EBU **TECHNICAL**

Hybrid Radio

WorldDMB

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EBU TECHNICAL

European Broadcasting Union

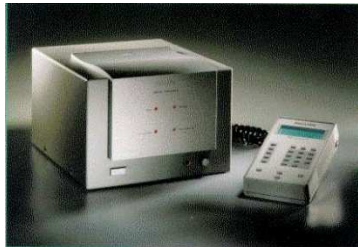EBU·UER

Listening figures

- Radio is popular
  - UK: 46.5 millions adults listening weekly, 90.6% UK population (15+)
  - A all time high !

  - Digital listening share: 15.8% DAB, 4.1% DTT, 2.9% Internet

  Source: rajar.co.uk, Q2 2010 figures

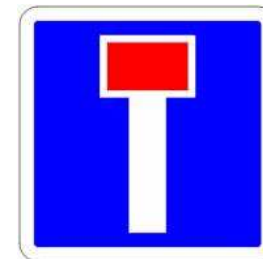# Digital radio,
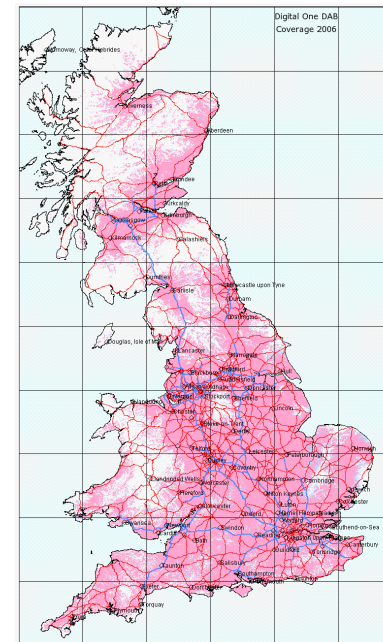# a new technology ?

Digital radio generations

1st generation (1990-)

- Context: Audio migration from analog to digital
- Simulcast of AM/FM programs on digital
- Audio quality as the only added value

Digital radio generations

- ## 2nd generation (2000-)

  - New and exclusive <u>audio content</u> on digital

  - Strategy with broadcasters, governments, retailers

  - Growing success in some countries (UK, Denmark, Australia,..)

  - Inaction or rejection in other countries

Digital radio generations

- # 3rd generation (now)

  - Context: Internet and Iphone disruption

  - Broadcast ? Broadband Internet ? On demand ?
    Rich media content associated to the audio ?

How will radio be delivered in the future ?

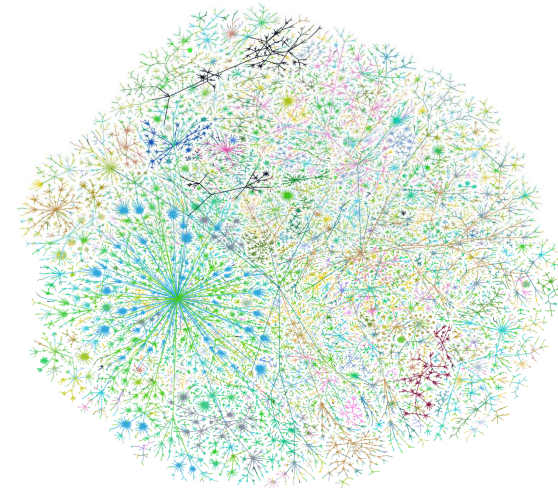# Different approaches: Broadcast & Internet/Broadband

- **Terrestrial Broadcast**
  - **Efficient** one to many delivery
  - Direct access to listeners
  - Horizontal market
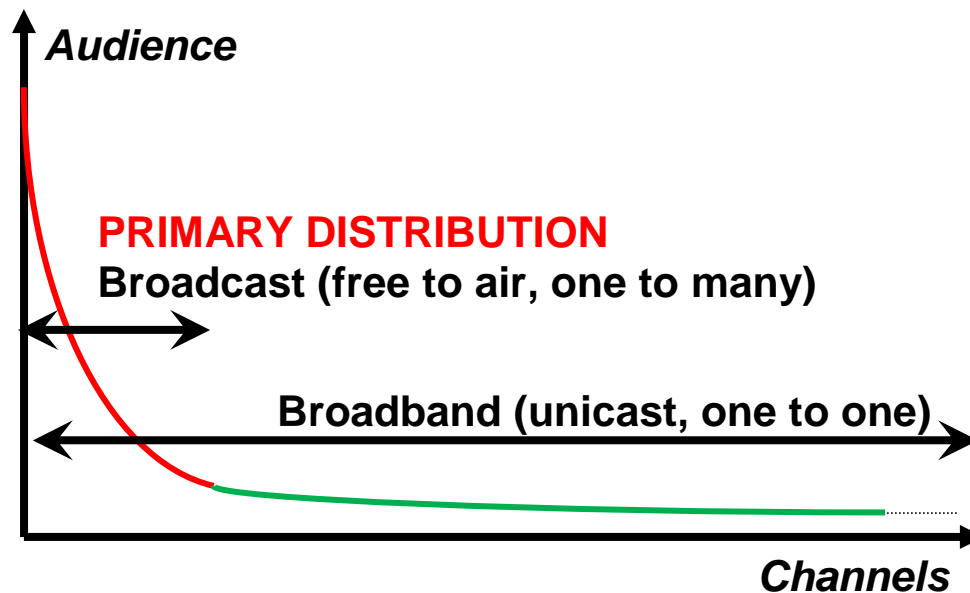 - **Free to air**
  - Spectrum is available
  - Strict regulation

- **Internet/Broadband**
  - High flexibility
  - Worldwide coverage
  - Inefficient for mass delivery
  - Democratised delivery (no license needed)
  - Subscription needed for reception (not free to air)
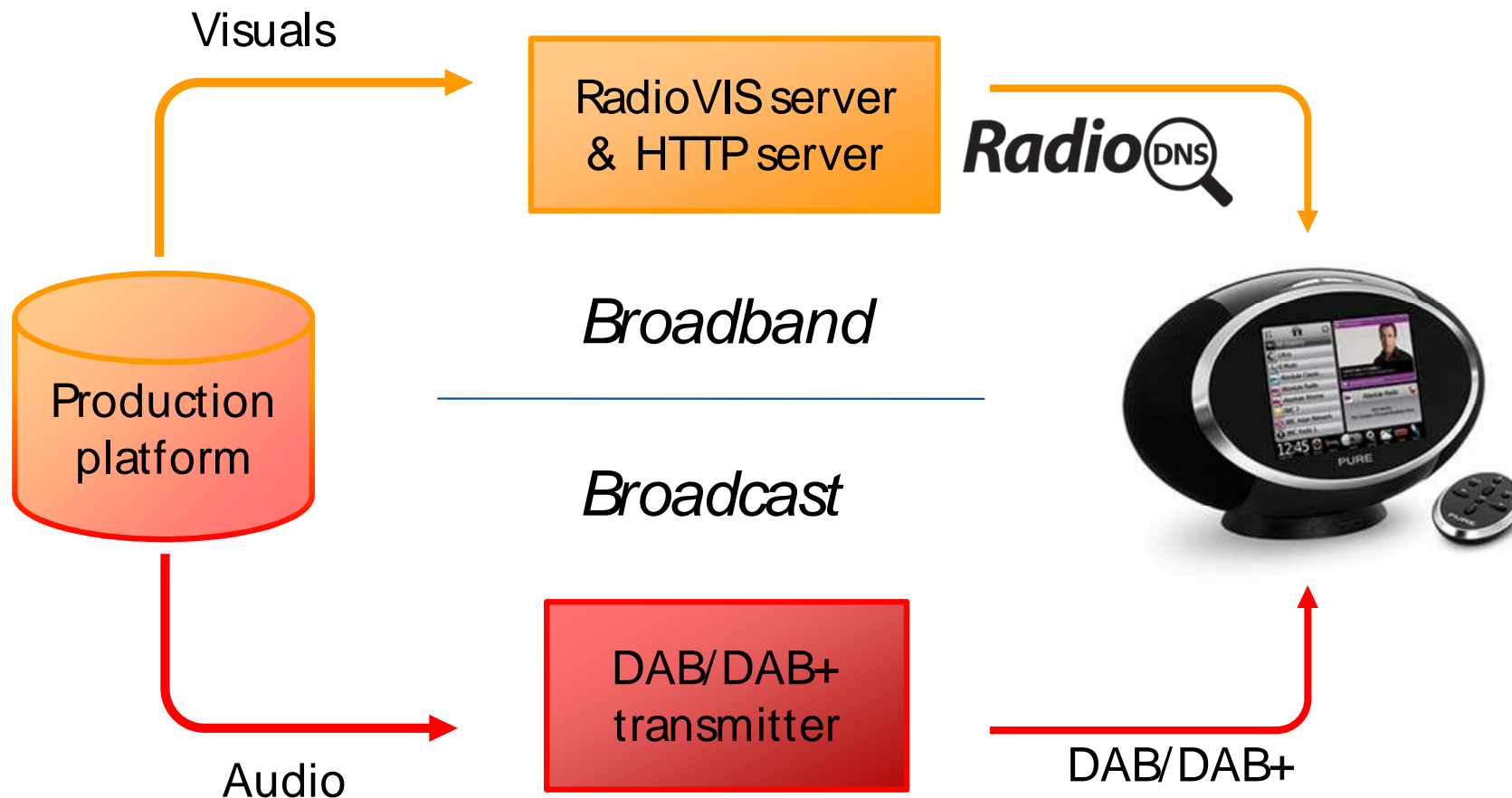 - **Net/operators neutrality** questions – quality of service

The Hybrid Broadcast&Internet/Broadband Approach

Audience

PRIMARY DISTRIBUTION
Broadcast (free to air, one to many)

Broadband (unicast, one to one)

Channels

- Broadcast for national/regional/local programs
  - Primary distribution
  - Efficient delivery through a free-to-air broadcast system (one-to-many)
- Broadband for interactivity, rich content, niche programmes

The Hybrid Broadcast Internet/Broadband Approach

Visuals

RadioVIS server & HTTP server

Radio DNS

Broadband

Production platform

Broadcast

DAB/DAB+ transmitter

DAB/DAB+

Audio

- Automatically push multimedia content to listeners

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RadioDNS applications

 Slideshow

 Electronic Program Guide

 Tagging

Opened to other applications...

New radio services offered by digital radio

- **Text services**
  - Simple text (label, song title)
  - Advanced text ("Teletext" like service)

- **Rich content**
  - Visual radio, slideshow
  - "Flash" like applications

- **Tagging**

- **Electronic Program Guide**
  - podcast

- **Enhanced traffic information**

- **Surround sound (DAB+)**

What about the receiver ?

Profiles of receiver: standard radio receivers

- **Standard radio receiver profile**
  - The "daddy's radio" as we know it
  - Simple text screen
  - Low cost

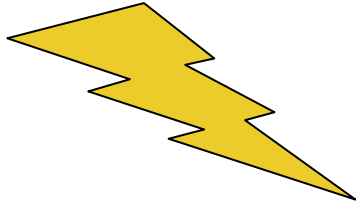# Profiles of receiver: Rich media receivers

- **Rich media receiver profile**
  - Colour screen
  - Interactive controls
  - Very often with Internet connection
  - Integration in multimedia devices (players, phone, car nav, etc)
  - Hardware tends to become generic (micro PC platforms)
  - Possibility sometimes to create your own application

Broadcast hotspot

DAB/DAB+/DMB

Free-to-air
broadcast
signals

Wifi/Bluetooth
relaying

- A solution for "tuner-less" multimedia devices
  - Argo One SmartTV for DAB/DAB+/T-DMB
  - Equinix Tizi for digital TV (DVB-T)

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The future of radio is hybrid

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