# Broadcast & broadband convergence on hybrid devices to enhance the final user's experience

## 27th CIRCOM Regional Annual Conference 2009

**Groningen - 15 May 2009**

Rai - Centro Ricerche e Innovazione Tecnologica

**Rai**

In 2005, an IBM Business Consulting Report titled .....

IBM Business Consulting Services

IBM Institute for Business Value

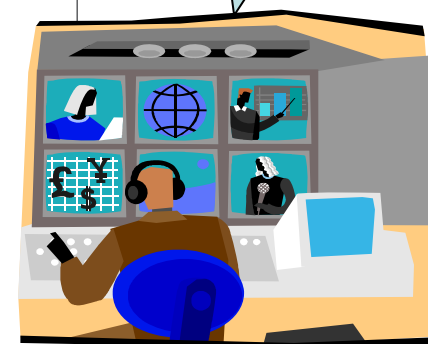**The end of television as we know it**

A future industry perspective

IBM

Media and Entertainment

The key message: on-demand media services via broadband networks will rapidly replace conventional television

# Drivers of change for the TV industry



Open

Content access

Limited

Passive → Involved

**Consumer media control**

Source: IBM Institute for Business Value.
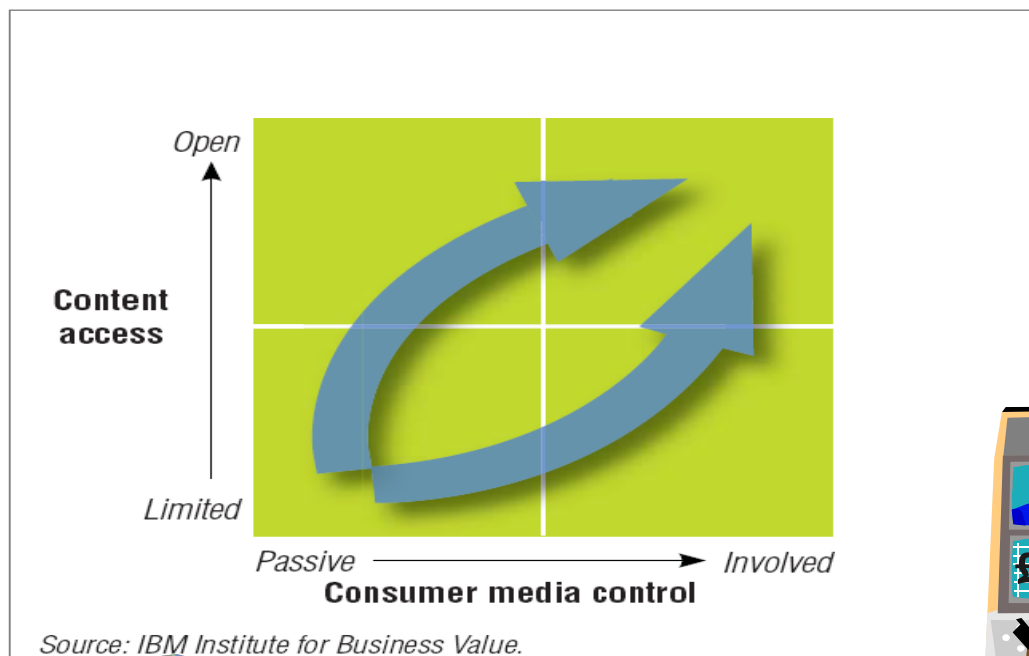
**Video On Demand Blogging Chatting UGC**

**Sofa TV Zapping**

Passive

Active

# The scenario ... at home

**Rai**

**Yesterday ....**

**Personal Computer**
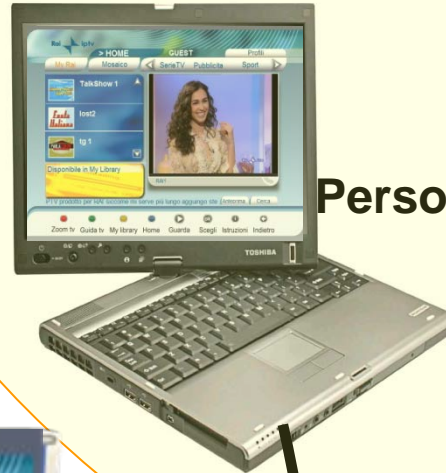
**Console Giochi**

**Connessione Internet**
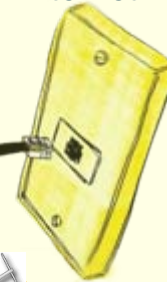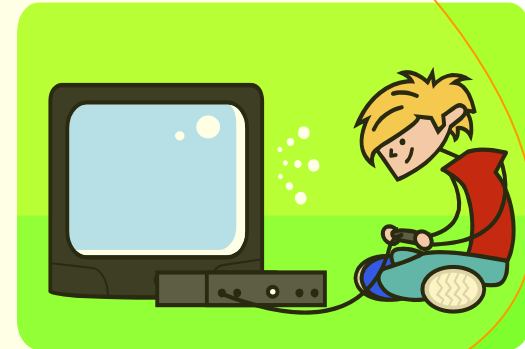
**Hybrid Decoder/ Integrated TV, with PVR capabilities**

# Today/Tomorrow ....

Rai - Centro Ricerche e Innovazione Tecnologica

# Some CE products ...
# Internet connected

## Sharp AQUOS Net connected TVs .......

Using this service and television's remote control, viewers can configure "widget" to check everyday weather information, stock quotes, comic strips, games, high-resolution gallery images.........

## Apple TV .......

"*Apple TV redefines what your TV can do ...*" ... watching on-demand HD movies, buy or rent standard definition movies and TV shows a day after they air, play iTunes music and control it with iPhone/iPod touch, access photos, watch podcasts

# Some CE products …
# Internet connected



*"Tivo brings you entertainment"* .......

Tivo Digital Video Recorder (+ Tivo service) is a device the user connects to the TV and the TV source video signal (satellite, terrestrial,..) to watch and record TV shows. Plus it can connect to the Internet, to deliver movies, music, photos to the TV set.

## Sony's BRAVIA Internet Video Link

In addition to YouTube, the content lineup for the Internet Video Link now includes Yahoo!, AOL, Sports Illustrated, blip.tv, CondeNet's Style.com, Men.Style.com, Epicurious and Concierge.com channels, Sony Pictures Television's Crackle, The Minisode Network and Inside Sony Pictures channels, FEARnet, Ford Models, SingingFool and VideoDetective.

# Some CE products …
# Internet connected

## Widget ….  Yahoo & Intel  (Samsung, Sony, …)

"*The Internet revolution will be televised …*" TV widgets
are small web applications that allow users to surf their favorite sites using the remote
control, to watch web video, track favorite teams or stocks, interact with friend and
family, stay updated on news and information on top of TV watching

## Philips Net TV

To provide linear broadcasting, IP Electronic Program Guide, selective
video contents (Catch-up TV, Web video, Video on demand..), Infotainment
(News, Weather, Sports, Games, eCommerce), Personal content (Photo, Video,...)

## + more and more solutions

# Hybrid scenarios (Broadcast plus Broadband) & Broadcasters

- **What Broadcaster can do TODAY using the broadcast channels …**
  - linear TV channels
  - thematic TV channels
  - some interactivity
  - push VoD on local set-top-box hard disk

- **New opportunities and use cases …**
  - linear TV (BC) + VoD Catch-up TV (BB) + VoD Premium/Archive content
  - broadband enhanced Teletext (BB)
  - targeted advertisements (BB)
  - audience tracking & profiling (BB)
  - Integrated search on broadcast and broadband content
  - Cross-signalling: broadcast stream can be used to signal the availability of "broadband applications" → in this way the control remains in the hands of the broadcaster

# Rai  Hybrid scenarios (Broadcast plus Broadband)
## & Broadcasters
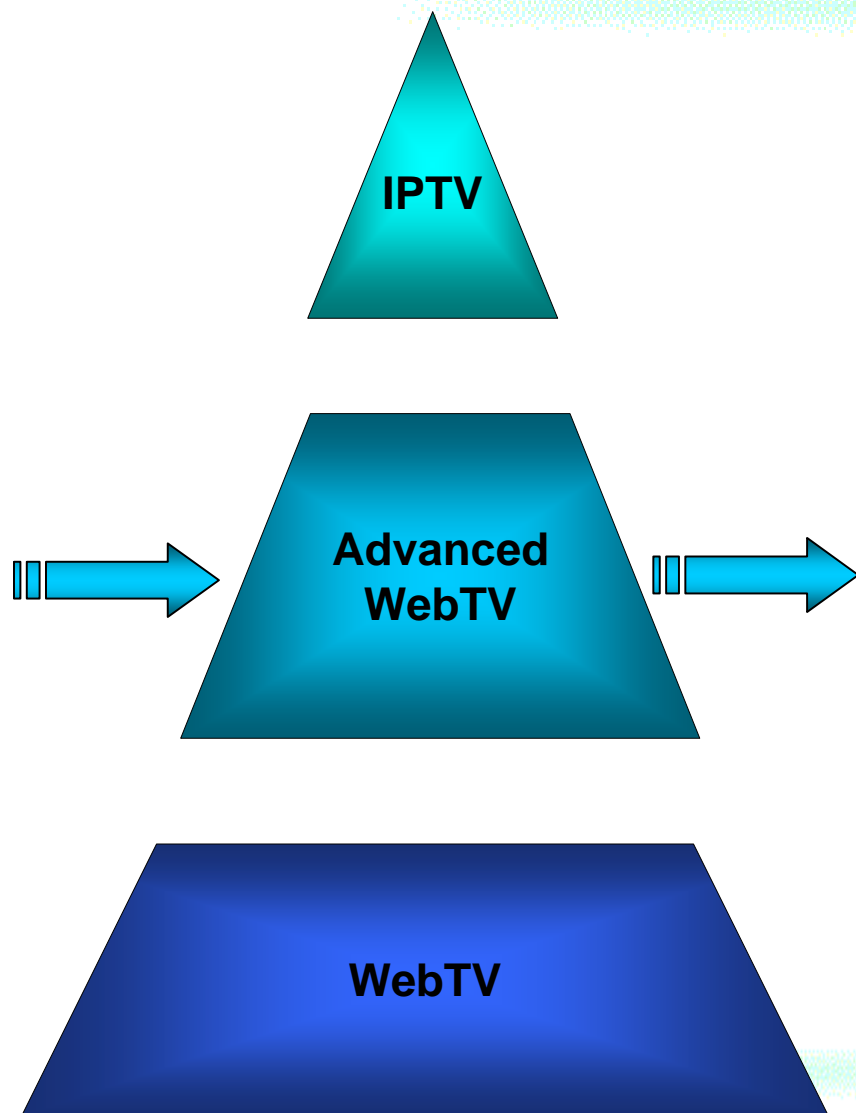
**IPTV**

**TV-Like Experience**
- Walled Garden IPTV Operator over Managed network
  - Broadcast TV ( es. *Offerta Sky, Raiclick,,…*)
  - Video on Demand (VOD)/ Podcasting
  - VAS

**Advanced WebTV**

**TV-Like Experience**
- Advanced WebTV over Open Internet
  - Personalized Offer
  - Download & Play
  - PushVOD
  - VoD streaming (e.g, via CDN operator,..)

**WebTV**

**PC-Like experience**
- WebTV over Open Internet (es. *www.rai*.tv)
  - Download & Play
  - VOD senza QoS

# Hybrid scenarios (Broadcast plus Broadband) & Broadcasters

- **Which bodies are working on these issues …**
  - **OpenIPTVForum**
    - **Create in March 2007 by Ericsson, France Telecom, Nokia Siemens, Panasonic, Sony Corporation, Philips, Samsung Electronics and Telecom Italia**
    - **Pan-industry initiative with the purpose of producing end-to-end specifications to enable IPTV services mass market penetration considering both managed and un-managed network**
    - **44 members today …**
    - **Broadcasters' presence: IRT, BBC & RAI**

  - **DVB**

  - **EBU Recommendation 127 (Feb. '09) :**
  **"Television in a Hybrid Broadcast/Broadband Environment"**

    *This recommendation is designed to encourage interoperability and consistency in the development of hybrid broadcast/broadband consumer television receivers.*

# Hybrid scenarios (Broadcast plus Broadband) & Broadcasters

- **But still many open issues….**

    - **Which impacts on the broadcaster back-end/front-end infrastracture?**

    - **Which impact on the network infrastracture?**

    - **Which protocols, format, metadata, services discovery & selection issues, crossignaling between broadcast and broadband environement….**

    - **Which middleware on the CE devices?**

    - **And the existing "national" legacy?**

- **And also some risks …**
    - **New "intermediate" services aggregator ….e.g., the device manufacturer provides both the device and the service portals …**
        - **Loss of brand control …**
        - **Loss of audience …**
        - **Loss of EPG control …**

# Hybrid scenarios (Broadcast plus Broadband)
## … what RAI is going to do?

– **Strong support to the EBU initiative**

– **Sharing hybrid issues with the other italian broadcasters**
  – **Attempt to define a common and agreed specification for hybrid devices (set-top-box & integrated TV set)**


– **Internal (Experimental) Project: Advanced WebTV on hybrid devices**
  – **Editorial offer:**
    – **VoD Catch-up TV (1/2 weeks ago: Rai1, Rai2 & Rai3)**
    – **VoD Archive content**
    – **Users' profiling & tracking**
  – **Business Models:**
    – **Free/Advertising**
  – **Trial with real "users" (under evaluation)**
    – **Starting date: Autm. '09**

# Thanks for your attention ….

## Demos ….