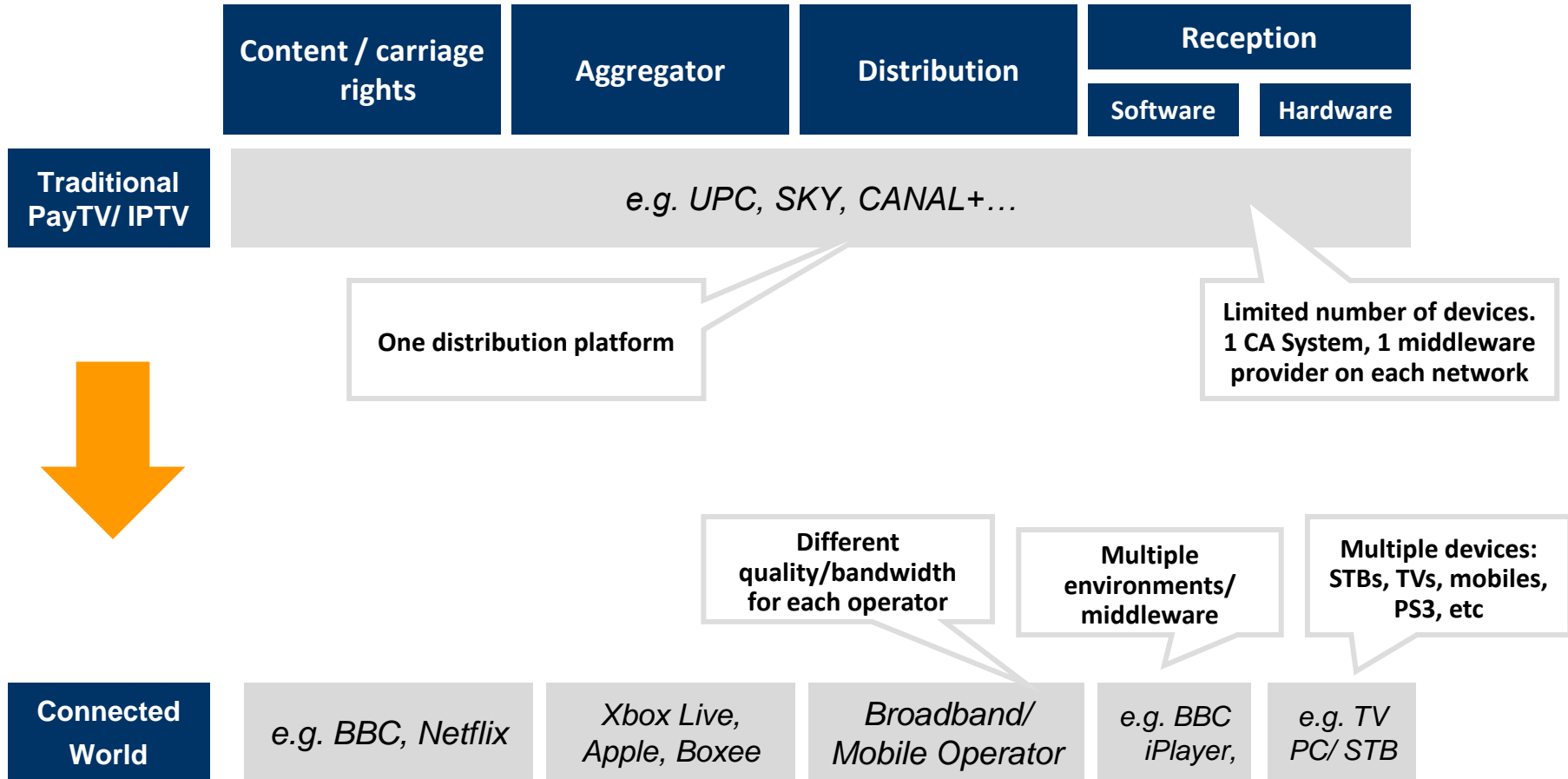
Consumer

↕

Card

↕

ATM

↕

Bank

BUT WHO CAN BE TRUSTED IN THE CONNECTED WORLD?

Over-the-top video delivery in a horizontal retail model breaks down the traditional pay-TV chain of trust and leads content providers into a potentially uncontrolled environment
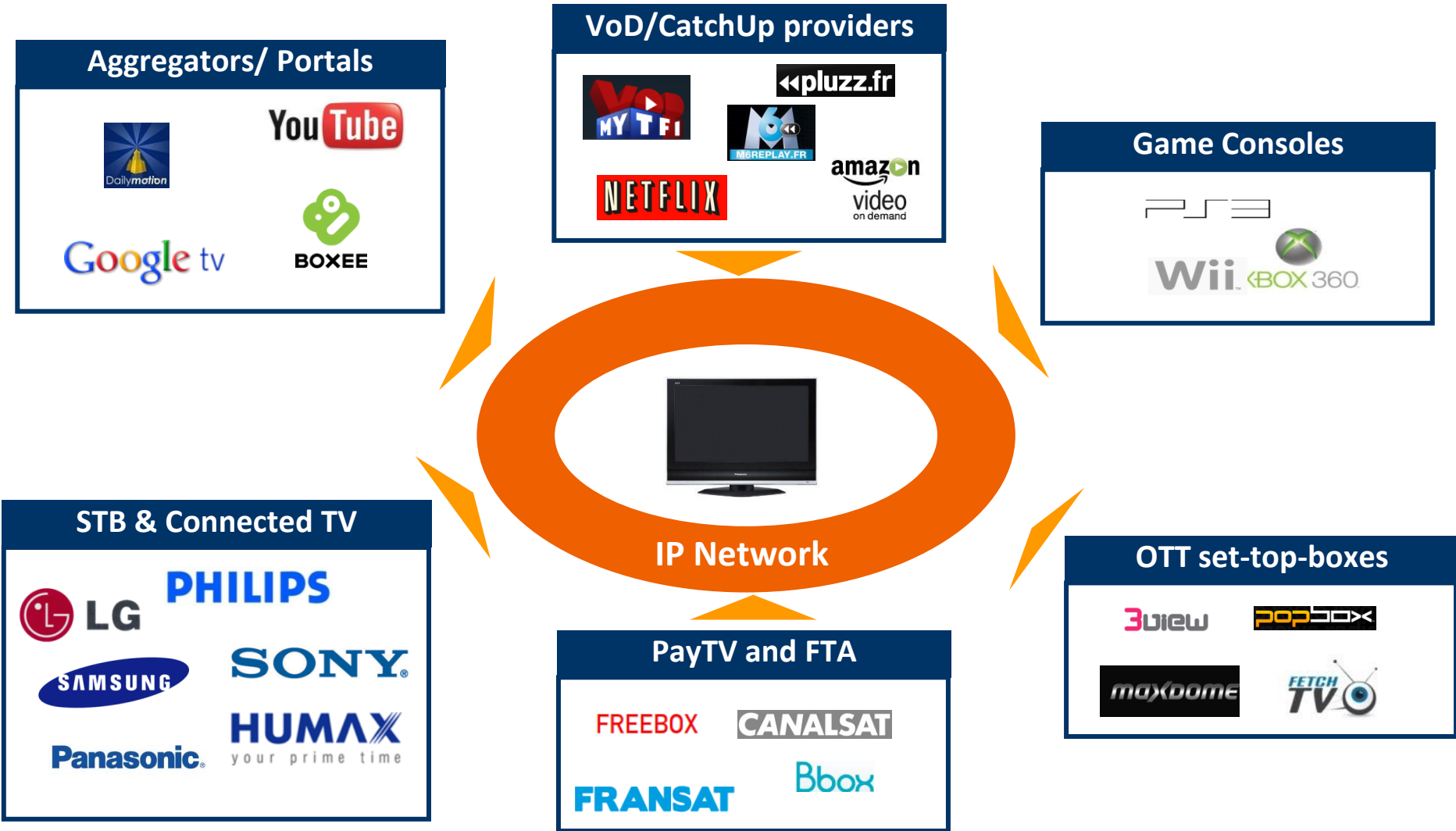

Content / carriage rights	Aggregator	Distribution	Reception	
			Software	Hardware

Traditional PayTV/ IPTV — *e.g. UPC, SKY, CANAL+…*

One distribution platform

Limited number of devices. 1 CA System, 1 middleware provider on each network

farncombe

BUT WHO CAN BE TRUSTED IN THE CONNECTED WORLD?

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	Content / carriage rights	Aggregator	Distribution	Reception	
				Software	**Hardware**
Traditional PayTV/ IPTV	*e.g. UPC, SKY, CANAL+…*				

One distribution platform

Limited number of devices. 1 CA System, 1 middleware provider on each network

Different quality/bandwidth for each operator

Multiple environments/ middleware

Multiple devices: STBs, TVs, mobiles, PS3, etc

Connected World	*e.g. BBC, Netflix*	*Xbox Live, Apple, Boxee*	*Broadband/ Mobile Operator*	*e.g. BBC iPlayer,*	*e.g. TV PC/ STB*

CONNECTED TVS: CONTENT FROM MULTIPLE SOURCES

The Internet has driven both manufacturers and content players to compete for direct access to the "connected TV"

Aggregators/ Portals

VoD/CatchUp providers

Game Consoles

STB & Connected TV

IP Network

OTT set-top-boxes

PayTV and FTA

THE INDUSTRY RESPONSE: MULTIPLE SECURITY SOLUTIONS

Multiple companies, all with different perspectives on the security requirements to be fulfilled, are competing to deliver solutions for connected devices

PC/Apple solutions

Industry Initiatives

Software CA Players

Legacy Pay-TV CA Players

Non-exhaustive examples of suppliers

SECURITY IN CONNECTED HOMES REQUIRES CO-OPERATION

Building a secure platform to enable content delivery to connected devices is challenging and requires the co-operation and commitment of all parties involved

Device manufacturers

- Need to provide devices compliant with hardware and software security requirements of DRM vendors
- Must commit to provide upgrades to maintain security
- Need to provide adaptive streaming solution to ensure highest possible content quality

Security Providers

- Need to comply with broadcaster and studio requirements
- Must supply a trust model complying with the needs of broadcasters, operators and manufacturers
- Have to demonstrate ability to maintain a secure platform for the lifetime of the device

OBJECTIVE:

A secured content distribution environment for connected devices offering the optimum streaming experience to consumers

Broadcasters/Operators

- Need to be able to operate a secure, multi-device platform meeting the requirements of content providers, including for HD and premium VOD content
- Need to ensure optimum streaming quality for its content, to extend the broadcast experience in the broadband world

Consumers

- Need an affordable solution they can identify, understand and which is designed to encourage them to consume content

REASONS FOR HOPE ?

Studios, CE Manufacturers, Network Operators and Standardization bodies are looking at enabling secured OTT content distribution, but many challenges remain!
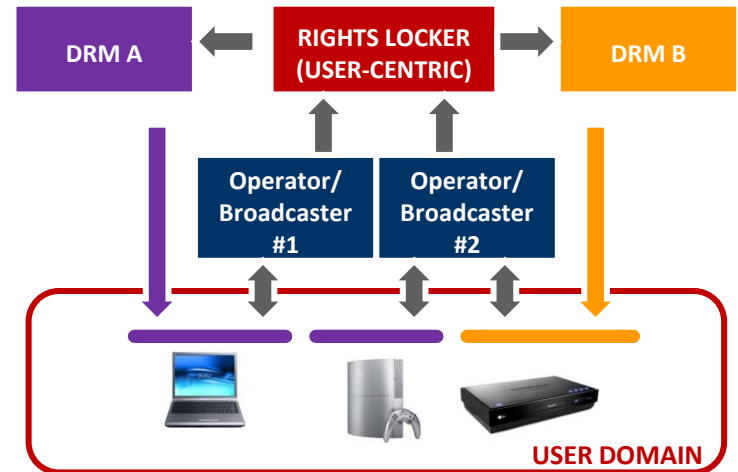
CE MANUFACTURERS

CONNECTED TV

Samsung Apps

HbbTV

BRAVIA Internet Video

NET TV

Google TV

STUDIOS: ULTRAVIOLET

DRM A

RIGHTS LOCKER (USER-CENTRIC)

DRM B

Operator/ Broadcaster #1

Operator/ Broadcaster #2

USER DOMAIN

PAY-TV OPERATORS

TV EVERYWHERE

STANDARDS

MPEG DASH Adaptive Streaming protocol ISO/IEC 23001-6

Common Encryption ISO/IEC 14496-12 (ISO/IEC 23001-7)

PANEL: CONTENT SECURITY & STREAMING

Thierry Fautier, Sr Director Convergence Solution

Gilles Bocon-Gibod, SVP & Chief Architect

Xavier Pouyat, Senior Program Manager

Rached Ksontini, Product Manager

Guillaume de Saint Marc, VP R&D New Initiatives

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Overview Germany Connected TV

December 2011, Lennart Sohst

Facts and Figures

▲ **1 of 3 sold TV sets is a connectable TV set**

▲ **more than 4,5 Mio. connected devices sold**

▲ **10 % of households have a connected TV Set**

▲ **connection rate approx. 13%**

▲ **non-linear A/V content most important feature**

Source: GfK Retail and Technology 2011

Connection Rate of 13 %

13%

87%

Source: GfK Retail and Technology 2011

Source: GfK Retail and Technology 2011
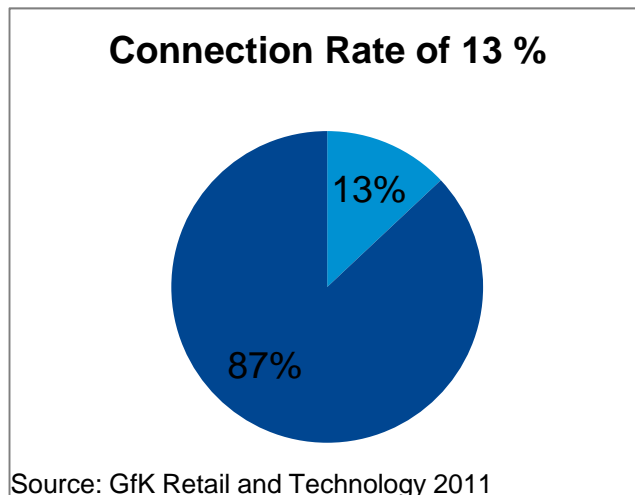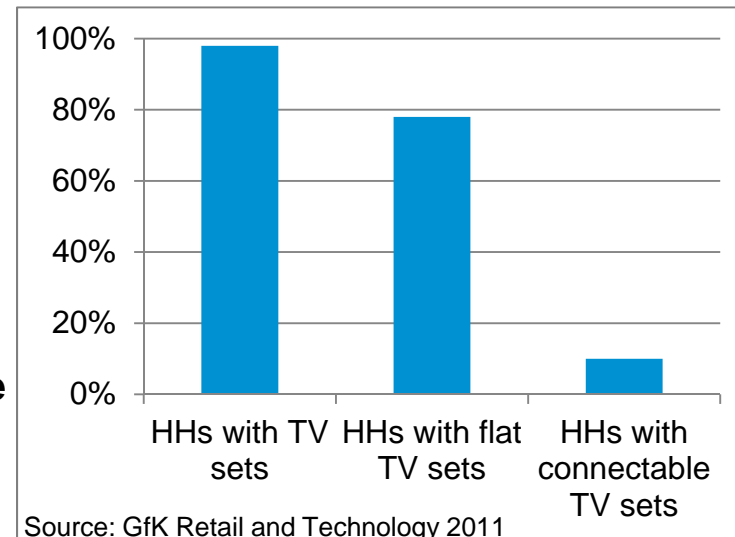
▲ **approx. 4.8 Mio connected devices (STBs and TV sets) to be sold in 2012**

▲ **in 2016 approx. 50 % of HHs have connected a device to the internet**

Source: Goldmedia Innovation GmbH, 10/2011

Activities of the German TV Platform

▲ **working group „Hybrid TV" founded in 05/09**

▲ **more than 25 organization/companies participating (manufacturers, broadcaster, infrastructure provider, service provider etc.)**

▲ **main objective:**

  • platform for all stakeholders to discuss and identify commercial requirements for Hybrid TV in Germany and enable the market

▲ **release of White Book in 09/11**

▲ **release of Usability Guide in 11/11**

interdisciplinary forum for cross-sectoral exchange of information and opinions among involved parties from different fields in the media environment (broadcaster, industry, infrastructure provider etc.)

White Book „Hybrid-TV"

- ▲ **explanation of Hybrid-TV, Smart TV, OTT etc.**

- ▲ **report of the current situation and market in Germany**

- ▲ **describing future tendencies**

- ▲ **discussion of business models for Hybrid-TV**

- ▲ **reflecting the achievements and next steps of the working group**

- ▲ **introduction to HbbTV**

DEUTSCHE TV-PLATTFORM

WHITE BOOK HYBRID-TV

Arbeitsgruppe Hybride Endgeräte zur
Integration von Broadband und Broadcast
der Deutschen TV-Plattform

Version 1.0, August 2011

HbbTV- a success story in Germany

SES

ETSI Release

Launch HD+ Smart TV

market launch

wg "Hybrid TV" founded

merging with H4TV

Showcase IFA/IBC

start of work

- plenty of HbbTV apps from various broadcasters (e.g. RTL, P7S1, Sport 1, Yavido etc.) launched
- variety of HbbTV devices from different manufacturers (e.g. LG, Samsung, Sony, Inverto, TechniSat, TTG etc.) developed and market

| Beginning of 2008 | 09/08 | 03/09 | 04/09 | 11/09 | 06/10 | 11/11 |

HbbTV – device base deployment

Western Europe: HbbTV-compliant TV sets installed base

- Total Western Europe connectable TV installed base (000s)
- HbbTV-compliant TV installed base (000s)

By 2014, HbbTV-compliant TV sets will makeup half of total Western Europe connectable TV sets (60 Million)

Source: Screen Digest, HbbTV Workshop Copenhagen 2010
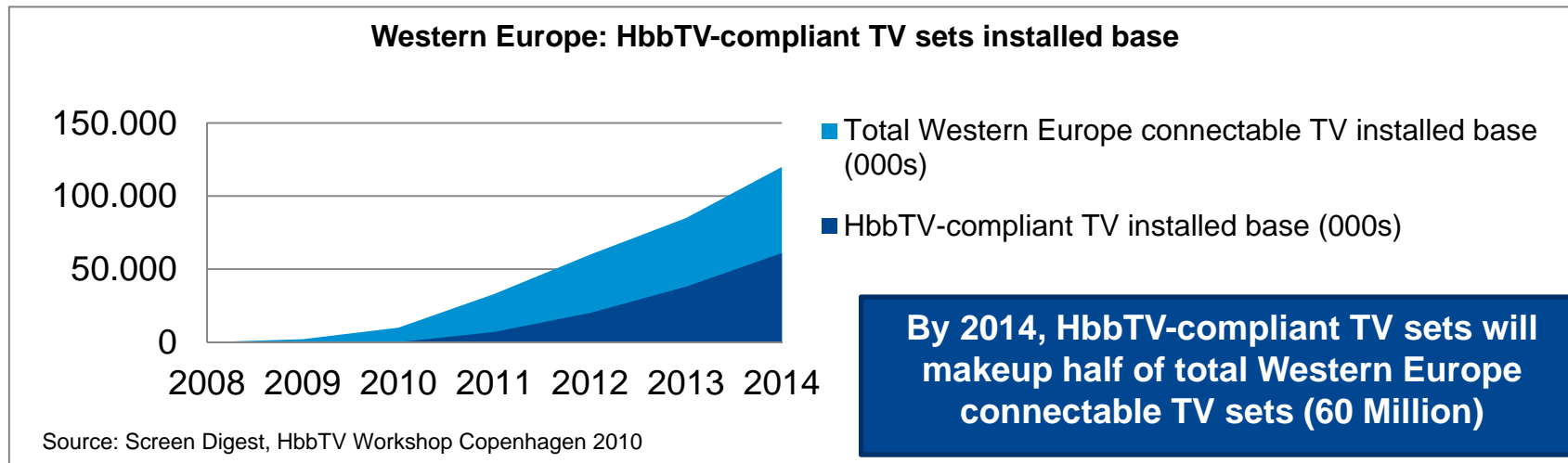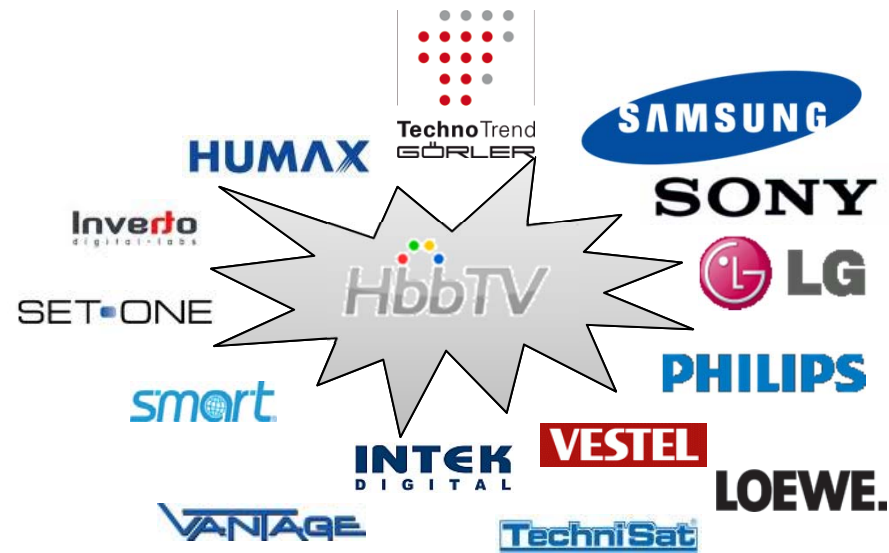
HbbTV – applications in Germany

> ➤ more than 20 broadcast-related applications available in Germany

> ➤ examples of broadcasters providing HbbTV: Das Erste, ZDF, RTL, P7S1, arte, Sport1, Yavido, rbb, BR

> ➤ more than 5 applications offered via satellite (DSM-CC) from Das Erste,Sport1, HSE24
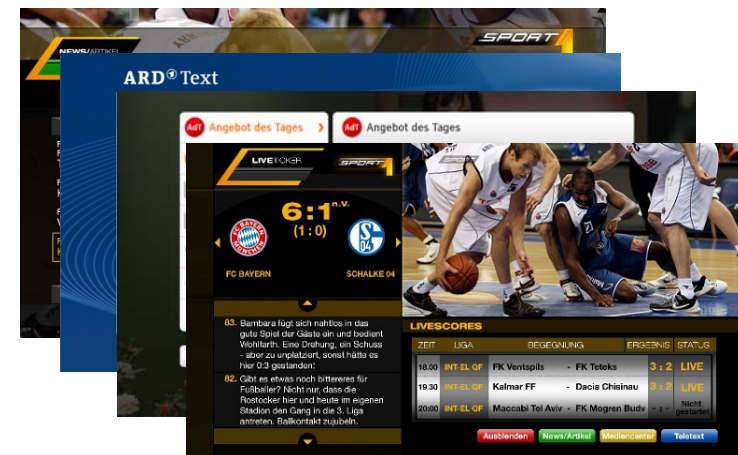
Summary

▲ **connected TV being well on the way in Germany**

▲ **HbbTV an important key component for the German connected TV market**

▲ **next challenge: reaching the end consumer**

SES

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thank you!

contact:

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lennart.sohst@aps.de

Senior System Engineer

Consumer Electronics

About the DTG

Independent , not for profit

Over 150 members, working in partnership

Publish the UK technical specification for digital terrestrial television (the D-Book)

DTG
Digital TV Group

DTG Technology Roadmap: D Book 7 And International Standards

MPEG
International standards for adaptive streaming

Digital licensing to the consumer supporting multiple deices

ISO **IEC**

ITU

DTG Digital TV Group
D-Book Part A

DTG Digital TV Group
D-Book Part B (CTV)

Coexistence with current Red Button Services (MHEG)

Interactive application handling

Basic IP Streaming Metadata

Browser Profile

DVB

ETSI

HbbTV
ETSI standard for hybrid TV launching in France and Germany

IPF OPEN IPTV FORUM
International standardisation for IPTV

DTG Digital TV Group
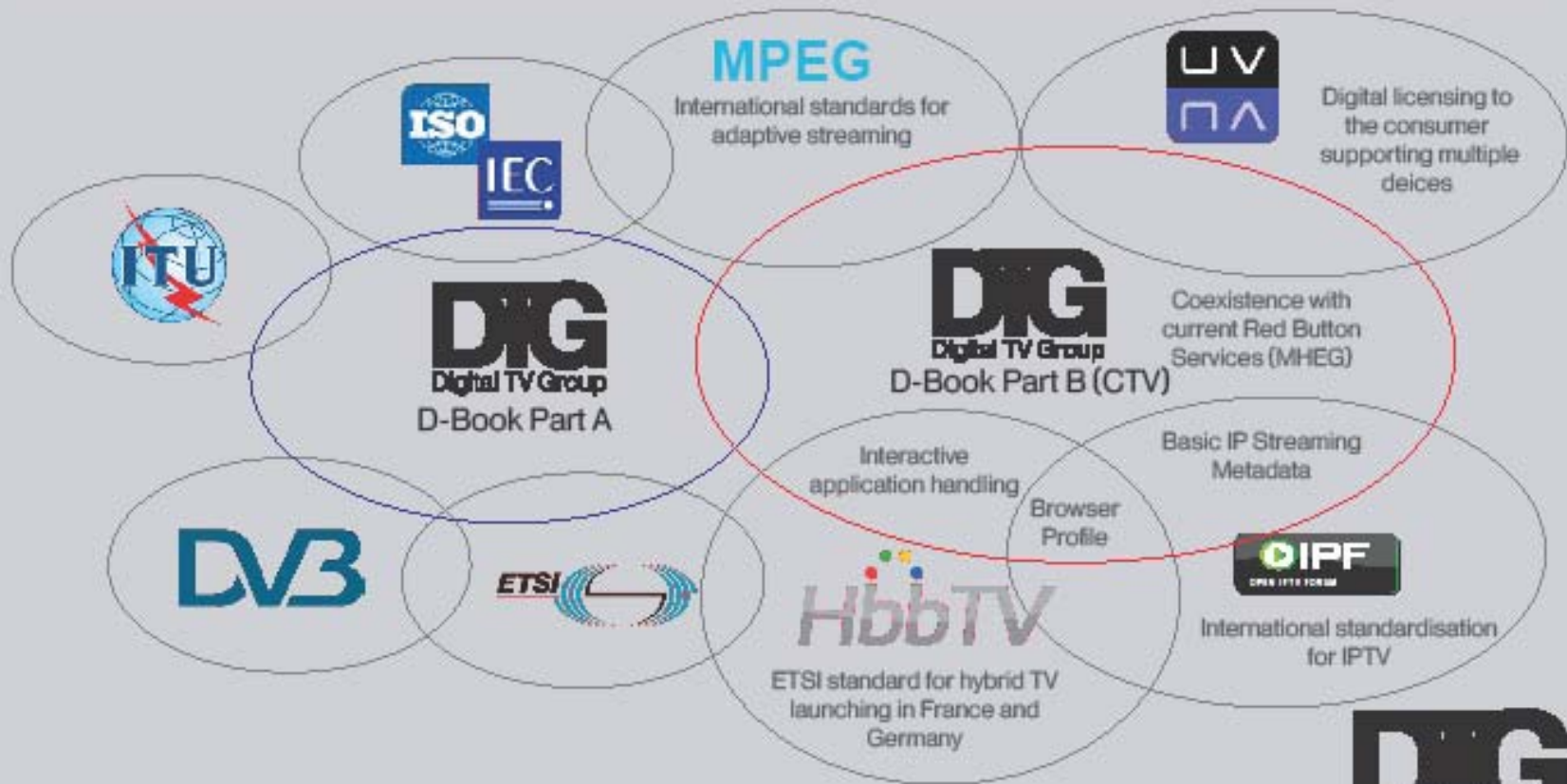
DTG Technology Roadmap:
Technical Feature Alignment

Freeview HD G2 (CTV)

freesat HD G2

youview

Remote Record
Reverse EPG

Adobe Air UI
Metadata Broker
Marlin DRM

DVB-T2
Receiver Mix AD
Target Region
Description

Adaptive Streaming
(MPEG-DASH)

Logical Channel Numbers
EIT Schedule EPG
Audio and Video Codecs
Active Format Descriptors
Subtitles
SI Compression
Content Management
Related Content (Green Button)
Accurate Recording
Series Linking
Alternate Instances
Broadcast Record Lists
MHEG (Red Button)
MHEG Interaction Channel
IP Delivery

Over Air Download
(DVB-SSU)
HbbTV Browser
(HTML)

DVB-S2
Broadcast Mix AD
Tunnelled SI
Postcode Database

Resident HTML App UI
PlayReady DRM
Apple Smooth
Streaming

Common Encryption

DTG Digital TV Group

Note: The size of the overlaps is not representative of scale and is a high level summary where some details may still be platform specific

Connected TV

Gert Svendsen

Senior Technical Manager, Product Management DTH, Canal Digital Danmark A/S
Chairman in the Technical Working Group of the Danish Electronic Association (BFE DTU)
Member of the EBU Forum for Advanced Media in Europe (FAME)
Member of The Digital TV-Group, UK.

Agenda

- Status of SMART-TV services in Scandinavia
- Experiences so far
- Challenges
- The way forward

- 25% of the SMATV-TV sales in Europe is done by Samsung
- > 5 mio. downloads from the Samsung SMART-TV app. store since February 2010
- On average 25.000 downsloads/day (by nov. 2011)
- > 550 apps. for Samsung SMART TVs available world wide

Viaplay VOD/CatchUp service
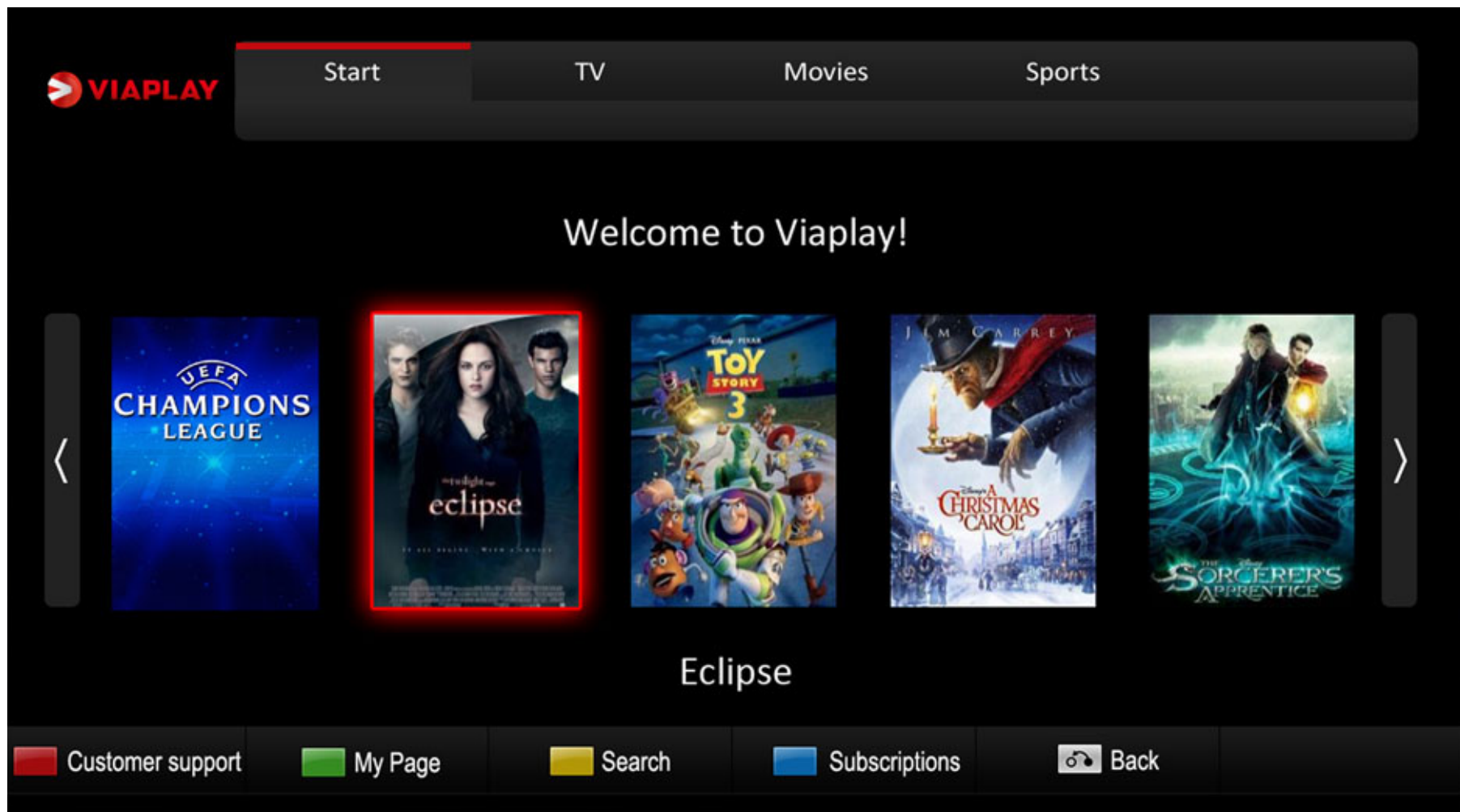
Available on LG and Samsung Smart-TV

Canal Digital go VOD on Samsung

youSee VOD on Samsung

TV2 Sputnik VOD service on Sony

- The national public service broadcaster, DR will start a pilot trial based on HbbTV in 2012
  - The CatchUp Service DR NU via HbbTV applications
  - Investigation of access to the service
  - Quality of Service
  - Etc.

The HbbTV test are headed by Carsten Corneliussen, DR Strategi & Politik, JPS

- NorDig is the common standardization regime for Scandinavia

- HbbTV will be a part of the NorDig standard and support HbbTV v. 1.1.1

http://www.nordig.org

Experiences so far

- It is still early days...
  - Quality of the networks at the costumers
  - Low hook-up rate

- Most of the applications are based on the Samsung platform

- Standardization needed

Content are handled different by content owners from platform to platform

Content platform

Setttop Boxes

Web applications

SMART-TV applications
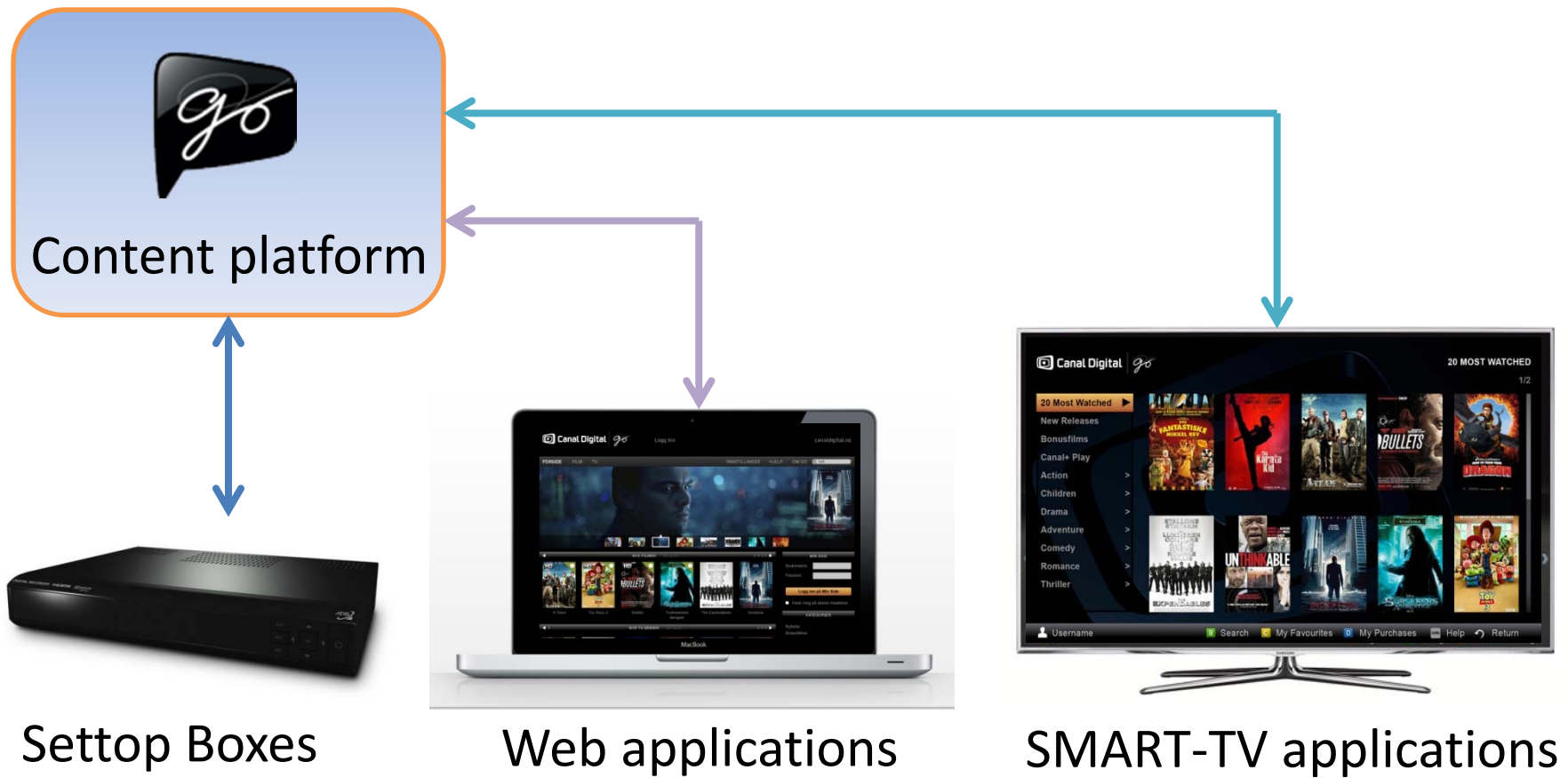
The way forward…

- Standardization
  - HbbTV a great step in the right direction
  - Test and verification of applications
- Content and regulations
- Bandwith challenge in the backbone networks
  - Imagine, if all the connected tv's really became connected and request the same service at the same time…

The way forward…

- In a longer term, it is not an option to do applications for every single tv-brand
  - Increasing cost for development
  - Increasing cost for daily operations
- Alliances could be one solution

Thank You for your attention!

The Italian way to
Hybrid Broadcast-Broadband services
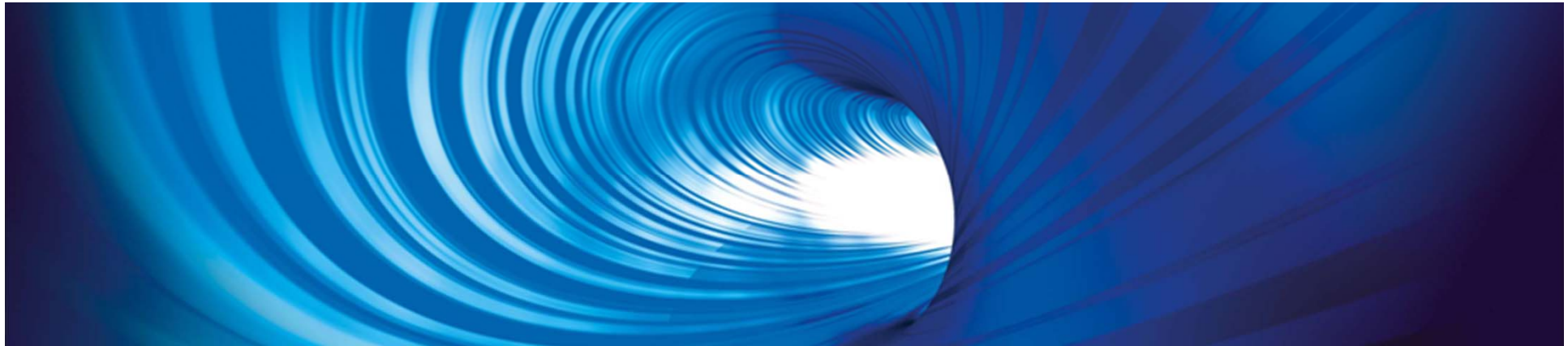
Giovanni VENUTI
Telecom Italia

Connected TV Symposium, Paris
5-6 December 2011

Who's is who in Italian Digital TV

Association of DTT Network Operators (Rai, Mediaset, Telecom Italia Media, Dfree, Local stations through their associations) for promotion and development (founded in 2003)

Industry-wide association, constituted in 2006, including broadcasters (Aeranti-Corallo, Mediaset, Rai, Sky Italia, Telecom Italia Media), telcos (Fastweb, Telecom Italia), manufacturers (ADB, Panasonic, Philips, Samsung, Sony, ST, Telsey), public institutions (FUB) and operators from various sectors (Eutelsat, Fracarro, Frame, IDS, SBP, Sisvel Tech), for promoting HD and 3D in Italy

Joint Venture created in 2008 by the main Italian terrestrial broadcasters (Mediaset, RAI and Telecom Italia Media), to provide satellite Free To Air digital television in areas not covered by terrestrial networks under the "tivùsat" brand. Active also on DTT as EPG Provider.

Roles and cooperations

- Since 2004 DGTVi has released specifications setting baseline requirements for interoperability of DTT receivers with services offered by operators. Italian DTT has been interactive from day 1. DGTVi choose MHP, <u>the</u> DVB standard middleware, for this purpose

- In 2008 HDFI joined DGTVi in specification activities when they entered into the new HD and Hybrid Broadcast Broadband (HBB) spaces

- Aligned HD and HBB specs for satellite were progressed during 2009-2010 in collaboration between HDFI and tivù

- Both DGTVi and tivù have developed their own Logo programs, with related certifications, aiming to promote compliant products towards consumers

DTT specs timeline

HD-Book DTT 1.0

HD-Book DTT 2.0

Broadband Addendum

D-Book 1.0

D-Book 1.1

DVB-T
SD (MPEG-2)
V.90 modem
MHP 1.0.3

LCN
CIv1 for TVs

HD (H.264)
Ethernet
CI+ for TVs
MHP 1.1.3
HBB

OIPF PAE
HTTP streaming

DVB-T2
3D (2D bc)
OIPF HAS
GEM 1.3

Sep'04   Apr'07   Oct'08   Oct'09   Jan'11

Facts and figures

- Some 9.5M first generation MHP SD DTT receivers have been sold since 2004

- More than 1M MHP SD tivùsat receivers sold in 2 years of operation

- Around 1M DGTVi Gold Label certified devices already in the field
  - STB: ADB, Fuba, Humax, Sagemcom, Telesystem
  - iDTV: LG, Loewe, Panasonic, Philips, Samsung, Sharp, Sony, Vestel

- Most of Connected TVs sold in Italy nowadays, besides coming with each manufacturer's own widget portal, are also Gold Label

Latest developments

- The following Addenda to HD-Book DTT 2.0 are in the works by DGTVi and HDFI:

  - Generic DRM support

    - MPEG Common Encryption (CENC) for IP Simulcrypt

    - MPEG DASH (superseding HAS) for Adaptive Streaming

    - OIPF DRM API (already in HD-Book DTT 2.0)

  - Broadband Applications Security (BAS)

    - HTTPS-based replacement and extension to MHP Security framework for broadband applications

- Based on such Addenda tivù is going to launch its own "tivùon" branded service, a coopetitive portal of broadcasters' OTT offers, which uses Marlin DRM

what is aedeti?

✓ spanish association of interactive TV companies

✓ born in 2008, with the aim to promote interactivity in the region

✓ coordinates the subgroup for interactivity at the Digital TV Technical Forum

✓ focused on the selection of a standard for interactive TV / hybrid TV

a word about mirada... mirada

- software products for digital TV platforms and broadcasters

- HQ in London and offices in W. Europe and Latin America

- references: Ericsson, GVT, Sky, Telefónica, BBC, Tivu...

- more than 10 years in the digital media world

- about 100 employees

- listed on LSE:AIM: MIRA

references
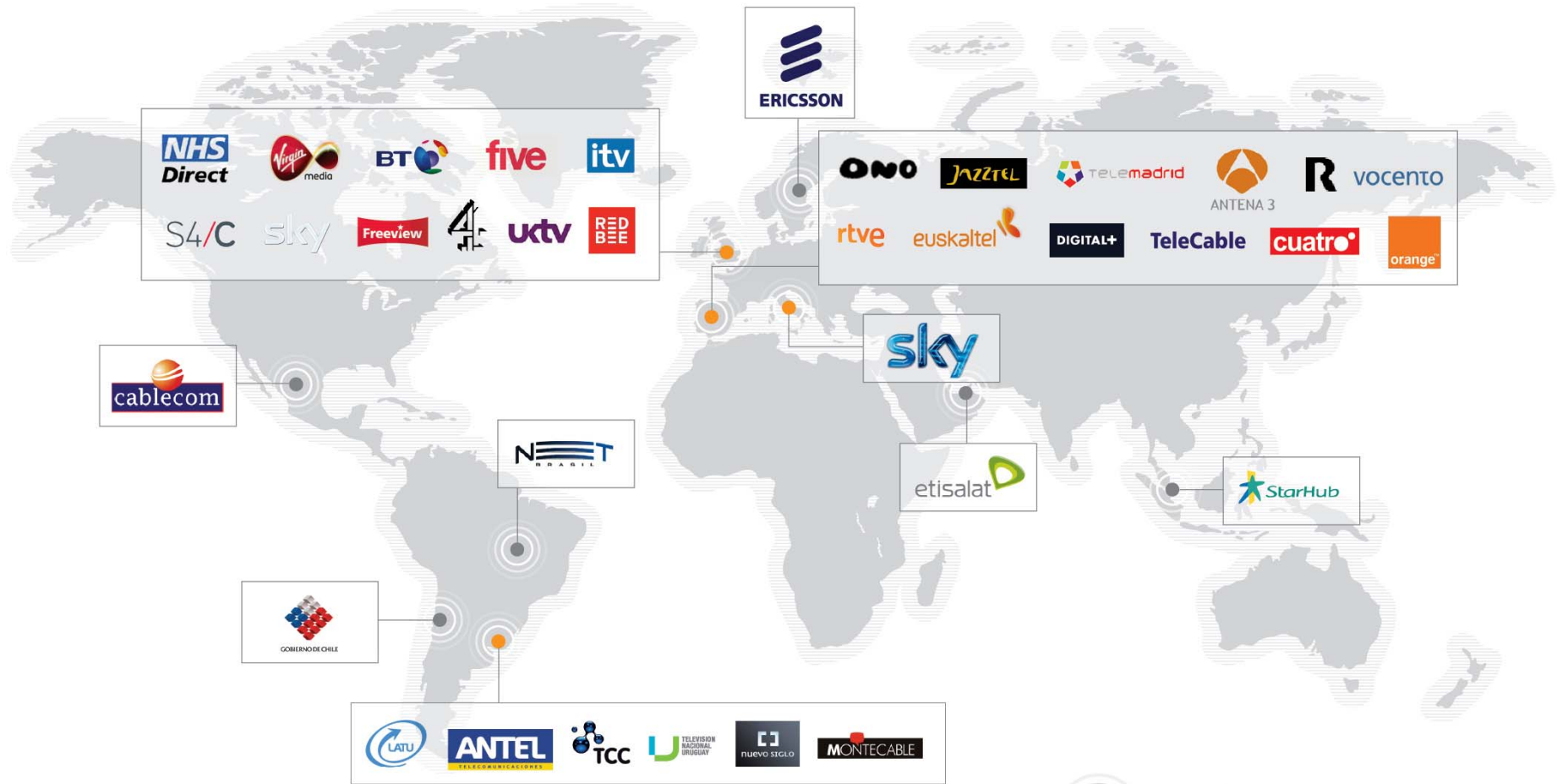
the market challenges

- consolidation of OTT

- content search

- open standards

- evolution of the advertising market

- real integration of the Social TV

- ecosystem for live and on-demand TV

the past of iTV on the Spanish DTT

✠ first trials: 2003

- Retesit (Telemadrid)
- Maresme digital (TV3)

✠ commercial launch: 2005

- ‣ agreement on mhp
- ‣ up to 20% of the DTT bandwidth (including EPG)
- ‣ imposed by DTT licensing rules
- ‣ NO relevant footprint of mhp receivers
- ‣ modem-based return path (when available)

✠ mhp in Spain was "the walking dead"

progress during the last 3 years

✝ Digital TV Technical forum (2009)

  ‣ SG4: interactivity

  ‣ No consensus about the standard (mhp recommended)

✝ manufacturers: connected TV trials (2010)

  ‣ highly fragmented market approach

  ‣ relevant commitment from broadcasters

  ‣ concerns about the evolution of the market

✝ AEDETI Hybrid TV working group (2011)

  ✓ evaluating HbbTV standard for the Spanish market

  ✓ **consensus reached** and publication by official bodies

HbbTV to take off next year in Spain

From David Del Valle in Madrid

Spain's electronic industry forecasts th[...]
the country with 25 per cent of the esti[...]
for HbbTV, according to Ametic.

In the current year, 15 per cent (675,0[...]
ready, but worldwide events like the O[...]
2012 will boost the acquisition of Hbb[...]

To make it come true, the electronic in[...]
rule it and lay the legal groundwork fo[...]
example of Germany and France. "We [...]
said Jesus Casado, representative of A[...]

Spanish broadcasters have publicly ba[...]
EBU and are making HbbTV trials at t[...]
and Cuatro, TVE and Telefonica are de[...]
RTVE to launch a specific service to co[...]
launched Canal + Yomvi with access to[...]
Ipad, Iphone, video consoles, connecte[...]

Spain selects HbbTV

Spain has agreed to adopt HbbTV has its system of choice for connected TV. The ministry of industry, tourism and trade has approved a document put forward by the Association of Interactive Television (AEDETI) and signed by 54 national and international companies.

AEDETI first began its exploration of HbbTV in 2009 under a mandate issued by the ministry of industry's technical mforum on digital trade.

This work was initiated in 2009 from a mandate from the Technical Forum Digital TV sponsored by the Ministry of Industry. Spain will follow HbbTV 1.1.1, published by the HbbTV consortium and approved by ETSI.

According to GfK, around six million connected TV sets have already been sold in the Spanish market, a figure that is expected to have risen by at least 15% during the course of 2011.

Mediaset España and Telefonica are already running a pilot. Mediaset's Telecinco is bringing in content from Telefónica's services such as Movistar Imagenio, Movistar Videoclub and Terra TV.

interactivity over DTT: next steps

1. pending issues on the Hybrid TV group
    - ✓ interoperability group
    - ✓ progress on discussions on overlays and DRM
    - ✓ next release of the document

2. trials
    - ○ expected model: catch-up TV portals
    - ○ experimenting on linear + on-demand TV mash-ups
    - ○ agreements between broadcasters, services promotion

3. growth of the connected TV market
    - • expected footprint by the end of 2011: around 900k

Thank you!

They watch
We learn
You benefit
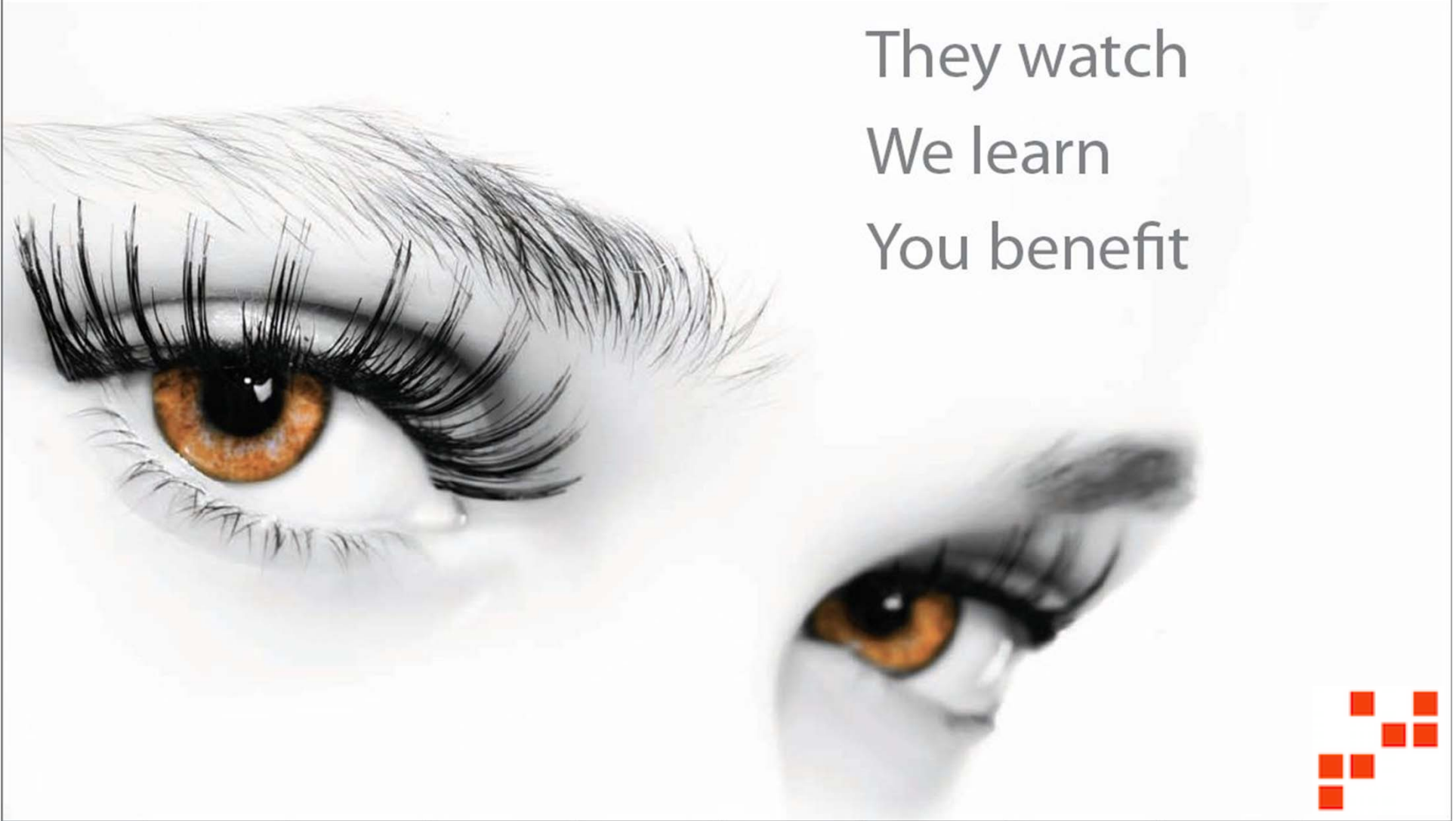
MERGING LINEAR WITH ON DEMAND

HYBRID BROADBAND BROADCAST IN EUROPE

Bram Tullemans
Project Manager
Broadband Systems & Software Platforms

EBU TECHNICAL
European Broadcasting Union

e-mail: tullemans@ebu.ch

05/12/2011

EBU•UER

Merging linear TV and broadband services

Device specific use of catch up services

Hybrid Broadband Broadcast

mhp (logo)	**Italy** DVB's MHP deployed in Italy EBU chaired DVB, hosts Project Office, etc.
HbbTV (logo)	**Germany** Deployed, Signalling carried on DVB-S, DVB-T **France** France Télévision have a HbbTV beta-test service on air and have won prices with their event driven services. **Spain** Launched in November 2011 **Netherlands - Austria** Expected launch of beta environments (EBU is helping administer HbbTV Consortium & Association)

youview (logo)
M5EG (logo)
	UK pioneering market and complex:
	    • YouView aiming for launch in Q1 2012
	    • MHEG-5 well establish (but no in hybrid form)
	    • Next generation FreeSAT 'boxes will use HbbTV

(question mark figure)	Nordic countries – MHP history, but are tending towards HbbTV
	Other European countries

Who owns the television?

**GoogleTV
Yahoo TV
AppleTV
(Microsoft)**

**Internet
Content
Provider**

**Broadcast
Content
Provider**

**UK – MHEG-5, YouView
FR, DE, SP, NL, A – HbbTV
IT, NO - MHP**

**Internet
Service
Provider**

**ISP iptv/cable
Services
Orange, ...**

Internet

Home Net

**Home
Media**

**Cons
Equipment
Provider**

**Panasonic Vieracast
Philips NetTV
Samsung SmartTV
Sony Bravia**

EBU·UER
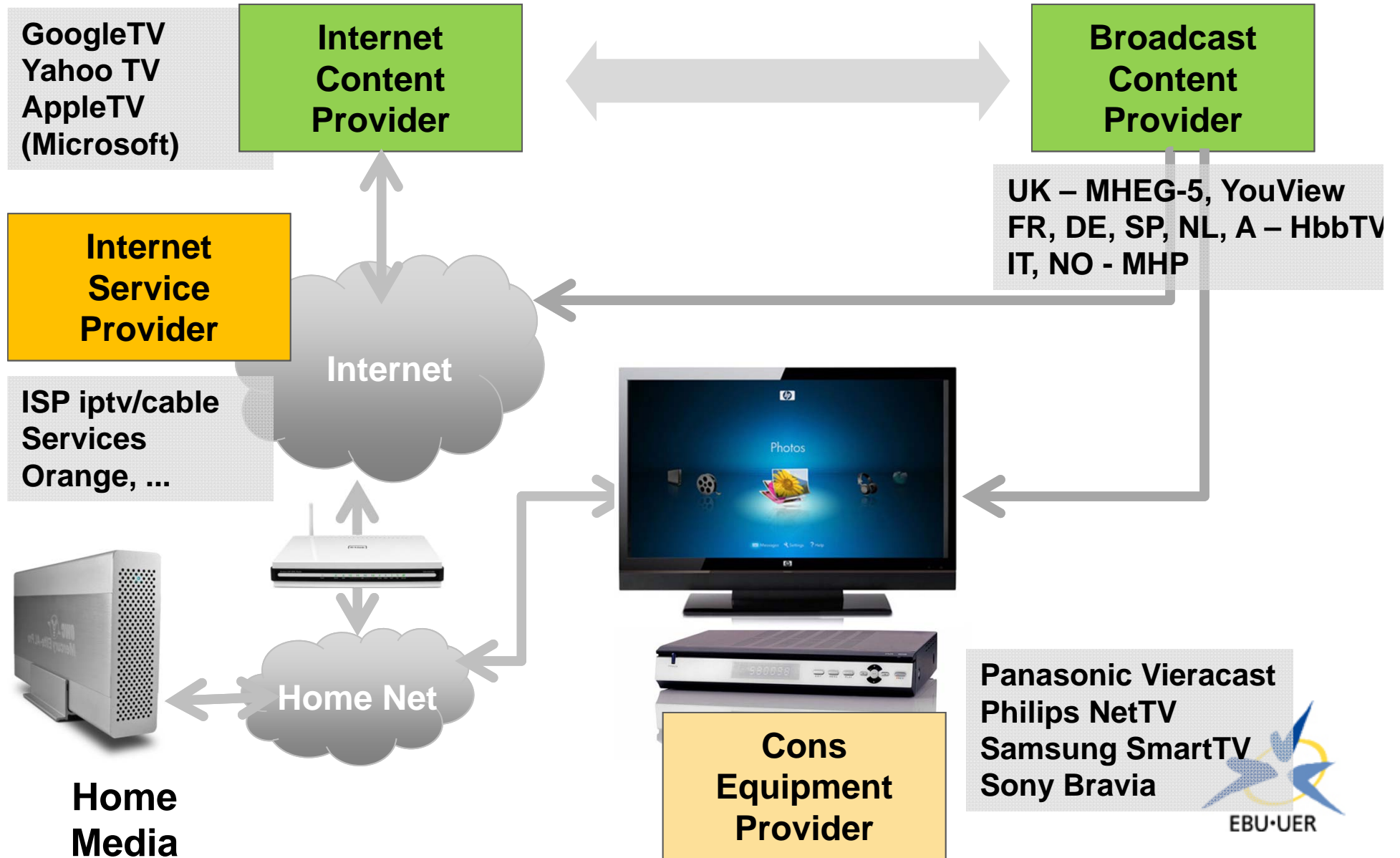
EBU Principles for Hybrid Television

- Linkage between broadcast and broadband

- Access to broadcasters' content

- Content integrity and display of broadcast signal on screen

- Preservation of a safe viewing environment, including the protection of minors

- Copyright/IPR, piracy, data protection

HbbTV roll out

- Current version: HbbTV 1.1.1

- Interoperability testing of devices

- Communication of HbbTV compatible devices

- Development of standardisation to HbbTV version 1.5 (addition of MPEG DASH)

- HBB Forum creative content meeting in February 2012

- Launching services in different countries

HbbTV: Linear merges with on demand

Interesting services

- Guide audience to (related) content of their interest: What has been (Catch-up), what is now (program info) and what will be (EPG) services

- Lean back interactivity: User control of (social) media overlays, personalized recommendations and user presets

Direct relation with audience

- Return channel for user participation: It is all about the relation between audience and the content!

- Broadcaster in control of content related services: alternative to proprietary systems

Development and innovation

- Single development platform, use of existing standards and interoperability of services

EBU·UER

First results ....

Use of catch-up services on connected TV's

- Audience chooses different content in catch-up service on connected TV's (more documentaries, travel programs etc.)

- People watch more of the content on connected TV's than on the standard webpage's (longer viewing rate per program)

- The audience uses the catch up service all day long but it peaks just before live television does

Debunking some internet hypes

- The length of the content does not influence the viewing percentage (on demand is not only about short content)

- On demand audience watches programs to be up to date (On demand is not the end of live or the Watercooler effect)

EBU·UER

Last remarks

- HbbTV standard will boost production content related interactive web services.

- Broadcasters, service/content providers and device manufacturers need to work together.

  - Development of content specific services, the distribution of live and on demand video and the reception of these signals are interrelated.
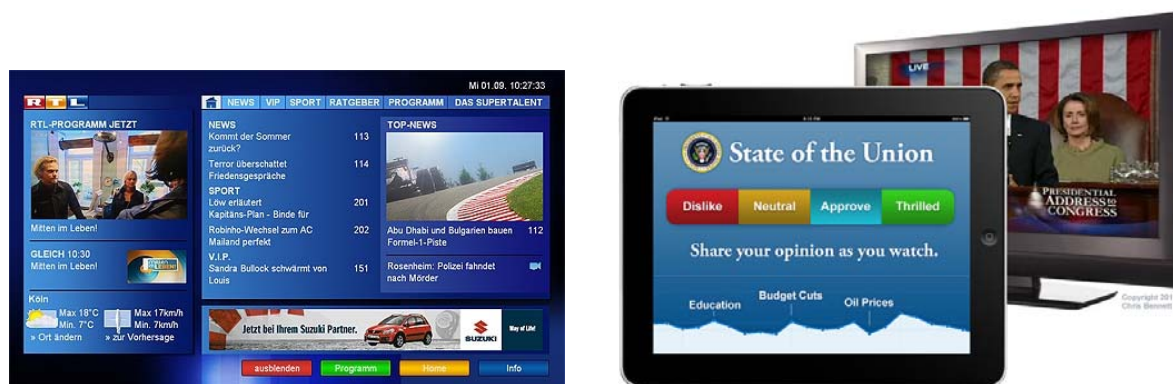
TechniSat

Smart TV

The company

- Founded in 1987

- Manufacturer of a wide range of digital receivers, head end systems, multi-switches, measurement devices and satellite reception equipment

- Entered the high-end TV market in 2005

- Headquarter are located in Daun, Germany

- Further locations throughout Europe

TechniSat locations in Europe

Entry in the connected world

- Launch of TechniSat hybrid devices in February 2011 in the core market

- European-wide launch in November 2011

Current ISIO devices

MultyVision ISIO

DIGIT ISIO

DigiCorder ISIO

Concept of operations

- Open portal for efficient cooperation with content partners

- Support of HbbTV and CE-HTML standard

- Internet link list with TV-optimized websites

Internet link list

- Fast access to your favorite service because of the clearly organized Internet list

Browsing

- With TechniSat ISIO
  devices you can enter
  each URL and access
  any webpage
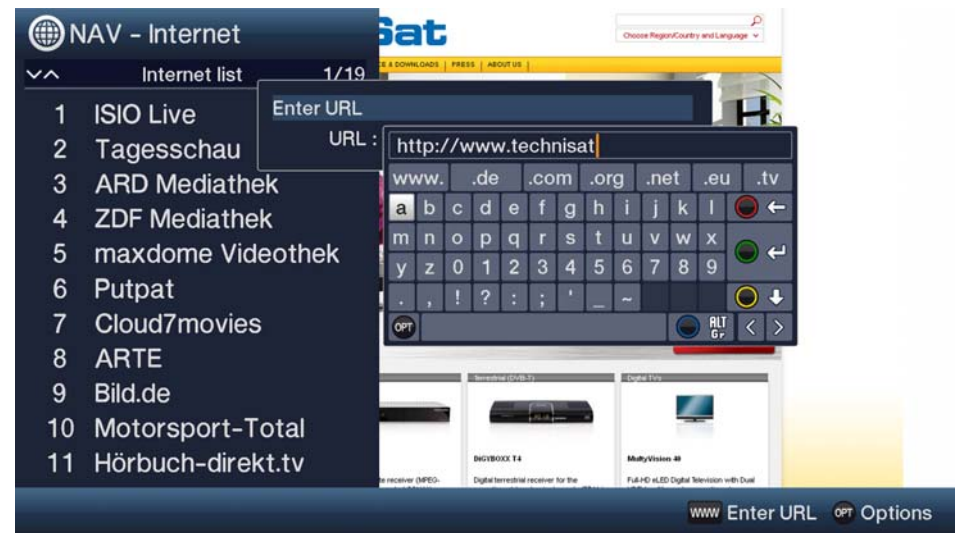
Future prospects

- ISIO functionality will be a constant feature of future TechniSat devices

- Internet link list will be extended continuously

- HbbTV will be a constant feature to meet the requirements of the broadcasters
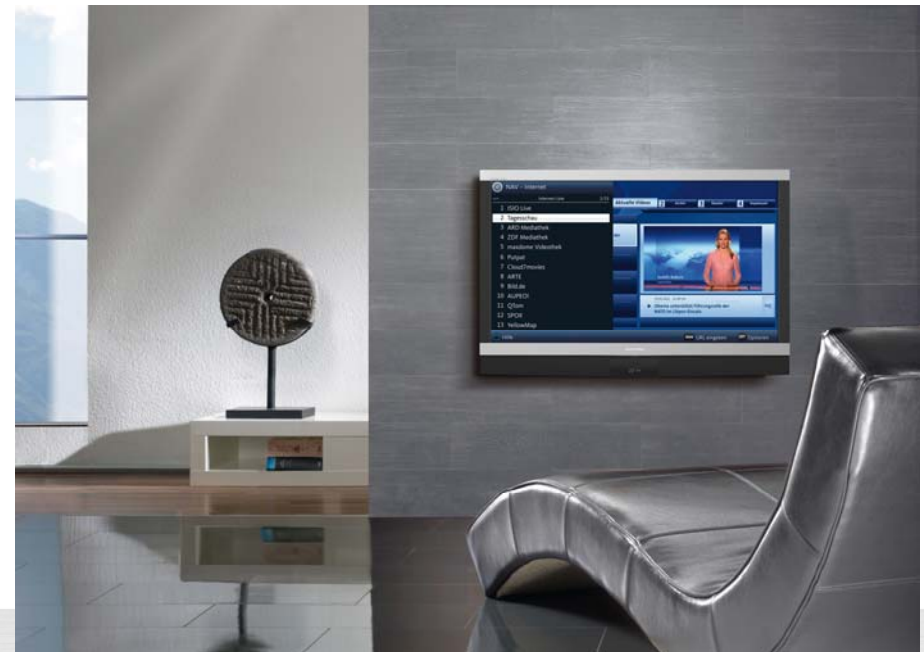
Thank you for your attention!

Elmar Möller

e.moeller@technisat.de

Confidential

PHILIPS

The logical step….

From phones…

…to Smart Phones

From TVs…
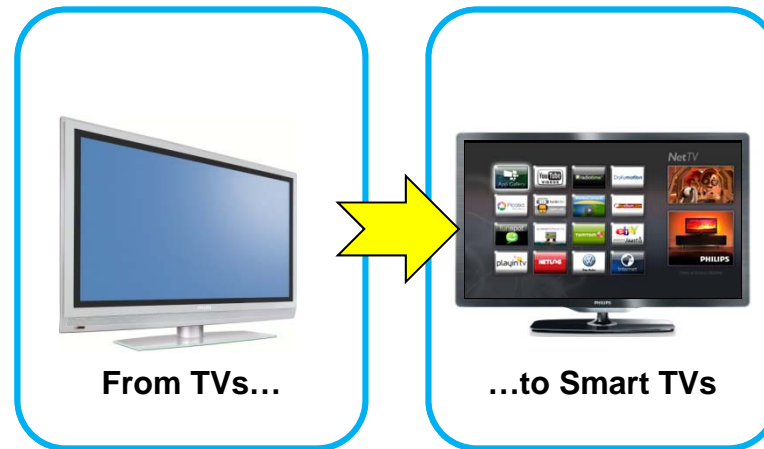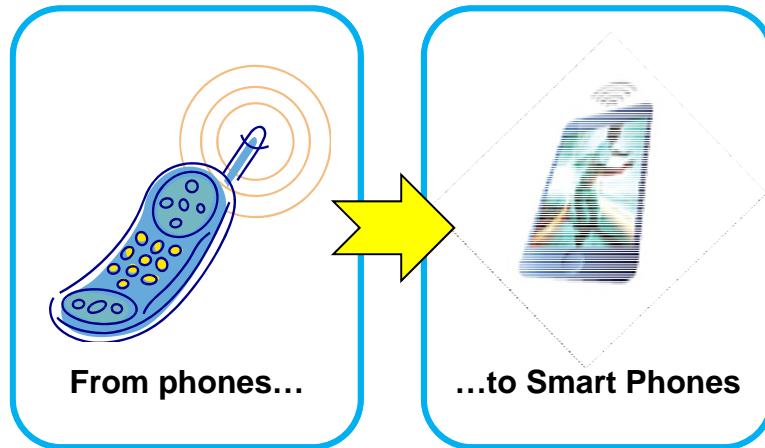
…to Smart TVs

Philips Smart TV based on 4 pillars

PHILIPS

SmartTV

Control

SimplyShare

NetTV

Program

Use a keyboard

Use your phone & tablet as remote control

Use by-packed remote
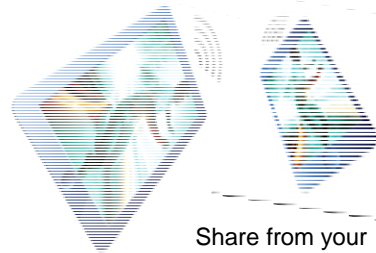
Share from your phone & tablet

Share from your computer

Watch Catch-up TV

Rent movies

Gaming
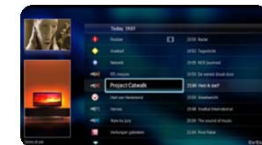
See what's on with the online TV Guide

USB recording

Confiden.

New Tablett App for the Smart TV

NEW! EPG app on iPad

Control your TV with the iPad

View your photos on your TV

TV is about sharing content, interaction and is no longer only a "living room" experience

Consumer research shows that 50% of consumers are using the Internet on a separate device while watching TV

From these consumers statistics show that the younger population (under 35 years old) are:

– 36% are talking with others about the program / movie they are watching.

– 15% are reading and/or posting on message boards, blogs or forums about what they are watching on TV.

watching together while being apart
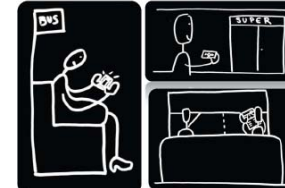
PHILIPS

New Catch up TV service & Online Video stores
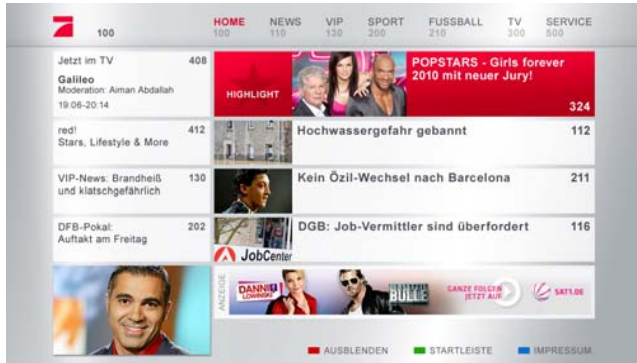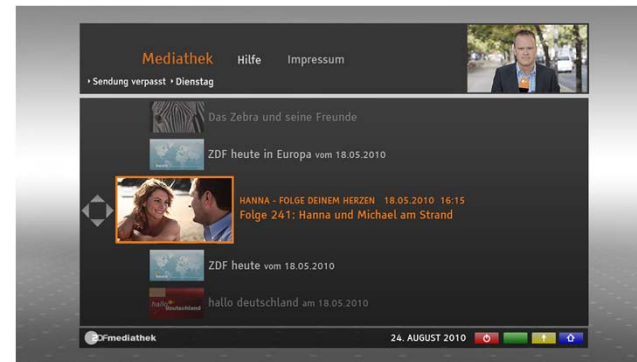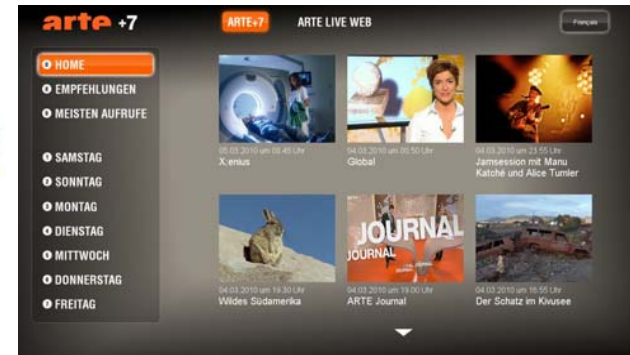
NetTV

videociety

FRANCE 24

ARD

BBC iPlayer

Boomerang

maxdome

arte

ZDF

TV Movie.de

iConcerts

viewster

OTSDAM TV

7

eredivisie live

f

kinderkino.de

münchen.tv

SAT.1

CN CARTOON NETWORK

twitter

Catch up TV

Video On Demand
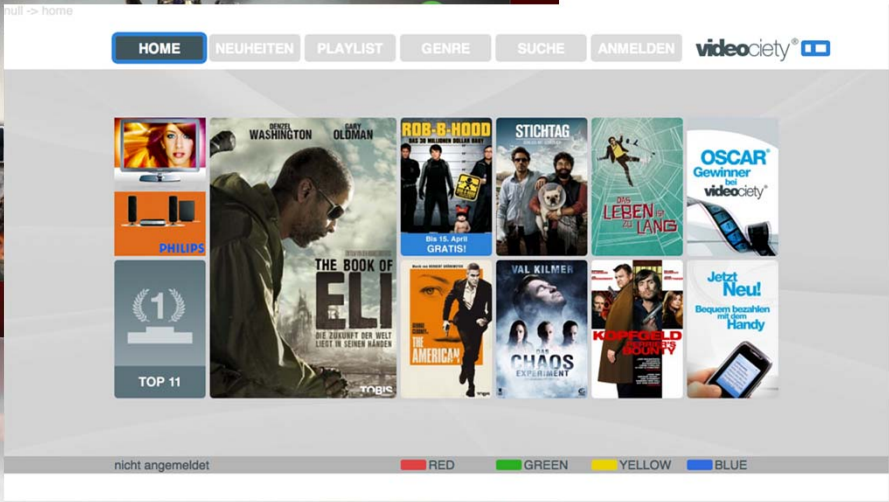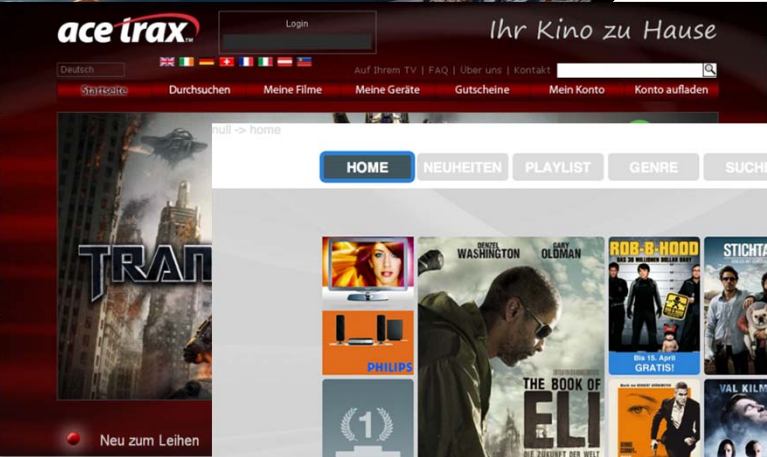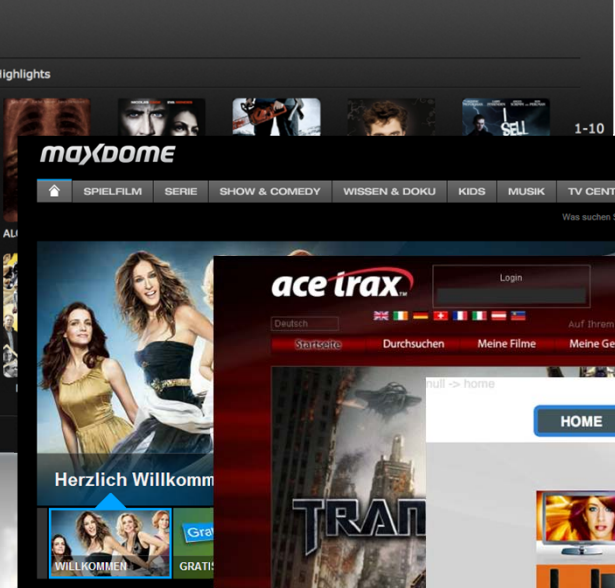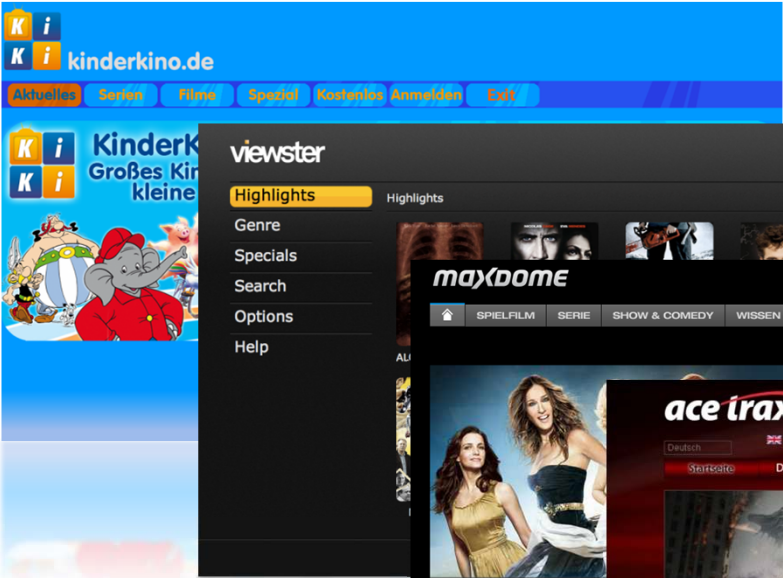
Payment for Philips Smart TV
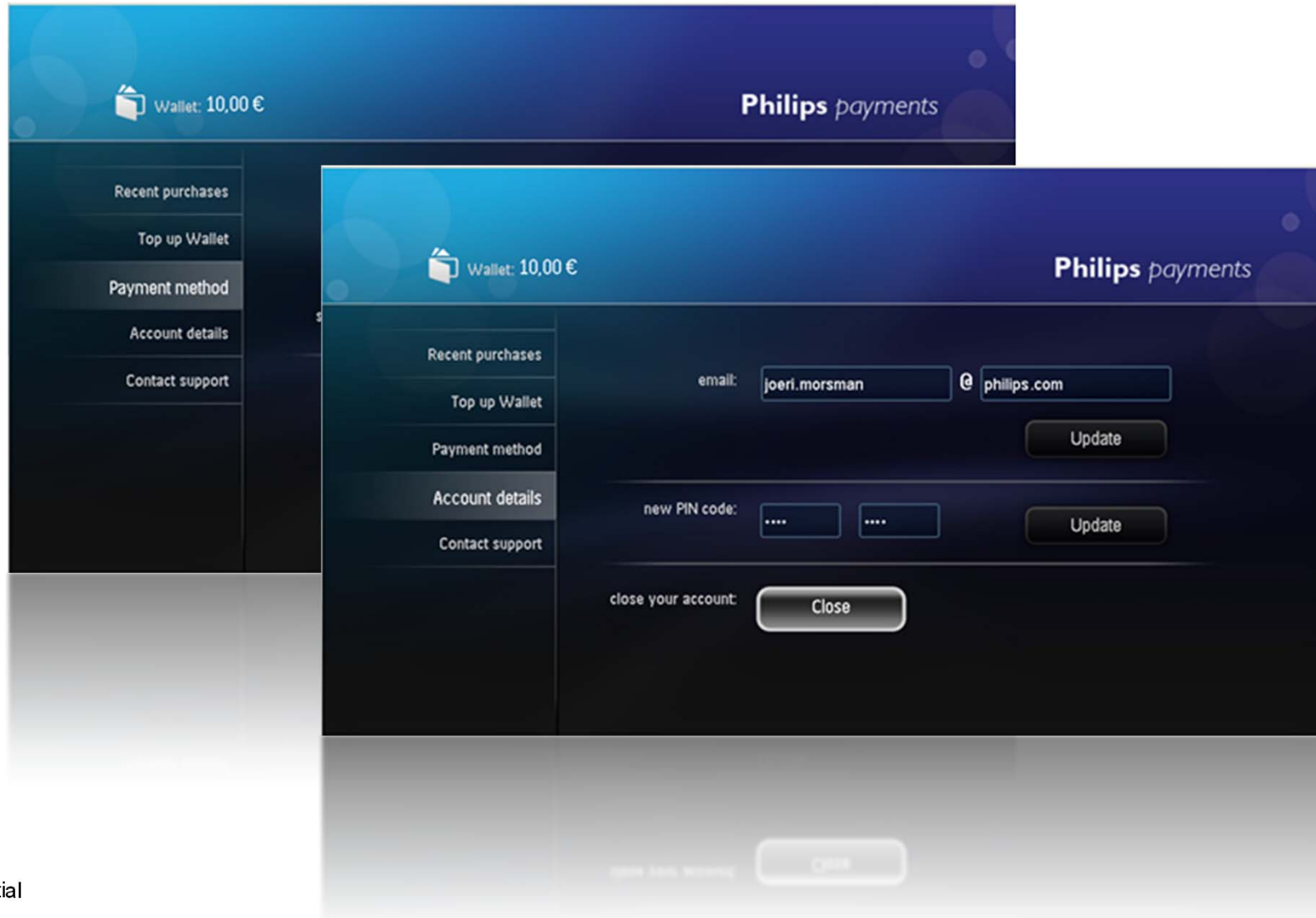
Seaching for Online Content

SmartTV

Search 🔍

21 Mar 20:25 19°c 🌡️

Now on TV

📽️ Video on Demand

India Express

THE HAUNED

For laughs 2
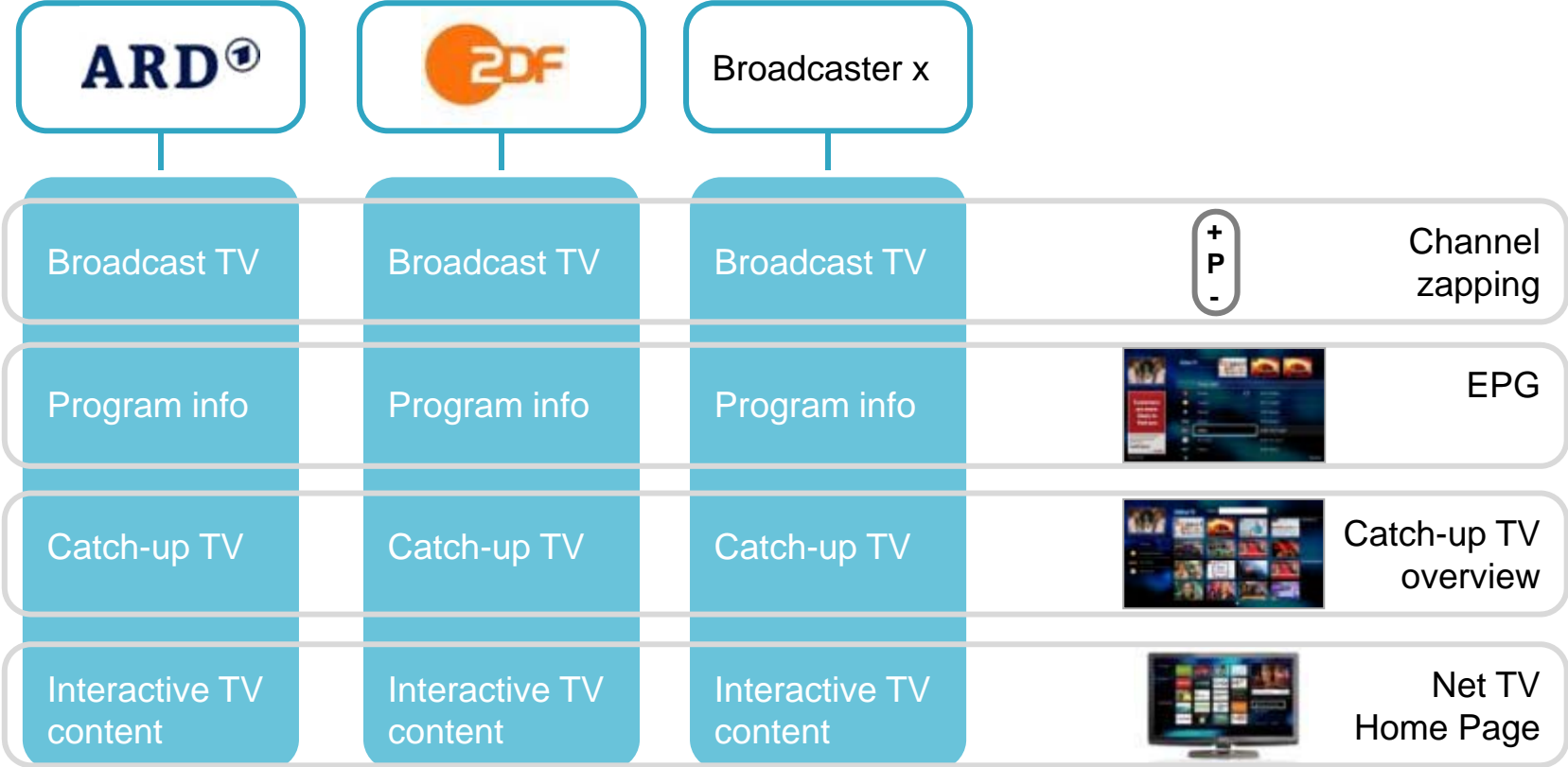
The expandables   The Haunted   Prince of Broadway

■ ■ ■

App Gallery

Watch:
Chefcook
🖥️ Recordings

5 Unread
emails
✉️ Email

🔒
maxdome

ZDF

f

TV Guide

Internet

BBC iPlayer

videociety

twitter

viewster

Register   ▬ Remove   ▬ Move   ▬ Lock   ▬ Feedback   Terms of Use

PHILIPS

Summary

Apps for Second Devices

Search

Payment

Sharing Media

SmartTV

Open Internet

Video On Demand

USB Recording

Smart TV UI

Symposium on connected TV for Europe
a broadcaster's point of view

5 Décembre 2011

Gilles MAUGARS
TF1 CTO

> **TF1 aujourd'hui**

CONFESSIONS INTIMES — Ushuaïa NATURE — APPELS D'URGENCE — SANS AUCUN DOUTE — HARRY ROSELMACK : DERRIÈRE LES MURS DE LA CITÉ — Shopping Avenue MATIN — OPÉRATION TAMBACOUNDA 5 ADOS, 10 JOURS POUR CHANGER — DISPARITIONS

50mn INSIDE — LA FERME CÉLÉBRITÉS EN AFRIQUE — KOH-LANTA LE CHOC DES HÉROS — SECRET STORY — L'AMOUR EST AVEUGLE — Love & Bluff — HD HAUTE DÉFINITION — 50mn INSIDE

SEPT À HUIT — TOUS ENSEMBLE — LE GRAND FRÈRE — TÉLÉ SHOPPING — LINK LA VIE EN FACE — CCC ? L'HEBDO — AU FIELD DE LA NUIT — COURSES ET PARIS DU JOUR

MasterChef — une famille formidable — Les Feux de l'Amour — Dr. HOUSE — WALKER TEXAS RANGER — CHAMPIONS LEAGUE — FEMMES DE LOI — LA ROUE DE LA FORTUNE

R.I.S SAISON 5 — CLEM — MENTALIST — NEW YORK SECTION CRIMINELLE — GREY'S ANATOMY — A PRENDRE OU À LAISSER — Le juste prix — ATTENTION À LA MARCHE !

Mon Incroyable Fiancé — Télé vitrine — MONK — brothers & sisters — NEW YORK UNITÉ SPÉCIALE — LE GRAND CONCOURS SPÉCIALE CHAMPIONS DES JEUX TV — MILLIONS — Totally Spies !

JULIE LESCAUT — REPORTAGES — LES FRÈRES SCOTT — LES EXPERTS — Une Famille en OR — Disney PIXAR Cars — TOURNEZ MANÈGE ! — Bob l'éponge

Les Toques — Star Academy — Joséphine ANGE GARDIEN — GHOST WHISPERER — Fou de cuisine — LA SOIRÉE DE L'ÉTRANGE — Sidaction ENSEMBLE CONTRE LE SIDA — NRJ MUSIC AWARDS

SŒUR THÉRÈSE.COM — ENQUÊTES & RÉVÉLATIONS — FRINGE — LES EXPERTS : MANHATTAN — Pièces jaunes 2010 — Le Grand Bêtisier OÉ ! — LE GRAND QUIZ DU CERVEAU — 100 PLUS GRANDS

— VICTOR SAUVAGE — NEW YORK POLICE JUDICIAIRE — DEXTER — sacrée soirée — 2010 - LES ENFOIRÉS... LA CRISE DE NERFS ! — 20 HEURES — QUI SERA LE MEILLEUR ?

LA LOI SELON BARTOLI — Mes Amis Mes Amours Mes Emmerdes — SECTION DE RECHERCHES — Services sacrés — JT WEEK-END — 13 HEURES — LES ENFANTS DE LA TÉLÉ — 30 HISTOIRES LES PLUS SPECTACULAIRES

VIVE LES VACANCES ! — CLAIRE BRUNETTI — ESPRITS CRIMINELS — Life — AUTOMOTO — Formule 1 À LA UNE — Miss France

LA VIE EST À NOUS — AFFAIRES ÉTRANGÈRES — LOST — ELEVENTH HOUR — PROFILAGE — DORA L'EXPLORATRICE — DIANE, FEMME FLIC — TÉLÉFOOT
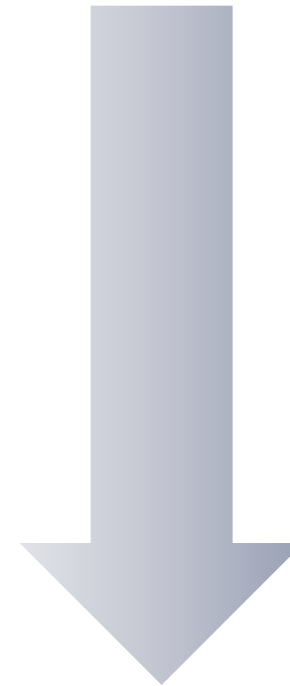
TF1

> ## Capacité à developper son univers

- Outils accessibles
- Relation avec le consommateur
- Protection du programme

> ## Potentiel de l'outil

- Textes et photos
- Vidéo en clair
- Vidéo payante
- Ergonomie homogène

> ## Déploiement de la technologie

- Faible coût
- Solution commune à tous
- Compréhensible du public

TNT 2.0

TF1

> **Fixer les règles**

- **Spécifications**
- **Tests**
- **Logo**

> **Communiquer**

- **Institutionnel**
- **Communication en magasin**
- **Simplicité du message**

> **Se déployer sur tous les usages**

- **Box des opérateurs**
- **TV connectées**
- **Tablettes**

TNT 2.0
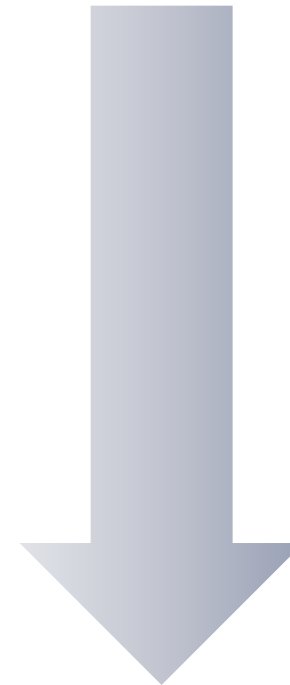
Merci

HbbTV
Industry Vision – CE Vendor

December 2011

Mark Londero - Sony Europe

Contents

1. **Not only Connected "TV"**
   - **Blu-ray, Home Theatre, Games console**

2. **Apps & OTT Video**
   - **Browser on TV, or Video, or both ?**

3. **Broadcast Catch-Up**
   - **Step change in connection rates**

4. **What role for DRM?**
   - **PlayReady & Marlin**

5. **Threats & Opportunities**
   - **Manufacturers proprietary solutions**

6. **Questions ?**

It's not just Connected "TV"

SONY

Blu-Ray Disc

Home Theatre

Connected TV

Game Console

Netbox

Non-Tuner "Connected TV"

→

Press **RED**
button to
open Portal
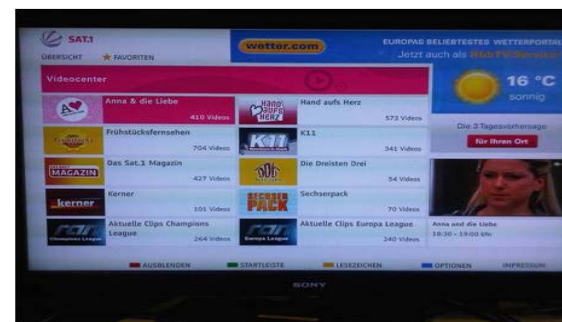
❖ CE Vendors can aggregate links to HbbTV compliant apps on the resident portal

4

Non-Broadcast "Connected TV"

Broadcast is only a simple "launcher" app

Select "Channel" to start IP service.

All video content delivered by IP

Smart TV Apps & OTT Video

Growth of Connected Home Entertainment

Exhibit 2   Flat-panel TV sales in US and Western Europe, 2010-2014

Annual Sales (million units)

Source: Strategy Analytics

Western Europe
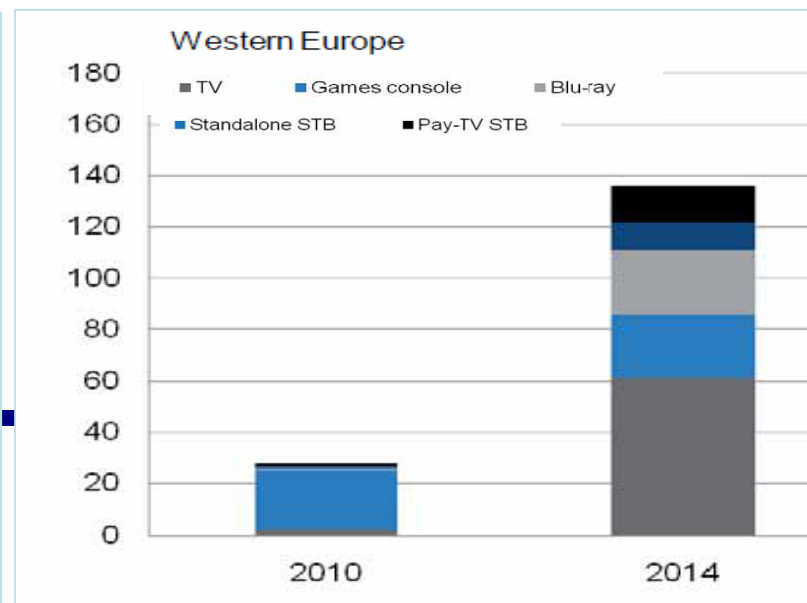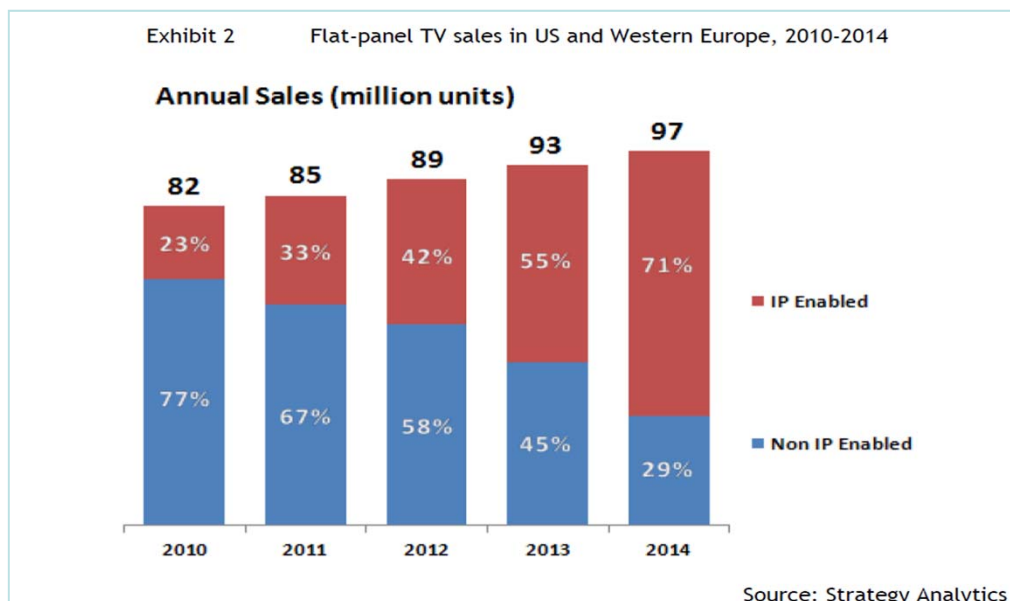
- 71 % of the TV sales in USA / W Europe will be connectable by 2014
- Some CE vendors already exceed

- Screen Digest forecasts active connected devices for Europe to grow to 80 million by 2014

What role for DRM?

- **CE Vendors proprietary platforms can manage with individual authentication and secure streaming**
  - ▶ "Manufacturer Assurance"

- **Open platforms require a standard solution**
  - ▶ DRM can provide the answer
  - ▶ Open standard solutions such as Marlin are preferred

Potential Threats for CE Vendors

- **Enables horizontal market players to use CE platform to deliver IP content**
  - But no manufacturer authorisation of applications
    - Potential for quality problems without collaboration agreements

- **Enables B / C brands a standard path to offer a portal solution**
  - **competition increase for early movers**

Potential Opportunities for CE Vendors

- **Leverage already implemented standards**
  - No need for proprietary standards
    - Benefit both manufacturers and content partners

- **Enable non-tuner devices**
  - Blu-ray player / Home Theatre / game console

QUESTIONS ?

2 | **Interactivity and sport**

- Host Broadcast Services : « a job for specialists » « making broadcast history »

    - A huge amount of content is generated at major sport events

    - Interactivity improves the customer's experience and helps rights holders take full advantage of their rights on a variety of "second screens"

HBS

ANATOMY OF A FIFA WORLD CUP™ HOST BROADCAST OPERATION

VENUE

IBC

DISTRIBUTION

HB Cameras
Up to 32 per event

HBS
Production Unit

Broadcast
Compound

Satellite
Farm

Home Viewers
Worldwide

Live Match

Commentators

Fibre
Optic

IBC Master Control Room

Technical
Operations
Centre (TOC)

Digital
Media

TV Stations & Digital/
Mobile Operators
across the globe

FIFA MAX Server

Mobile Device
Users

MRL Cameras

MRL OB Van

Data Lines

Broadband
& Wireless

◆ **MULTILATERAL SERVICES FOR MEDIA RIGHTS LICENCEES** ◆ **MEDIA RIGHTS LICENSEES UNILATERAL SERVICES** ◆ **SERVICES FOR NEW MEDIA**

HBS

4 Host Broadcaster: « a job for specialists »

From Stadium to Home Viewer, Worldwide

Produce all multilateral signals and deliver them to Broadcast Partners worldwide	According to production concept agreed with customer
Provide Broadcast Partners with the best infrastructure possible for their own (unilateral) coverage	Each national broad-caster has its own specific needs to service its audience
Manage TV, Radio and New Media Operations	▪ Organise operations ▪ Coordinate telecom services
Manage the International Broadcast Centre (IBC)	▪ Design ▪ Build ▪ Operate ▪ Dismantle

HBS

5 | HBS ID

Making broadcast history™…

- Main customers: FIFA (since 99, currently until 2018), UEFA (currently until 2012) French Football League (currently until 2012)
- Headquarters in Switzerland, offices in Paris/Boulogne and Brazil
- Currently, 70 employees
- « Accordion company » : HBS team grows to up to 3,000 (local + international) staff during major events period
- Operates IGBS (in 50/50 JV with IMG Media), Host Broadcaster of Asian Games in Qatar, Kazakhstan, etc…
- Founding member of the HD Forum
- Recipient of several major international awards (Sportel, IBC Amsterdam, Emmy – with ESPN, Association for International Broadcasting (AIB), etc…)

6 | Making Broadcast History

"The Formula 1 effect" : major events have a significant impact on broadcast history

Always enhancing standards and services by introducing carefully-designed innovations, HBS helps advance the evolution of (sports) broadcasting:

- First Single HDTV production at 2006 FIFA World Cup Germany

- 3D production and Host Broadcasting at IIHF World Championship 2008 Quebec, 2010 FIFA World Cup South Africa, etc…

- Multimedia-oriented approach since 2002 :

  – Huge increase in content delivered : Multi-feeds Concept & Turn-Key Programming (since 2002)

  – Media Server generated / accessible deliverables (since 2006)

  – Dedicated feed for mobile devices (since 2008 for LFP, 2010 for FWC)

Making broadcast history™…

7 Basic Feed + Additional Multi-feeds

In 2010, HBS produced **18 distinct feeds**, generating more than 2,200 hours of coverage

		- 90 MINUTES	- 80 MINUTES	- 60 MINUTES	- 45 MINUTES	-30 MINUTES	- 10 MINUTES	KICK-OFF 1ST HALF	HALF-TIME	KICK-OFF 2ND HALF	+ 5 MINUTES	+ 10 MINUTES	+ 30 MINUTES	+ 45 MINUTES	+ 60 MINUTES	FORMAT	DELIVERY
BIF	EXTENDED STADIUM FEED			Live stadium pre-match coverage (including warm up)				Countdown to kick-off	1st Half	HT Coverage	2nd Half	Closing	Post-match live coverage			HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
	CLEAN STADIUM FEED**			Live stadium pre-match coverage (including warm up)				Countdown to kick-off	1st Half	HT Coverage	2nd Half	Closing	Post-match live coverage			HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
	EBIF SHOW*					Pre-match-Prog.	Countdown to kick-off	1st Half	Half-Time Programme	2nd Half	Closing	Post-match Porgramme				HD & SD 16/9 - 4/3 SAFE	IBC
MULTI-FEEDS*	SUPPLEMENTAL FEEDS*						Permanent Highlights Feed									HD & SD 16/9 - 4/3 SAFE	IBC
		Team A Package	Team A Stats / Team A Fans					Team A Bench	Team A Live Interviews	Team A Bench	Team A Live Interviews Team A Fans	Team A Stats				HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
		Team B Package	Team B Stats / Team B Fans					Team B Bench	Team B Live Interviews	Team B Bench	Team B Live Interviews Team B Fans	Team B Stats				HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
		Pre-match Interviews	Cable Camera (when available) or Tactical Camera					Tactical Camera Feed	Half-Time Interviews	Tactical Camera Feed	Flash Interviews	Press Conferences / Interviews				HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
						PlayerCam A Feed										HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
						PlayerCam B Feed										HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
	ISOLATED FEEDS	Isolated Feed 7 (Aerial coverage, when available)				Isolated Feed 1 (Central Camera No 1)										HD & SD 16/9 - 4/3 SAFE	IBC
		Isolated Feed 1 (Central Camera No 1)														HD & SD 16/9 - 4/3 SAFE	VENUE
		Isolated Feed 6: Beauty Camera														HD & SD 16/9 - 4/3 SAFE HD & SD 16/9 - 4/3 SAFE	VENUE IBC
		Venue Isolated Camera Feeds – Isolated Feeds 2,3,4,5														HD & SD 16/9 - 4/3 SAFE	VENUE
		Isolated Feed 7 (Aerial coverage, when available)				Isolated Feed 7 (Cable Camera coverage, when available)										HD & SD 16/9 - 4/3 SAFE	VENUE

* Please note that FIFA intends to incorporate non-match footage and FIFA archive footage in these feeds; consequently, some content of these feeds may be non-exclusive.
** Subject to Approval - Available for unilateral post-production purposes (e.g. of highlights) or use in conjunction with FIFA approved unilateral graphics only on a case-by-case basis and subject to written approval by FIFA.

ADDITIONAL FEEDS*	CLIPS COMPILATION	Clips Compilation Channel	HD & SD HD & SD	VENUE IBC
	MOBILE MATCH FEED	Mobile Match Feed	SD	IBC

| | | - 90 MINUTES | - 80 MINUTES | - 60 MINUTES | - 45 MINUTES | -30 MINUTES | - 10 MINUTES | KICK-OFF 1ST HALF | HALF-TIME | KICK-OFF 2ND HALF | + 5 MINUTES | + 10 MINUTES | + 30 MINUTES | + 45 MINUTES | + 60 MINUTES | FORMAT | DELIVERY |

8 | HBS Media Server

HBS produces / gathers content and data from its partners and makes it available to the broadcast community

- Media Server: 1st introduced by HBS in 2006

- Enables Broadcasters to access over 3,000 hours of footage from a dedicated set-up

- Ability to browse, log and exchange match material…

- To access (semi-raw and fully produced) content gathered by HB dedicated ENG crews (42 in 2010), as well as the archiving service

Making broadcast history™…

9 | Overall content delivered in 2010

- ❏ **2,200 hours** of Match Feeds: ESF, CSF, Team A&B, Tactical, PlayerCam A&B, Clips Compilation, Mobile Match feed
- ❏ **64** Aerial compilations
- ❏ **80 hours** of EBIF pre-match, half-time and post-match programs
- ❏ **290 hours** of ENG rushes
- ❏ **320** Features (Matches, Teams, World Cup and South Africa related)
- ❏ **122** Promos
- ❏ **64** Match Closers
- ❏ **99** World Cup Update
- ❏ **64** MD-1 live coverage from venue **+ 160** Match Day -1 packages
- ❏ **289** Infotainment Features +
- ❏ **2,734** Player Vignettes

HBS

10 | Mobile content 2006 & 2010

Dedicated mobile content production:

2006:   Mobile content was made up entirely of in-match clips

Reframing of match content through "pan and scan"

2010:   Specific live mobile feed as produced by HBS for French League 1

Innovative mobile packages were produced with tailored content, specific to mobile network operators, users and mobile football fans around the world

- **64** Mobile match feeds
- **400** Team Specific reports in 8 languages
- **900** World Cup Updates in 11 languages
- **5,250** Still images captured
- **6,300** Text descriptions written
- **15,000** Mobile match clips voiced in 11 languages

Making broadcast history™…

HBS

11 | BBC 2010

- Live matches, highlights, news & additional programming
- BBCi Red button
  - Including interactive coverage during live games, alternative commentaries and rolling highlights
- Specific World Cup website
  - Including news, VOD & live match streaming
- Social networking
- World Cup mobile browser service

12 | Helping BBC reach their objectives

- BBC had big presence in host country plus operations in UK

- Multichannel & multimedia broadcaster

  – Live & recorded sports programming, daytime insertions, news, broadband and mobile production units

- Aggregator of their own and HBS content

  – Multifeeds access for live match programming

  – FIFA Max customer

    - Using much of 100 plus hours per day

    - Plus HBS edited content

13 | **ESPN provided Unprecedented Access for the Best Screen Available**

14 | The Average Daily Multi-Platform User Went to 2.3 Platforms

15 | Created Innovative Products to Fuel Passion and Interest

The Soccer Power Index (SPI)

Making broadcast history™…
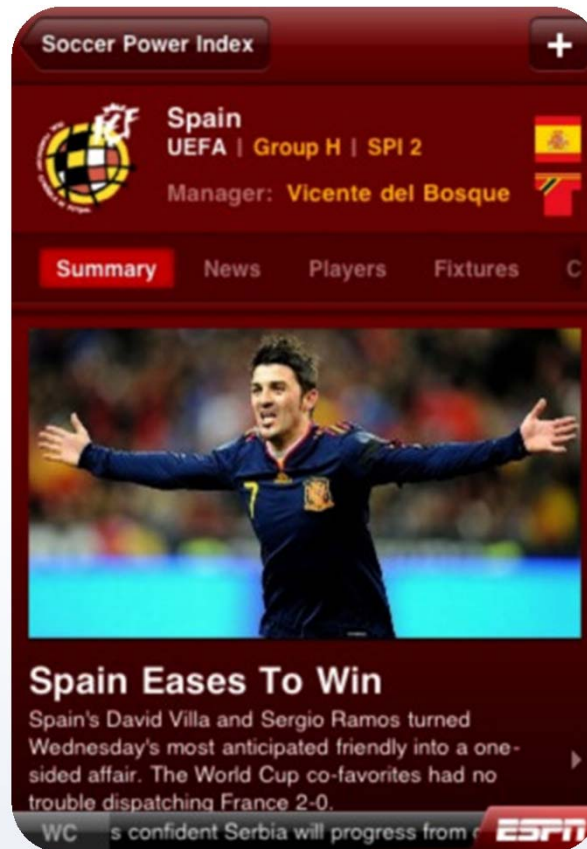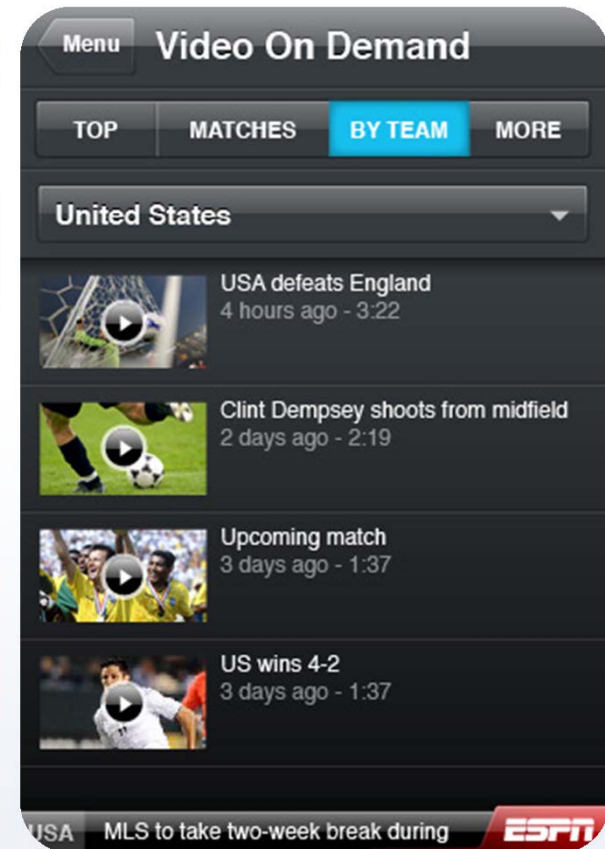
17 Built a Community to Ignite Conversations

18 Multimedia Access Drove Incremental Consumption for ESPN

48 %

41%

4777

3272

121%

2316

1048

2002
Korea-Japan

2006
Germany

2010
So Africa

Making broadcast history™...
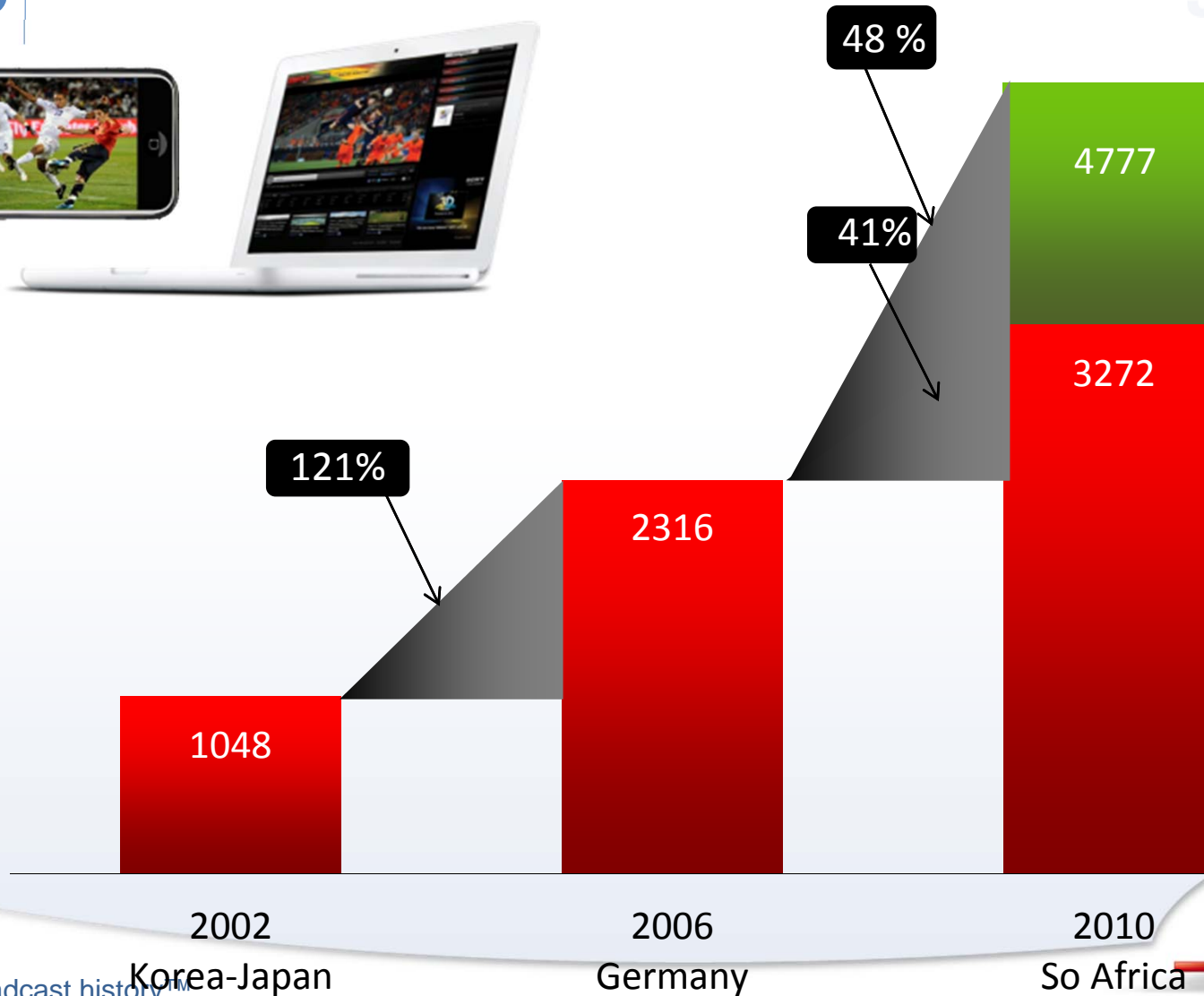
19 | Second Screen/Multimedia

- Multimedia consumption to continue
- Another big lift expected from:
  - 2012 Olympics (BBC "plays at home", and promises a best ever, incl. making all sports available live)
  - EURO 2012 : UEFA offers its Rights Holders Live Match Streaming, (white label) Mobile APPs, a range of web services incl. XML news feeds, a MatchCentre application, statistics application, etc...
- Rights holders targeting content on multiples devices:
  - PCs
  - Tablets
  - Smart phones
  - Smart TV
  - Gaming consoles

Making broadcast history™…

20 | Second Screen Content

- FIFA/HBS initial 2014 assumptions based on feedback from market and rights holders
  - Significant growth and innovation in this area
- Live streaming (with data) and catch-up/watch again services
  - + Mobile feed
- Mobile in-match clips service
- VOD
  - Highlights, interviews, team reports, etc.
- Data (stats and animated content derived from data)
- APPs
  - White label APP
  - + Component elements (VOD, interactive camera plans, data, etc.)
- Broadband embedded video players
  - White label player
  - + Component elements (VOD, streaming, data, etc.)
- Content to drive social media debate/forum

21 | Multimedia Technical & Operational Considerations

- Technical standard(s)
  - Event-time internet standard to be determined
- Content production technical platform
- Metadata
  - Assist end users downstream to speed up editing or publication
- Content hosting
  - Many rights holders will have big news and sports programming departments off site
    - Fast, easy, inexpensive(!) access
- Level of service
  - B2B and/or B2B(2C)

- Olympics 2012
  - Organising Committee (LOCOG)
  - Host Broadcaster (OBS)
    - Broadcast data feed
  - Online technical services including DIVA (Data Integrated Video Application)
    - BBC
    - CTV
    - NBC
    - Terra
      - Olympic rights in 19 South American countries

23 | Rugby World Cup 2011
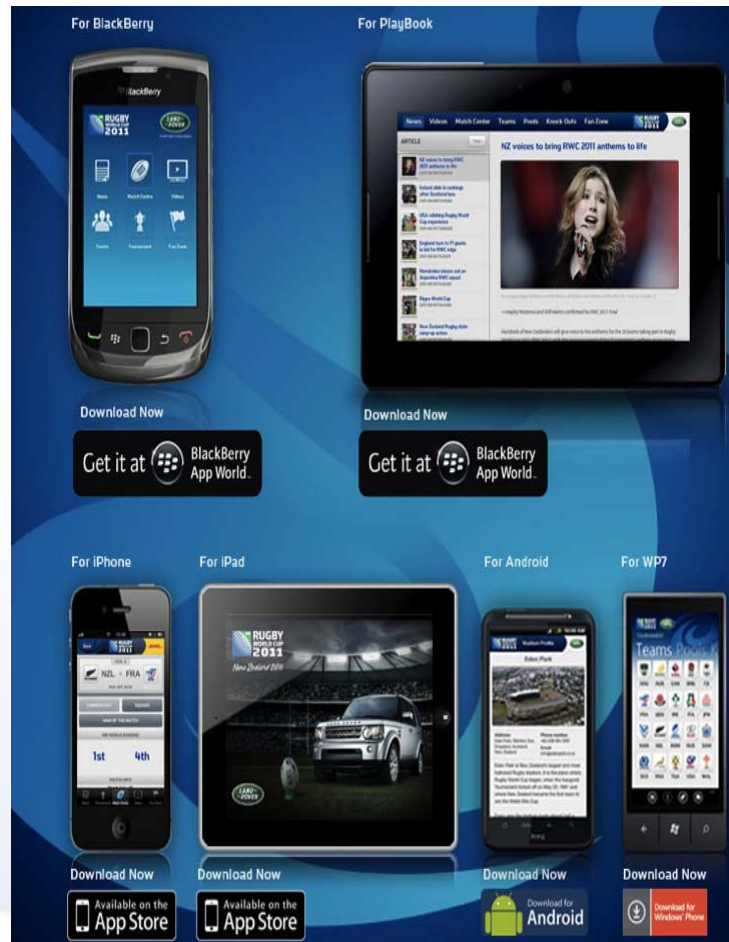
- The 2011 Digital Media Hit

- 8 platforms

- ~3M app installs

- 17M mobile videos watched

- 5M videos watched on web

Making broadcast history™…

HOME | NEW ZEALAND | TICKETS | FAN ZONE | MEDIA CENTRE | VIDEO | ONLINE SHOP

RUGBY WORLD CUP 2011

England **12** **19** France

MATCH COMPLETED

DHL

ENG
FRA

00 | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80

TRACKER HOME | COMMENTARY | STATISTICS | TEAM LISTS | MATCH INFO | PHOTOS | VIDEO

COMMENTARY #RWC2011

Tweet 69   Like 337

Thank you for joining us on the Live Rugby Tracker. Don't forget to join us tomorrow at 18:00 NZT for Quarter-Final 3 match between South Africa and Australia

France will play Wales in the semi-final next Saturday night. France and Wales have never met in a Rugby World Cup match

Mickaël Meynard says:
Bravo la France ! #RWC2011

Jess says:
Still. France did play well that game, as much as I hate to admit it. #rwc2011

Chris Holland-Jones says:
ah well, there were some good moments for England but ultimately France prevailed with some very good play #rwc2011

You can have a look at the highlights or replay of the matches 24 hours after the game (72

LATEST PHOTOS

LATEST VIDEOS

25 | Delta Tre embedded player: DIVA

- Sport is on top of new consumer trends and fosters adoption of new TV standards

- Major sport events provide a huge amount of content, beyond the « live event basic feed »

- Rights holders are eager to maximise interactive usage of this content to maximise their audience (esp. to younger targets) and optimise benefit of (expensive) rights

- Adoption of broadly recognised standards will further accelerate these trends and spread adoption by Leagues and secondary events

Digital television in Russia

Henrikas Iouchkiavitchious

TV and Radio Transmitters Network

- 17,000 employees
- 14,000 TV transmitters
- 2,500 Radio transmitters
- 35 satellite distribution systems

Transition to digital TV
Phase 1 (2009-2010)

Analog television

Digital television

Power	Number
5 kw	1
1 kw	47
100 w	247
To 100 w	2029

Transition to digital TV
Phase 2 (2011-2012)

Coverage: 39.4% of population

Analog television

Digital television

Power	Number
5 kw	10
1 kw	127
100 w	614
To 100 w	3139

4

Transition to digital TV
Phase 3 (2012-2013)

Coverage: 94% of population

Analog television

Digital television

Power	Number
5 kw	36
1 kw	237
100 w	973
To 100 w	4196

Transition to digital TV
Phase 4 (2013-2015)

Analog television

Digital television

Power	Number
5 kw	36
1 kw	243
100 w	977
To 100 w	5274

6

Satellites 2015

Express-МД2
145°E
2009-2018

Экспресс-АМ5
140°E
2012-2027

Express-AM8
14°W
2013-2028

Express-МД1
103°E
2009-2018

Express-AM44
11°W
2009-2018

Express-AM7
40°E
2013-2028

Express-AM6
53°E
2012-2027

Express-AM33
96.5°E
2008-2020

Express-AM4
80°E
2011-2026

● Space communications centers

TV market in Russia

Subscribers

IPTV 3%

Satellite 32%

Cable 65%

Revenues

IPTV 4%

Satellite 28%

Cable 68%
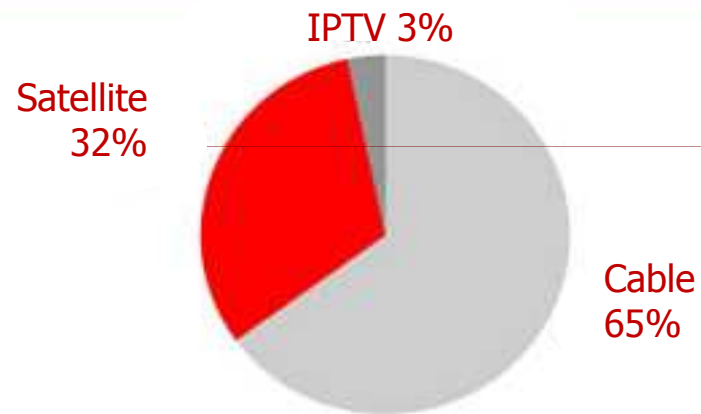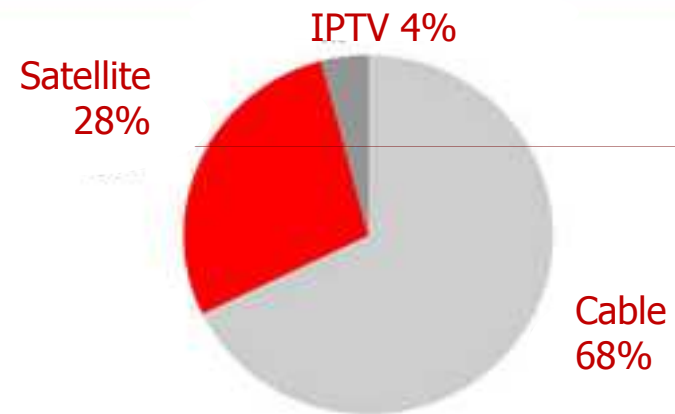
Russian TV composition
31% - commercial TV

Satellite 12%

Cable 18%

IPTV 1%

Broadcast 69%

Эфир

IPTV

Спутник

Кабель
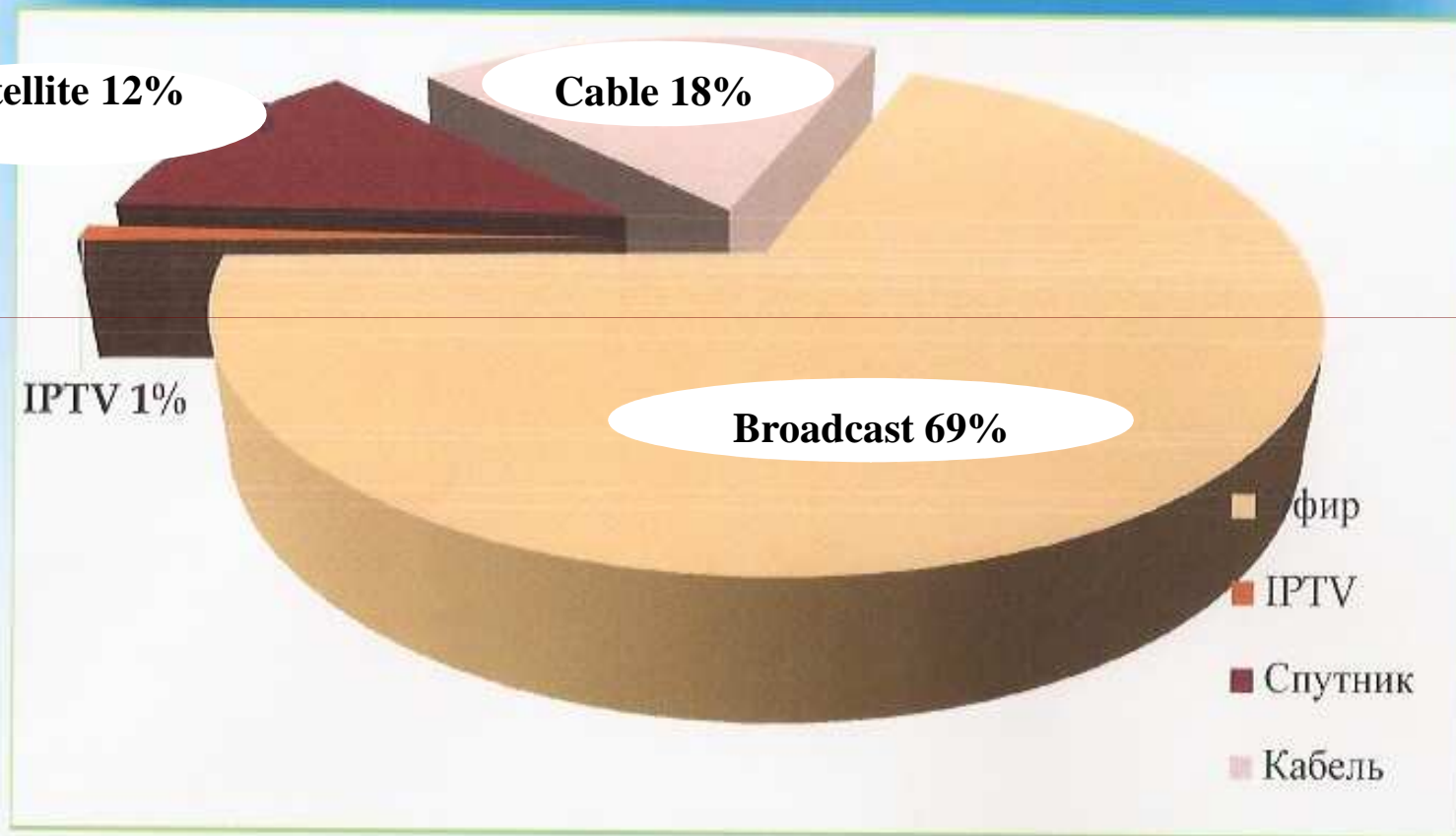
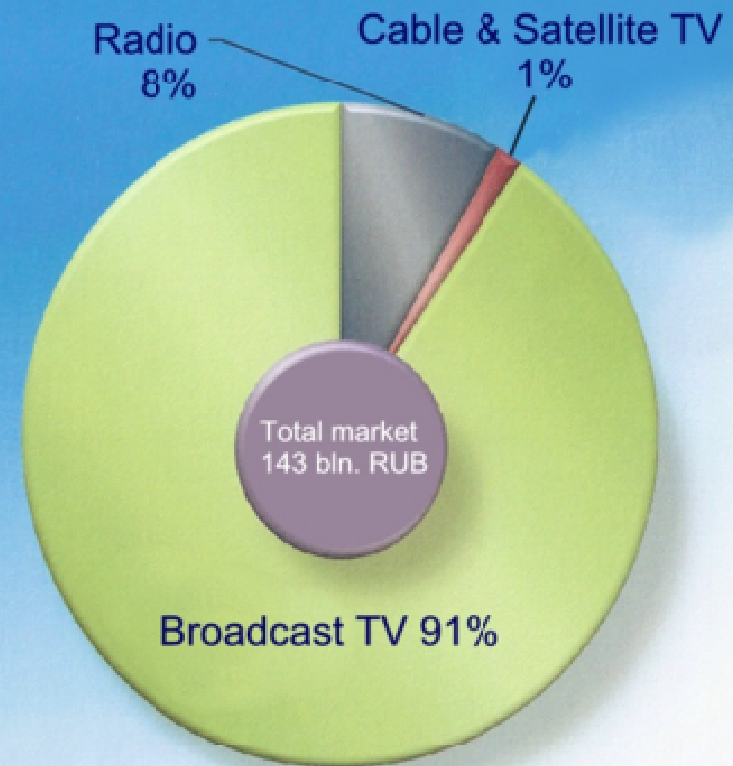Regional TV in cities of 10,000 and above
(No. of broadcasters)

Category	No. of broadcasters
Less than 2 hours per day	496
2 to 3 hours per day	149
3 to 4 hours per day	62
4 to 8 hours per day	68
8 to 16 hours per day	19
16 to 18 hours per day	6
18 to 24 hours per day	49
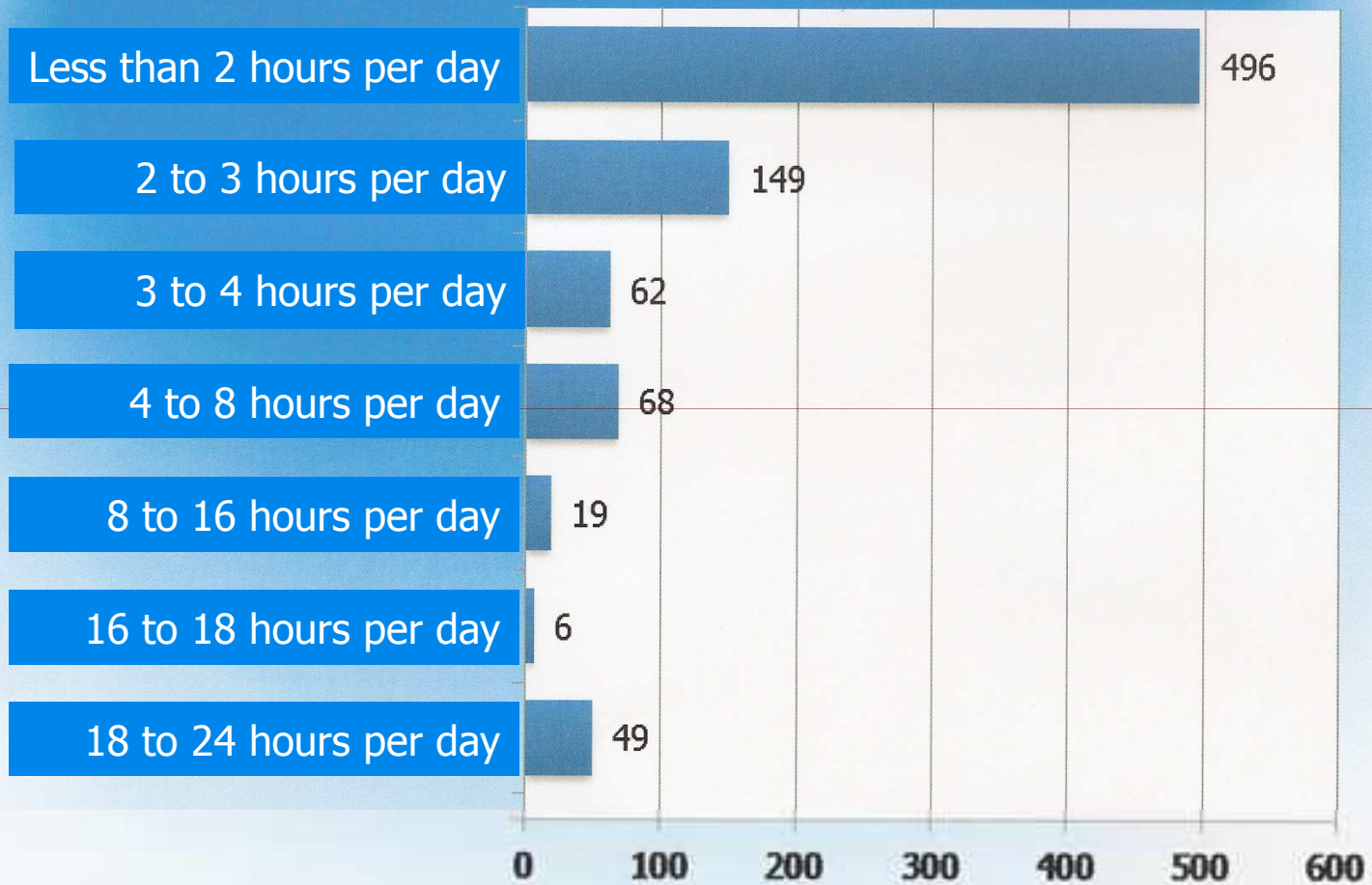
TV and Radio Advertising Market Structure
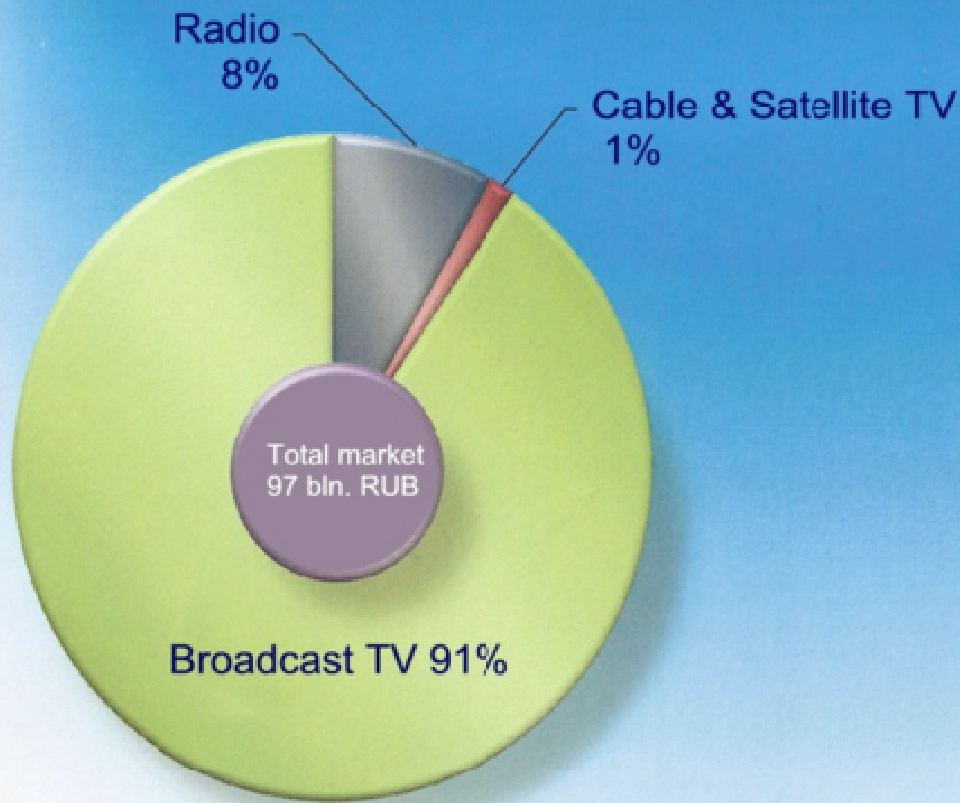
Source: Russian Association of Communication Agencies

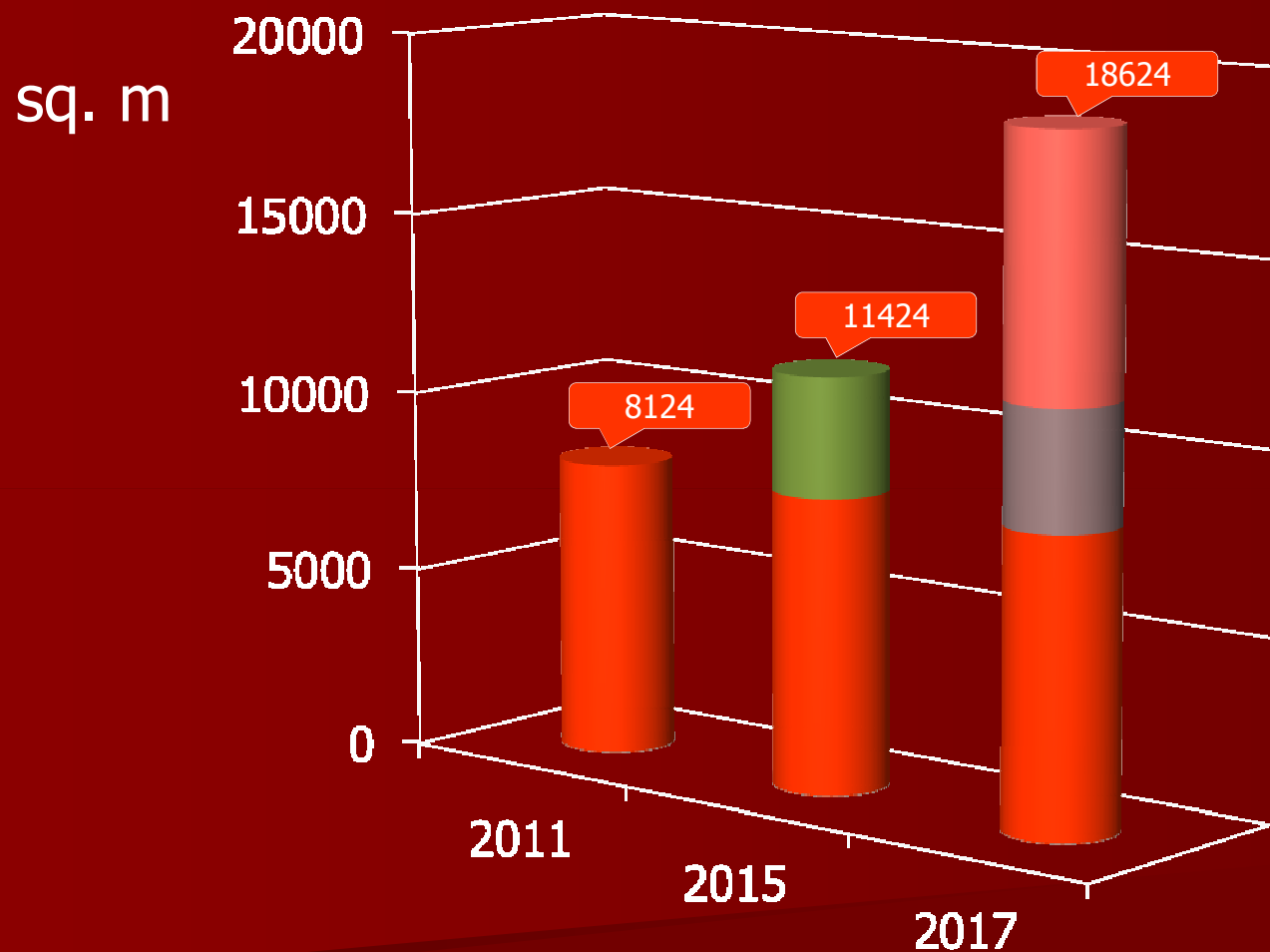# Program Structure of National and Federal TV Companies in 2011
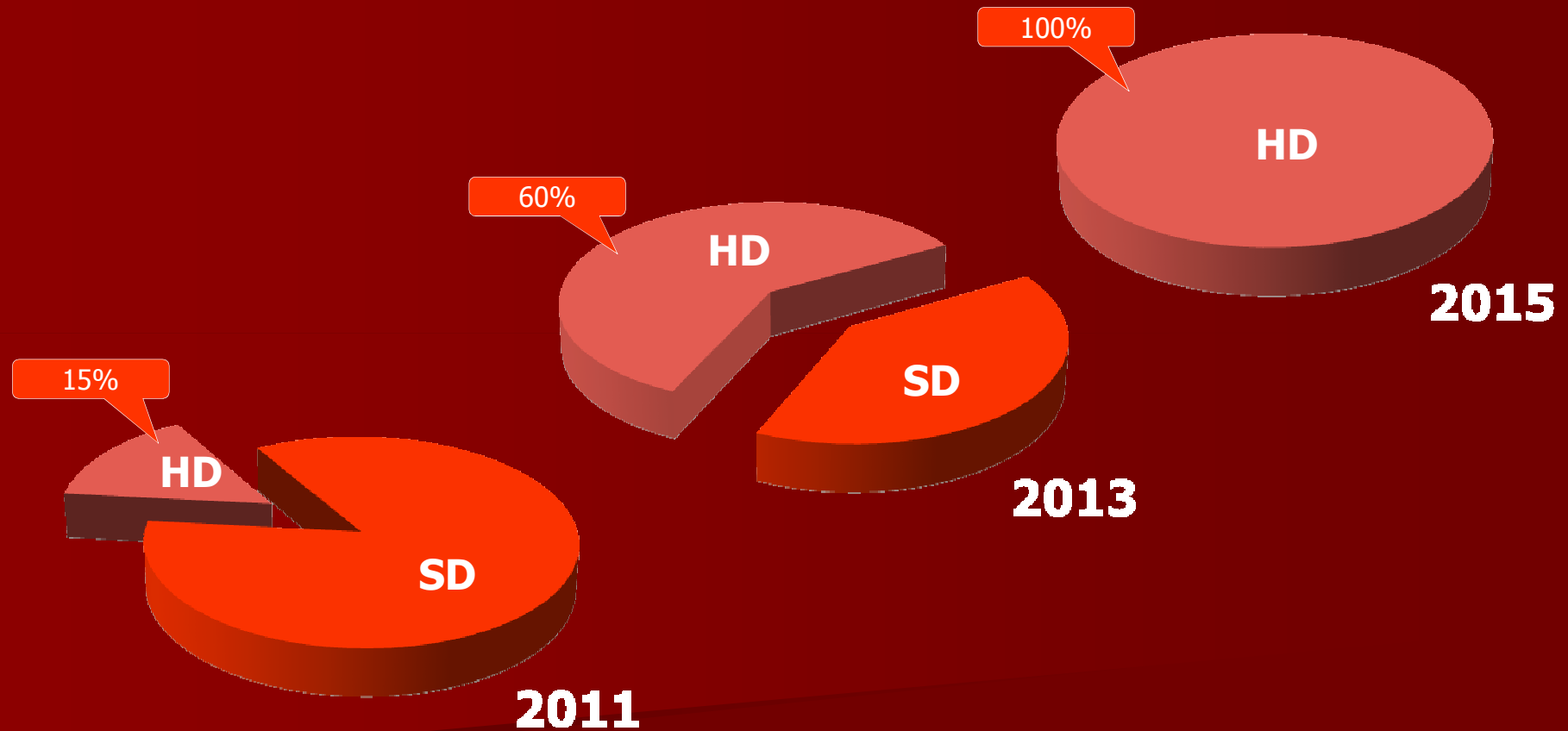
Ostankino: Medium-term Development Plan

sq. m

- 500000
- 400000
- 300000
- 200000
- 100000
- 0

240000

300000

450000

2011

2015

2017
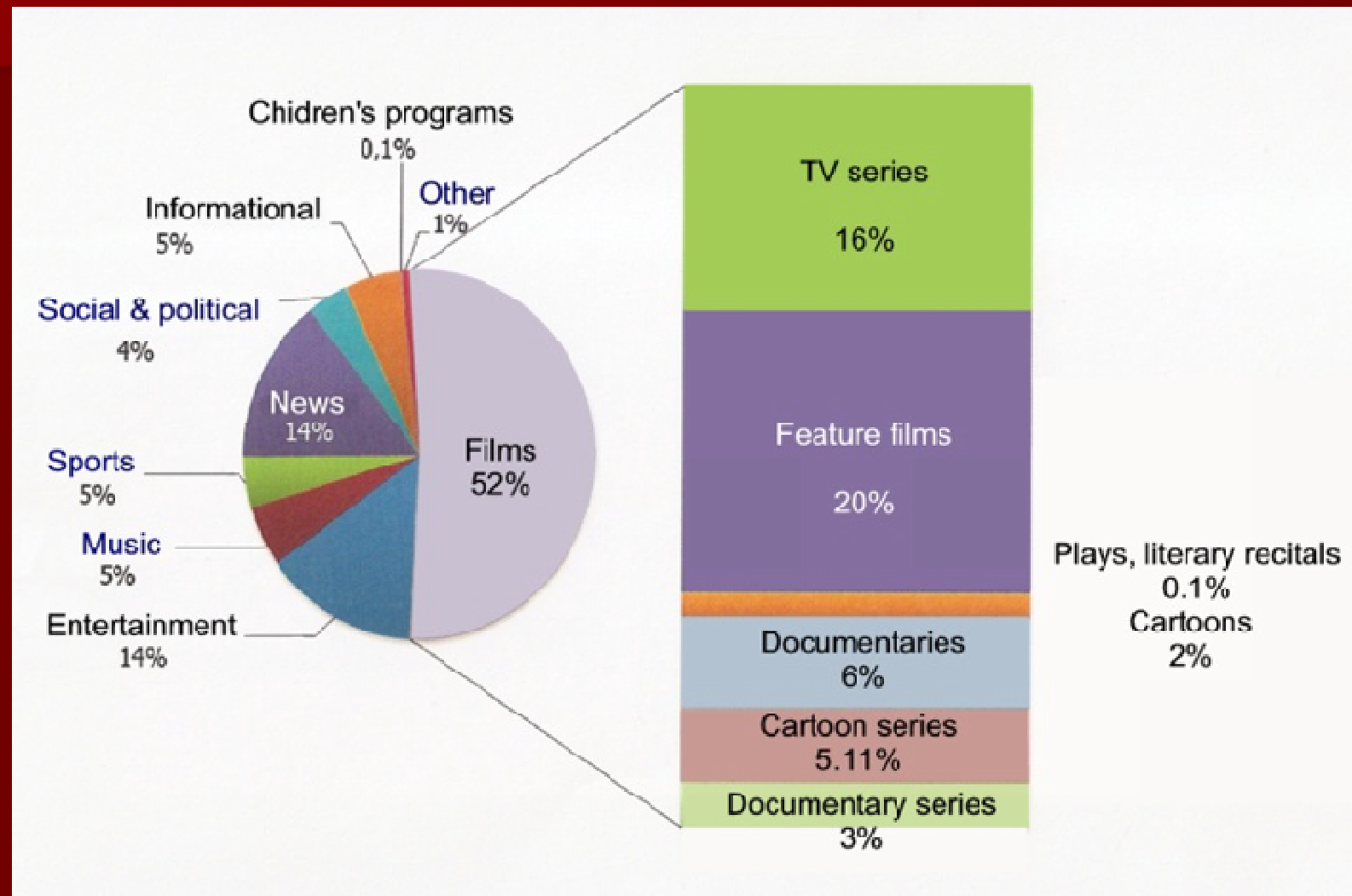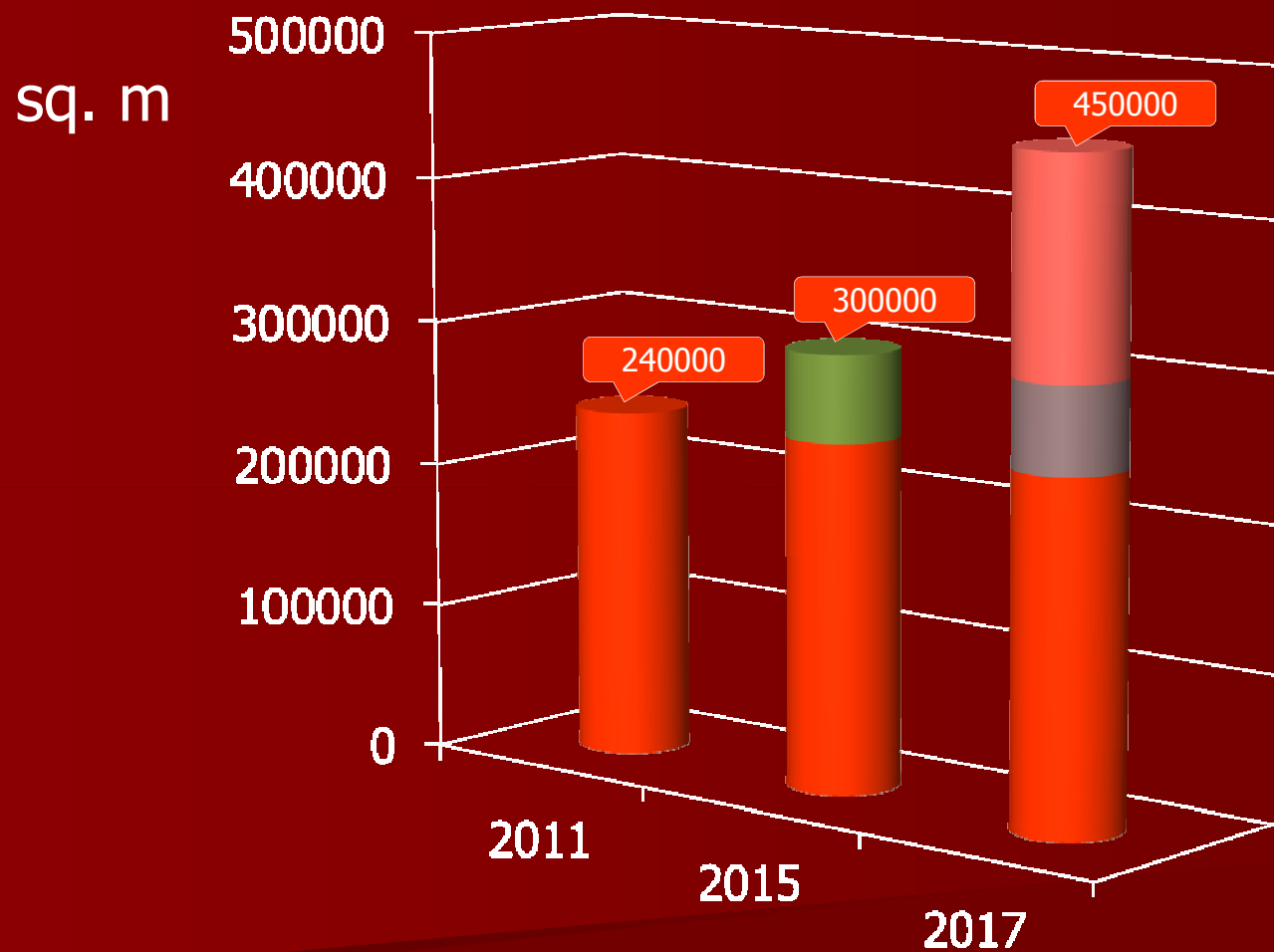
HDTV production facilities

Ostankino: Medium-term Development Plan

sq. m

8124 — 2011
11424 — 2015
18624 — 2017

HDTV studio facilities

Ostankino: Medium-term Development Plan

SD-to-HD migration phases
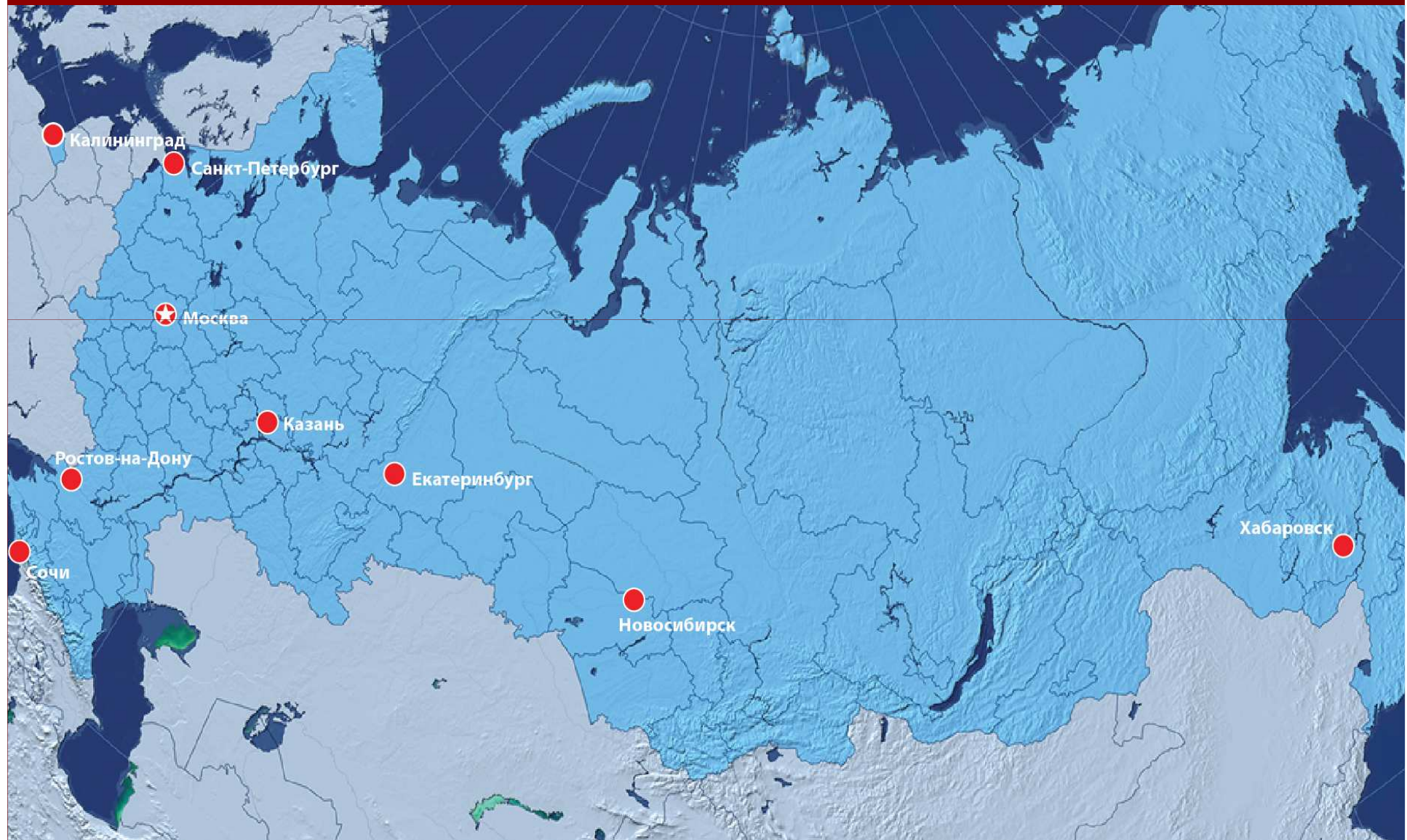
	OBVan 10	OBVan 16	OBVan 24
No. of cameras	10 (up to 12)	16	24
Format	720p/1080i/1080p	720p/1080i/1080p	720p/1080i/1080p
Length/Width/Width in operation/Height (м)	12 / 2,53 / 4,44 / 4	13,6 / 2,53 / 3,8 / 4	13,6 / 2,53 / 4,72 / 4
Cameras	9 x Sony HDC-1500R SSM 1 x Sony HDC-3300R	11 x Sony HDC-1500R SSM 2 x Sony HDC-3300R	20 x Sony HDC-1500R SSM 4 x Sony HDC-3300R
Lens	Fujinon 2 x 88xPF/2 x 42x/4 x 22x/2 x 14x	Fujinon 2 x 101xPF/4 x 88xPF/2 x 42x/4 x 22x/4 x14x	Fujinon 4 x 101xPF/5x 88xPF/2 x 42x/7 x 22x/6 x 14x
Video mixers	Snell Kahuna 360 2 ME, internal DVE	Snell Kahuna 360 2 ME, internal DVE	Snell Kahuna 360 3 ME, internal DVE
Video recorders	4 x XDCAM HD (до 8x)	4 x XDCAM HD (до 8x)	4 x XDCAM HD (до 8x)
Replay servers	3 x EVS LSM XT3	5 x EVS LSM XT3	9 x EVS LSM 3XT3
Sound control panel	Studer Vista 9	Studer Vista 9, Yamaha DM1000VCM	Studer Vista 9
Coding/Decoding	Dolby Laboratories	Dolby Laboratories	Dolby Laboratories
Communications system	Riedel	Riedel	Riedel

Mobile Satellite Stations

Format	720p/1080i/1080p
Length / Width / Width in operation/ Height (м)	7 / 2.4 / 3.2 / 3.3
Cameras	3 x Sony XDCAM HD PDW700
Lens	Fujinon 17 [ZA-series
Video recorders	1 x XDCAM; 1 x HDV; 1 x HDCAM; 1 x P2
Sound control panel	Yamaha DM1000VCM
Microphones	Sennheiser
Loudspeakers	Fostex
Wireless communication	Riedel Riface, Phone Hybrid Glennsound 2ch
Antenna	1.8 AvL 1812K Intelsat\ Eutelsat approval
Amplifier	2x350W CPI
Modulator	DVB-S/DVB-S2 QPSK/8-PSK

Main sport events in Russia

2013: World Universiade in Kazan

2013: World Athletics Championship in Moscow

2014: Winter Olympic Games in Sochi

2016: World Ice Hockey Championship

2018: World Football Cup

NRJ : TV CONNECTEES

En complément de sa présence sur les smartphones, les PC et les tablettes, NRJ a décidé d'être présent sur les écrans connectés dès le début **2009** (mise en production commerciale dès l'été 2009).

Ce **prépositionnement stratégique** visait tant à ne pas laisser ce nouveau terrain aux seuls pure players qu'à se préparer à ce qui (dès le départ) s'annonçait comme devant devenir le mode de consommation audiovisuelle de demain (grand écran directement connecté au réseau IP).

Pour cela NRJ fait appel non seulement aux diverses **solutions propriétaires** des industriels, mais aussi à la norme **HBBTV**. Aujourd'hui, l'application NRJ pour TV connectées est ainsi présente sur **4 plateformes techniques différentes.**

Attention : **la TV connectée pourrait (si on laisse « la loi de la jungle » s'installer ») se révéler destructrice de valeur**. En effet, les audiences linéaires et non linéaires vont de croiser tôt ou tard et la publicité en ligne est vendue moins chère que la publicité TV. De plus, l'arrivée d'acteurs concurrents (désormais sur les mêmes « écrans » TV, mais jouissant d'une «régulation» différente plus favorable) risque de tirer les tarifs à la baisse et/ou de préempter les campagnes de pub à leur seul profit. De « nouvelles règles du jeu » (plus équitables) s'imposent donc sur le « nouveau terrain » que constitue l'écran connecté.

TV connectée : Petit état des lieux

✓ **1 255 000** foyers équipés (**4.7%** des foyers équipés TV)

✓ **53 %** de foyers **25-49 ans** (contre 40.8% pour l'ensemble des foyers équipés TV)

✓ **42,6%** de foyers **CSP+** (contre 29.9%)

✓ **51,7 %** de foyers dans une agglomération de **+ de 200.000 habitants** (contre 38,0%)

(Sources : Mediamétrie GFK – 2ème trimestre 2011)

Actuellement (mais depuis peu), plus de 40% des nouvelles TV « connectables » achetées sont désormais « effectivement connectées » (source NRJ).
Le nombre de visiteurs uniques deviendra significatif dès la fin 2012.

Outre les aspects « réglementaires », il reste néanmoins à gérer quelques problèmes sérieux, qui seront mécaniquement induits par l'accroissement de l'audience : notamment la **capacité des réseaux IP à tenir la charge** (avec une qualité de service adaptée à de la vidéo sur grand écran (catchup et Vod obligent).

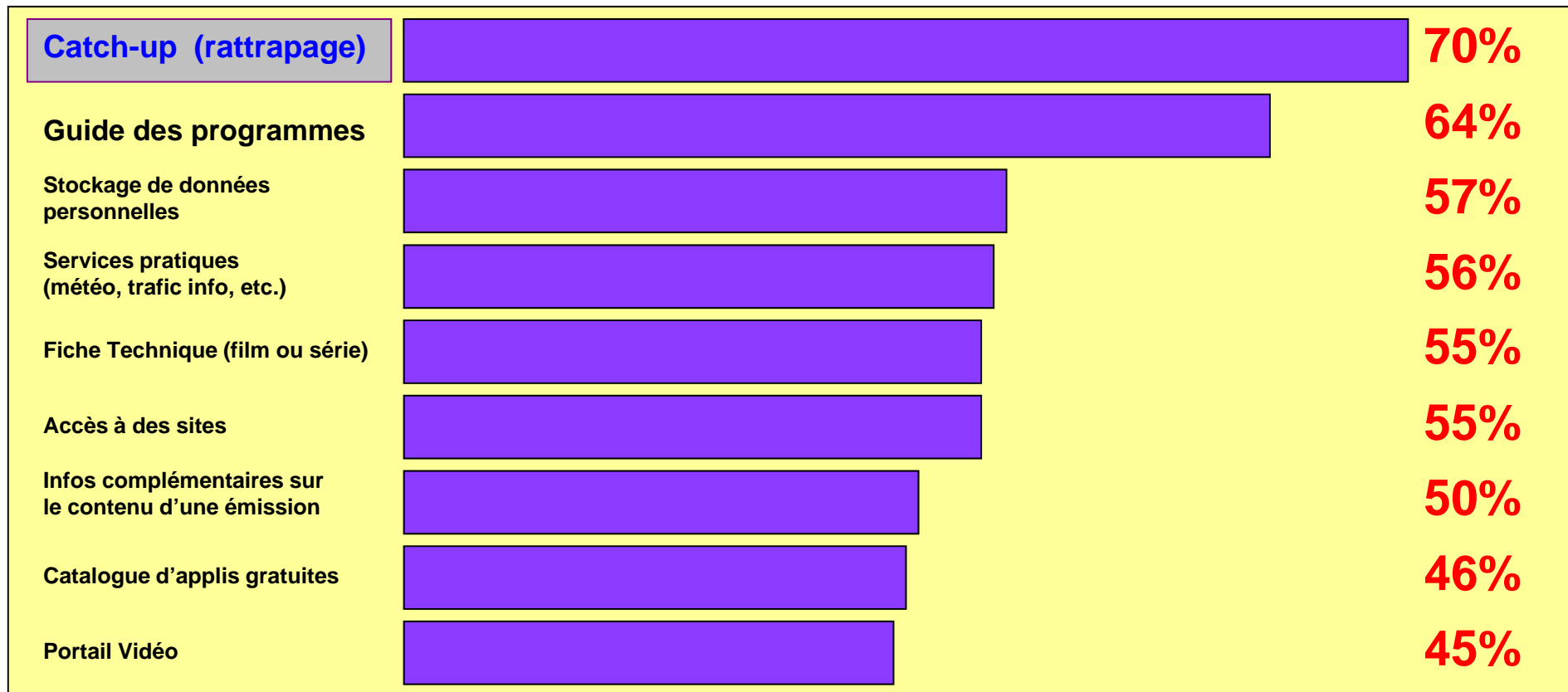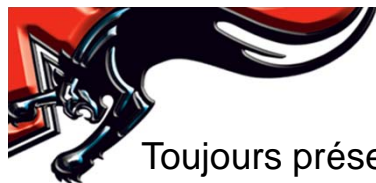# TV connectée : Volume des ventes en France

Légende : LED — Tv connectée — 3D

43,3%

17,5%

8,1%
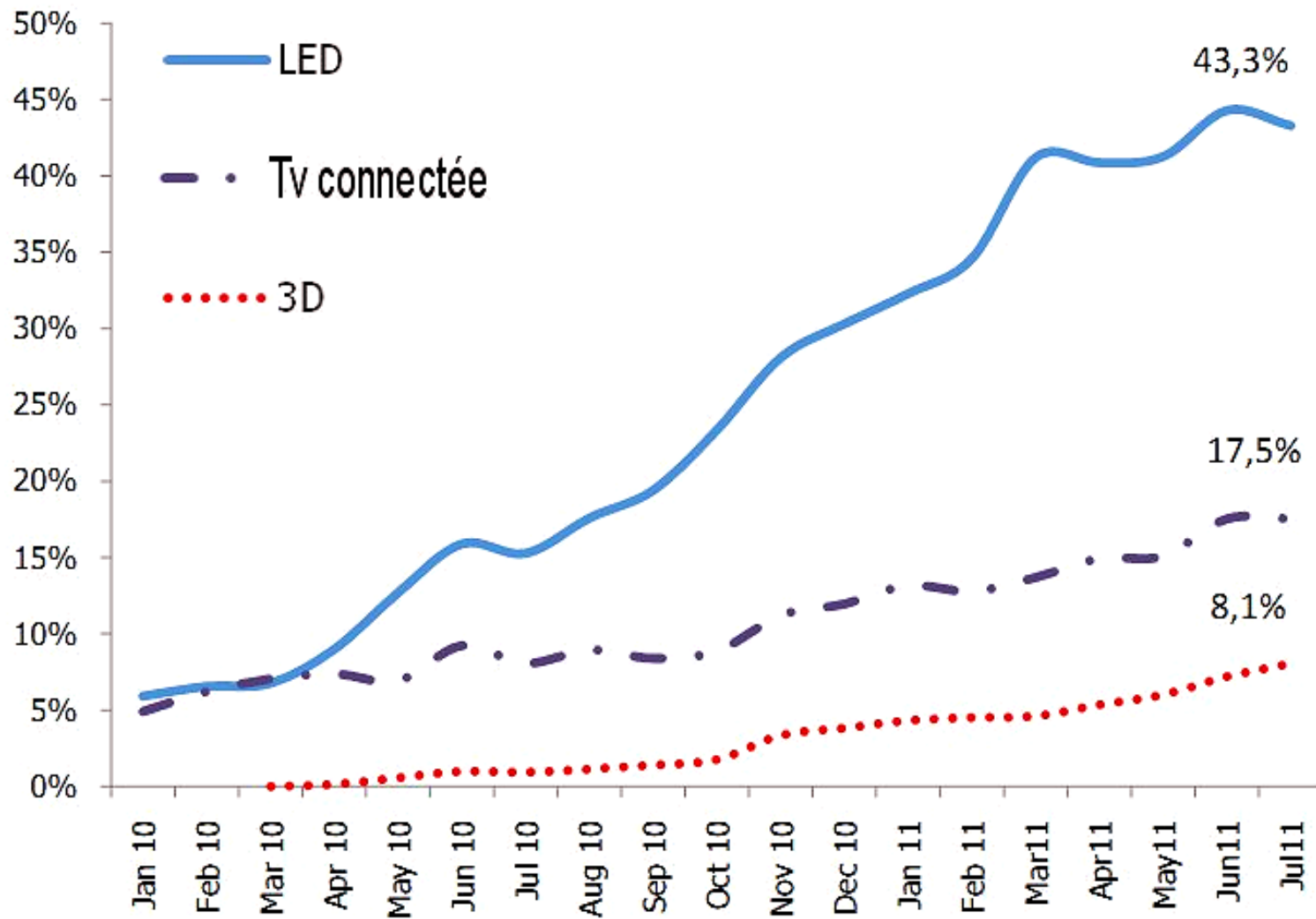
TV connectée : les services attendus par les français

« **44% des sondés estiment que la télévision connectée les amènera à consommer davantage l'écran du téléviseur au détriment de l'ordinateur** »

Service	%
Catch-up (rattrapage)	70%
Guide des programmes	64%
Stockage de données personnelles	57%
Services pratiques (météo, trafic info, etc.)	56%
Fiche Technique (film ou série)	55%
Accès à des sites	55%
Infos complémentaires sur le contenu d'une émission	50%
Catalogue d'applis gratuites	46%
Portail Vidéo	45%

NRJ : TV CONNECTEES

Toujours présent sur les supports d'avenir, **NRJ fut le premier groupe audiovisuel français à proposer des applications commerciales sur les TV connectées dès juillet 2009**.

Le service propose essentiellement :
- l'accès gratuit à des **news** sur les plus grandes stars
- l'écoute de **50 Webradios** de la marque NRJ (en qualité numérique, avec les crédits & visuels)
- l'accès à plus **de 40 vidéos** en **Télévision de rattrapage** sur **NRJ 12 Replay**.

La première version de l'univers NRJ est présente depuis 2009 sur les **écrans TV** et sur les **lecteurs Blu-Ray** connectés de **Philips.**

En décembre 2010, l'univers NRJ est arrivé sur les **adaptateurs TNT** puis sur les téléviseurs connectés de **Toshiba**.

Juin 2011, l'Univers NRJ débarque sur les Smart TV de **LG**

Depuis **juillet 2011**, l'Univers connecté de NRJ est présent selon la nouvelle norme Européenne **HBBTV** sur tous les TV compatibles.

Avant fin 2011, l'Univers NRJ sera présent sur **Samsung** et **Panasonic**

L'application NRJ en HBBTV

Sur la chaîne NRJ 12,après 10 secondes, un pop-up multichoix apparaît en surimpression dans le coin supérieur droit (et disparait automatiquement après quelques secondes si l'utilisateur ne clique pas sur l'une des vignettes).

L'application NRJ

Opening the way to HBBTV in Spain

rtve.es

• Prehistory: MHP way is gradually abandoned by broadcasters

•2008: RTVE's interactive unit is created. First approach to "connectivity" on TV sets through game consoles. There's not maturity at the local level

•2009: second round. Manufactures starts their walled garden approach. RTVE prospects on HBBTV.

•2010: RTVE declares officiallyi that will support HBBTV

•2011: RTVE invites spanish broadcasters to join forces to make HBBTV real. First HBBTV applications on the air

First specification adopted

- AEDETI reactivate Interactive TV Group with the support from SETSI. April 2011

- RTVE declares that will support this new effort but invites broadcasters to discuss independtly

- RTVE, Antena 3, ETB and TV3 starts works defining basic requisites.

- New broadcasters join the group of broadcasters for HBB definition. The group gets completed with the rest of public service territorial broadcasters, La Sexta and Mediaset.

- Specification is published officially in September 2011

Spanish Group of Broadcasters for HBB

• Unformally created. Broadcasters joined to avoid same mistakes done in the past.

• Base document is EBU Principles for the hybrid television.

• Main goals: own voice in the process of adoption, promote HBBTV standard, promote consensus.

rtve.es

• RTVE lunch first HBBTV in June.

• Followed by Telecinco (Mediaset) some days after.

• TV3 HBBTV app in August 2011. Followed by La Sexta and other territorial public service broadcasters.

• HBBTV portal from UNEDISA (El Mundo) is under development

"RTVE.es A la carta" HBB Ecosystem

XL Version

Device with full browsing
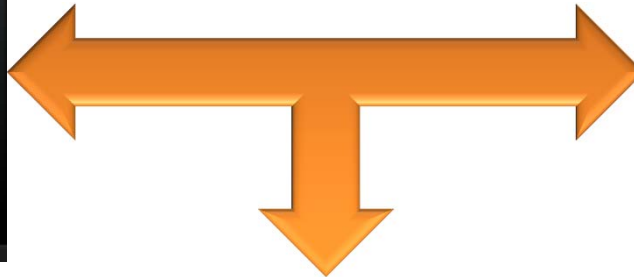
Propietary apps

Manufacturer's portals

Versión HBBTV

TV sets supporting standard

Some concerns to solve

• Requisites document published by SETSI still includes key elements as "not agreed": overlay, DRM among others.

• Interoperabily.

•Audience Measurament

rtve.es

Thank You!!

franciscojose.asensi@rtve.es

tivù Srl is a joint venture founded in October 2008 by Rai, Mediaset and Telecom Italia Media

tivù Srl
- Shareholder -

| Rai | Mediaset | Telecom Italia Media | FRT | Aeranti Corallo |

tivù Srl
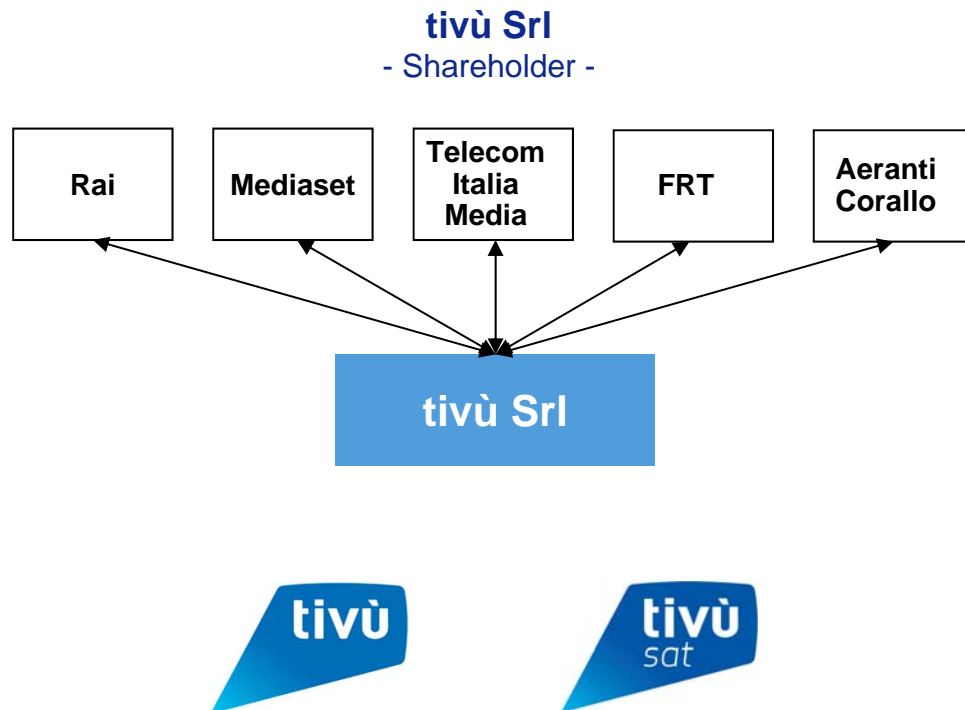
Comments

- tivù is a joint venture founded **by Rai, Mediaset and Telecom Italia Media** aiming to help Italy in the digital transition

- tivù launched its services in **January 2009 on the digital terrestrial** platform and in **July 2009 on the satellite**

- In May 2010 also the two main associations of local broadcasters joined the company with a minority share: FRT and Aeranti Corallo

tivù

tivù
sat

tivù
Libertà
di visione

tivù Srl operates on two digital platforms: DTT with **tivù** brand, SAT with **tivùsat** platform and is launching a third *hybrid* one: OTTV with **tivùon**! brand/services

NEW !!!

Digital Terrestrial Television promotion and development

- **Promotion and development of digital terrestrial television platform (DTT)**, also through brand construction, delivering common and recognizable values

Ensure universal television service through a free SAT offering

- **A free Sat platform, complementary to DTT,** allowing viewers not covered by DTT to receive a free digital TV service (served through SAT)

- More than **1M active households**

OTTV platform enabled via MHP application secured with an open DRM solution

- **An OTTV MHP service,** allowing viewers to experience real catch-up TV and VoD services

- Marlin Delegated Certification Authority

Libertà
di visione

Tivù has chosen Marlin DRM for the content protection of Tivùon! OTTV platform – an Open DRM technology that is rapidly becoming a pan-European standard

- **Tivù has chosen Marlin DRM** for broadband delivery content protection *(OTTV)*

- **Tivùon!** is a service for the industry and the Italian operators

Marlin Developer Community

The Marlin specifications were developed by the Marlin Developer Community (MDC) formed by major industry players together with Intertrust

Marlin: a pan-European Open DRM

The Marlin DRM has been choosen as the main content protection technolgy in the following countries:

- UK: for YouView, the open internet connected platfomr

- France: in the TNT 2.0 specifications from the HD Forum – France

- Spain: to support development of OTT-TV services

Marlin is worldwide adopted solution

Marlin is deployed in a variety of devices and services:

- Japanese national IPTV

- Sony PlayStation Network, PS3, PSP, TVs, and other devices

- Philips NetTV

- Open IPTV Forum for 'over the top' IPTV delivery

- Chinese television IT services

Tivù will release a new label that, when added to the "DGTVi gold" label, **will tell the customer that the device is ready for Italian OTTV services with Marlin DRM – MHP 1.1.3 – Mpeg DASH and CENC**

INTERACTIVE

BROADBAND

INTEROPERABLE (for PayTV)

OTTV services

TivùOn! new label (issued for 2012)

DGTVi gold label
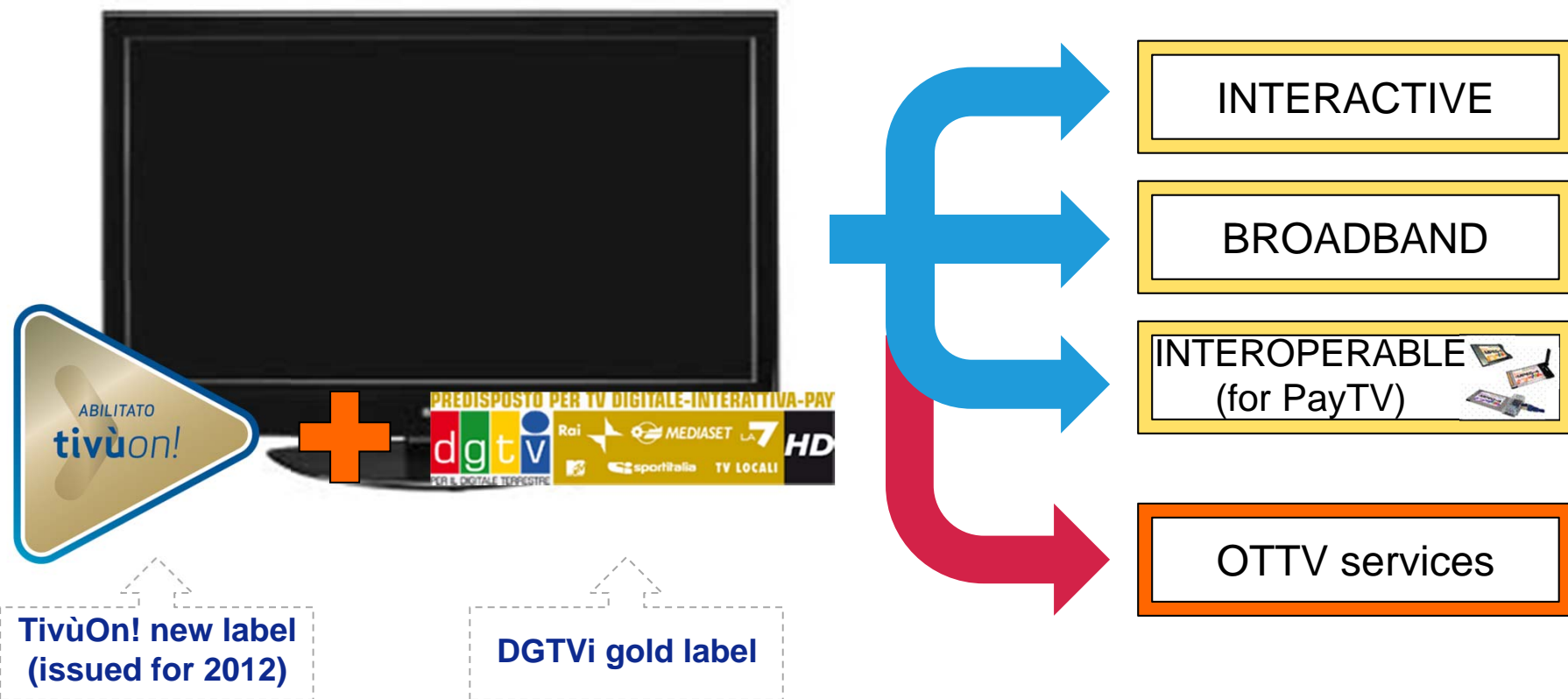
TivùOn! the first coopetitive Italian OTTV platform – a service trial will be launched by Q1 2012

OTTV Tivùon! Portal will be accessible through TivùSat EPG (and also via a dedicated broadcasting channel)
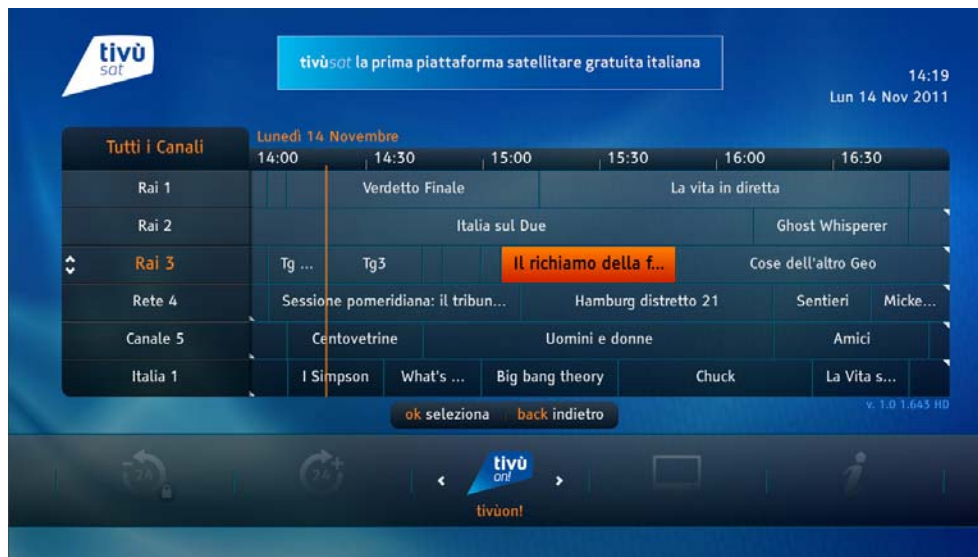
- **Tivùon! portal is based upon an MHP broadband service that works on Golden label and TivùOn! certified devices compliant to**:
  - Marlin-based DRM Addendum 1.0
  - BAS Addendum 1.0 *(Broadband Application security)*
  - Tivù's profile of DGTVi/HDFI "Broadband Applications Security Addendum 1.0", a generic framework for securing OTT applications

- **Tivùon! portal will be the gateway to catch-up TV and VoD services offered by the main Italian broadcasters**

TivùOn! homepage
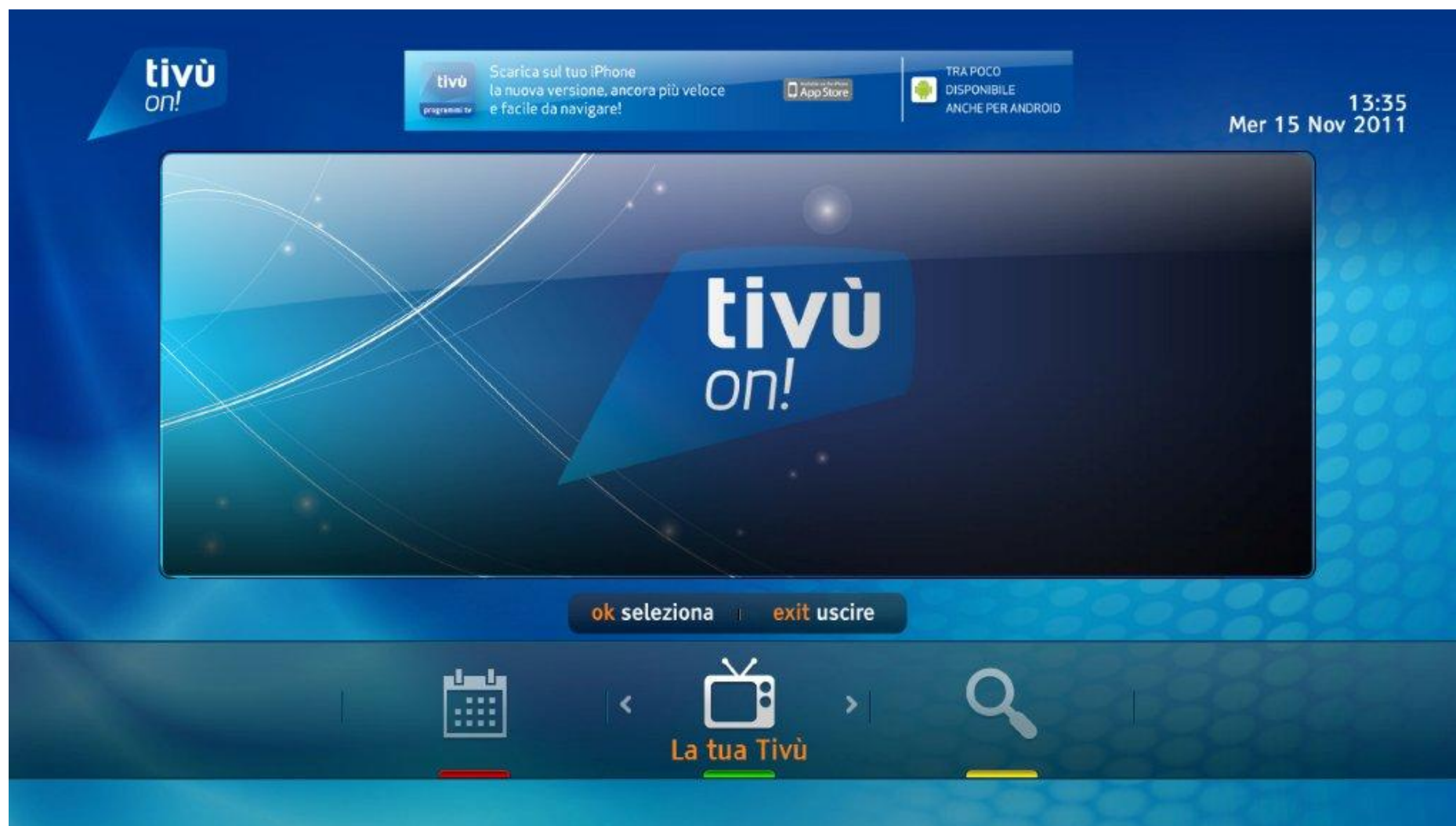
TivùOn! – VoD catalogue broadcaster selection

TivùOn! – VoD catalogue content selection

TivùOn! – VoD catalogue broadcaster selection

TivùOn! – VoD catalogue content selection