

# DVB-T situation in Europe

Mobile TV Workshop  
9 July 2007

Daniel Sauvet-Goichon

DigiTAG Chairman

EBU Technical Committee Vice-Chairman

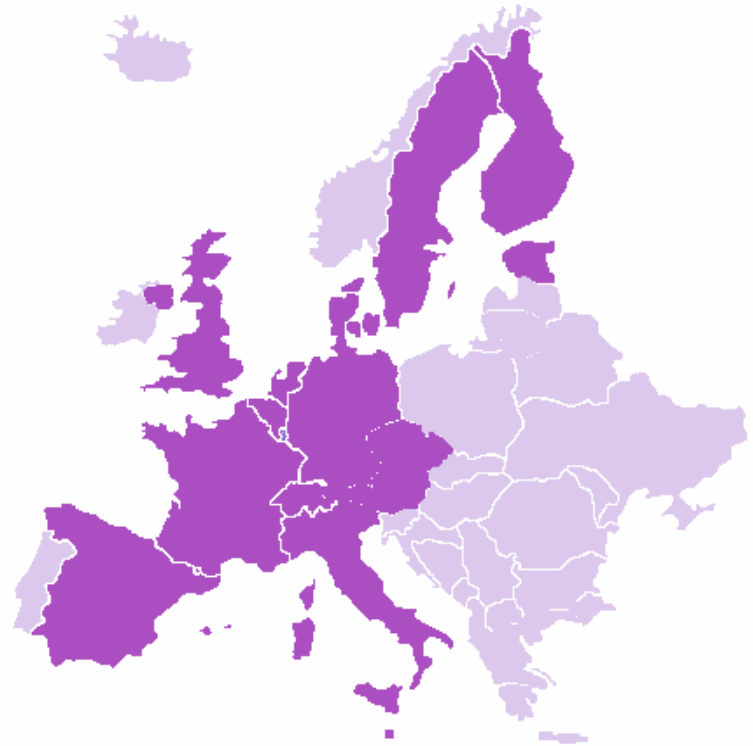
DVB-TM Vice Chairman

Member of French National Frequency Agency Board (ANFR)

- A non profit association formed in 1996, in the vicinity of the DVB project and the EBU, in Geneva
- To promote and help Digital Terrestrial Television start in Europe
- Created by 70 member organisations from 4 constituencies
  - ❑ Broadcasters (public, commercial, private)
  - ❑ Manufacturers equipment and consumer products
  - ❑ Network and transmission operators
  - ❑ Broadcast regulators and frequency spectrum administrations

- European survey
- ASO (Analogue Switch Off)
- Focus on France

- ❑ UK (Nov 1998)
- ❑ Sweden (Sept 1999)
- ❑ Spain (May 2000 / Nov 2005)
- ❑ Finland (Oct 2002)
- ❑ Italy (Jan 2004)
- ❑ Germany (May 2004)
- ❑ NL (Summer 2004)
- ❑ Belgium (Oct 2004)
- ❑ Malta (July 2005)
- ❑ France (Sept 2005)
- ❑ Switzerland (Nov 2005)
- ❑ Denmark (March 2006)
- ❑ Austria (October 2006)
- ❑ Estonia (December 2006)



■ Countries having launched DTT services

## OVERVIEW

- ❑ Re-launch of DTT services in Oct 2002 following failure of OnDigital
- ❑ 73% DTT coverage
- ❑ 17 million receivers sold (end 2006)

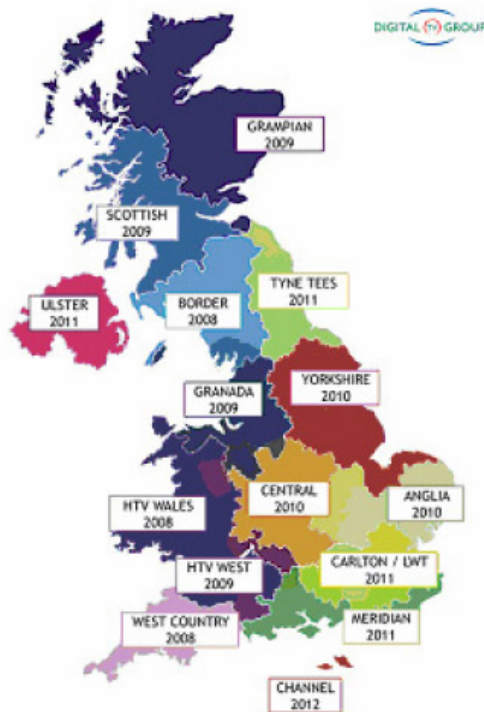


## OFFER

- ❑ 30 free-to-air television programme services
- ❑ Pay offer from Top Up TV Anytime

## NEXT STEPS

- ❑ Digital UK leading switch-over
- ❑ Analogue switch-off to take place from 2008 – 2012
- ❑ Switch-off to begin in Whitehaven on 17 Oct 2007



## 2008

Border

## 2009

West Country, HTV Wales, Granada

## 2010

HTV West, Grampian, Scotland

## 2011

Yorkshire, Anglia, Central

## 2012

Meridian, Carlton / London, Tyne Tees, Ulster

## OVERVIEW

- ❑ Services first launched in Berlin / Brandenburg in November 2002
- ❑ 7 million receivers sold (end 2006)
- ❑ Number of homes connected terrestrial growing



DVB-T: DasÜberallFernsehen

## OFFER

- ❑ varies between Länder; ~24 television programme services
- ❑ Short simulcast period (generally between 9-3 months)

## NEXT STEPS

- ❑ Analogue switch-off likely to be completed nationwide by 2008

## OVERVIEW

- ❑ Services launched in January 2004
- ❑ 70% population coverage
- ❑ 4 million receivers sold (Nov 2006)



## OFFER

- ❑ 30 free-to-air television programme services
- ❑ Emphasis on interactivity, t-government services
- ❑ Successful launch of pre-paid, pay-per-event services

## NEXT STEPS

- ❑ Italia Digitale set-up to guide digital switchover
- ❑ Analogue switch-off unlikely before 2012



## OVERVIEW

- ❑ Services launch on 31 March 2005
- ❑ Population coverage of 63%
- ❑ 10 million receivers sold (April 2007)



## OFFER

- ❑ 18 free-to-air television programme services MPEG2
- ❑ 14 pay DTT television programme services MPEG4
- ❑ HD/DTT expected to launch by September 2007

## NEXT STEPS

- ❑ Increase coverage to 85% (end 2007)
- ❑ Analogue switch-off planned for 30 November 2011

## OVERVIEW

- ❑ Re-launch of platform on 30 November 2005
- ❑ 3.8 million receivers sold (Jan 2007)
- ❑ 80% coverage since June 2002



## OFFER

- ❑ 20 television programme services available country-wide plus regional and local services
- ❑ 1 multiplex reserved for mobile television

## NEXT STEPS

- ❑ Analogue switch-off set for 3 April 2010
- ❑ Catalonia to switch-off by November 2009



**FINLAND**

- ❑ Launch of services in August 2001
- ❑ 100% coverage since August 2005 (2 MUX)
- ❑ Analogue switch-off set for 31 August 2007

**SWEDEN**

- ❑ Launch of services in April 1999
- ❑ Offering ~35 DTT services (mixture free-to-air/pay)
- ❑ Analogue switch-off underway; to end by Nov 2007

**DENMARK**

- ❑ 1 MUX launched in March 2006 with PSB services
- ❑ Likely to offer further services on a pay platform
- ❑ Analogue switch-off set for October 2009

**NORWAY**

- ❑ To start September 2007, MPEG-4

## **BELGIUM**

- ❑ One MUX for each of the two language groups
- ❑ Switch-off expected to be completed by 2012
- ❑ Commercial DVB-H trial in Ghent and Brussels

## **THE NETHERLANDS**

- ❑ 5 multiplexes provide DTT services
- ❑ Switch-off took place 10-11 December 2006
- ❑ Commercial DVB-H trial completed in the Hague

## **SWITZERLAND**

- ❑ Regional launches from 2003 with services on 1 MUX
- ❑ Switch-off of two analogue channels in March 2002; full switch-off underway by region (Ticino, July 2006)<sup>13</sup>

## Terrestrial countries

- ❑ Dominant business model is a free-to-air platform
- ❑ Many new services are offered to viewers

## Cable countries

- ❑ Limited new services offered
- ❑ Emphasis on portable/mobile reception

## Nordic countries

- ❑ Mixture of free-to-air and pay services offered
- ❑ Aggressive ASO strategy

*All countries so far use MPEG-2 (except France, Estonia & Norway soon)*

## DTT timetable In Eastern Europe (sequence by full launch date)

Country	Technology	Business Model	Soft launch	Full launch	Switch-off date
Estonia	MPEG-4	pay	Dec 2006	2006	2012
Lithuania	MPEG-4	pay	Jul 2006	2007	2015
Czech Republic	MPEG-2	free-to-air	Oct 2005	2007	2012
Poland	unclear	unclear	2008	2008	2014
Hungary	unclear	unclear	2008	2008	2012
Slovakia	unclear	unclear	2008	2008	2012
Slovenia	MPEG-4	pay	Mar 2007	2008	2012
Latvia	MPEG-4	free-to-air	2007	2008	2011
Romania	unclear	unclear	2008	2009	undecided
Bulgaria	unclear	unclear	2008	2009	undecided

Source: EBU

- ❑ Lack of necessary **legislative framework**
- ❑ **Strong opposition** from commercial broadcasters
- ❑ **Funding issues** for Public service broadcasters

### Proposed business model

- ❑ Countries planning to use **MPEG-4**
- ❑ Tendency towards a **pay platform** with some free-to-air services



**Legend**

- Commercial service launched
- Commercial pre-launch
- ◆ Pilot project

**France**

- ◆ TDF, DVB-H, 2005
- ◆ TowerCast, DVB-H, 2005
- ◆ TPS Orange ByTel TDF, DVB-H
- ◆ And 2 other

**UK**

- ◆ Arqiva, DVB-H, Oxford
- ◆ BSB, Flo

**Spain**

- ◆ ABERTIS, Amena, Vodafone : 3 DVB-H trials
- ◆ And 2 other



**Finland**

- Finish Mobile TV, Digita, DVB-H,

**Germany**

- BMCO, DVB-H, Berlin
- ◆ DMB 2006 worldcup

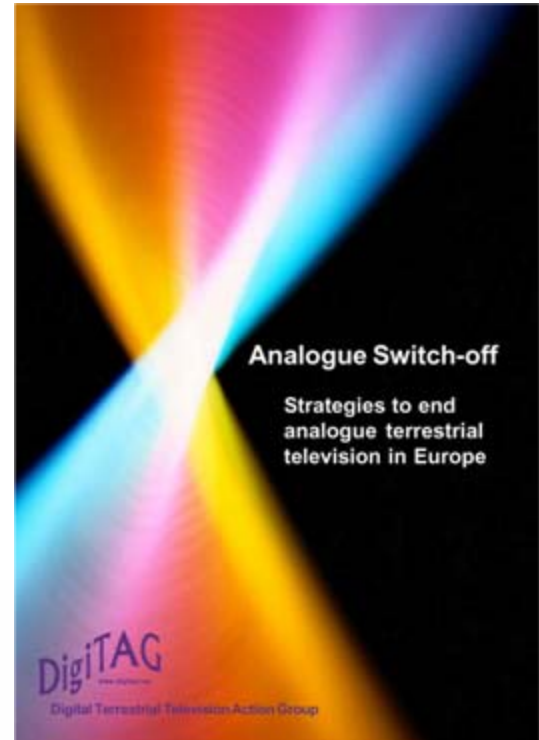
**Italy**

- ◆ RAI Torino, DVB-H
- H3G, DVB-H
- Mediaset TIM Vodafone, DVB-H

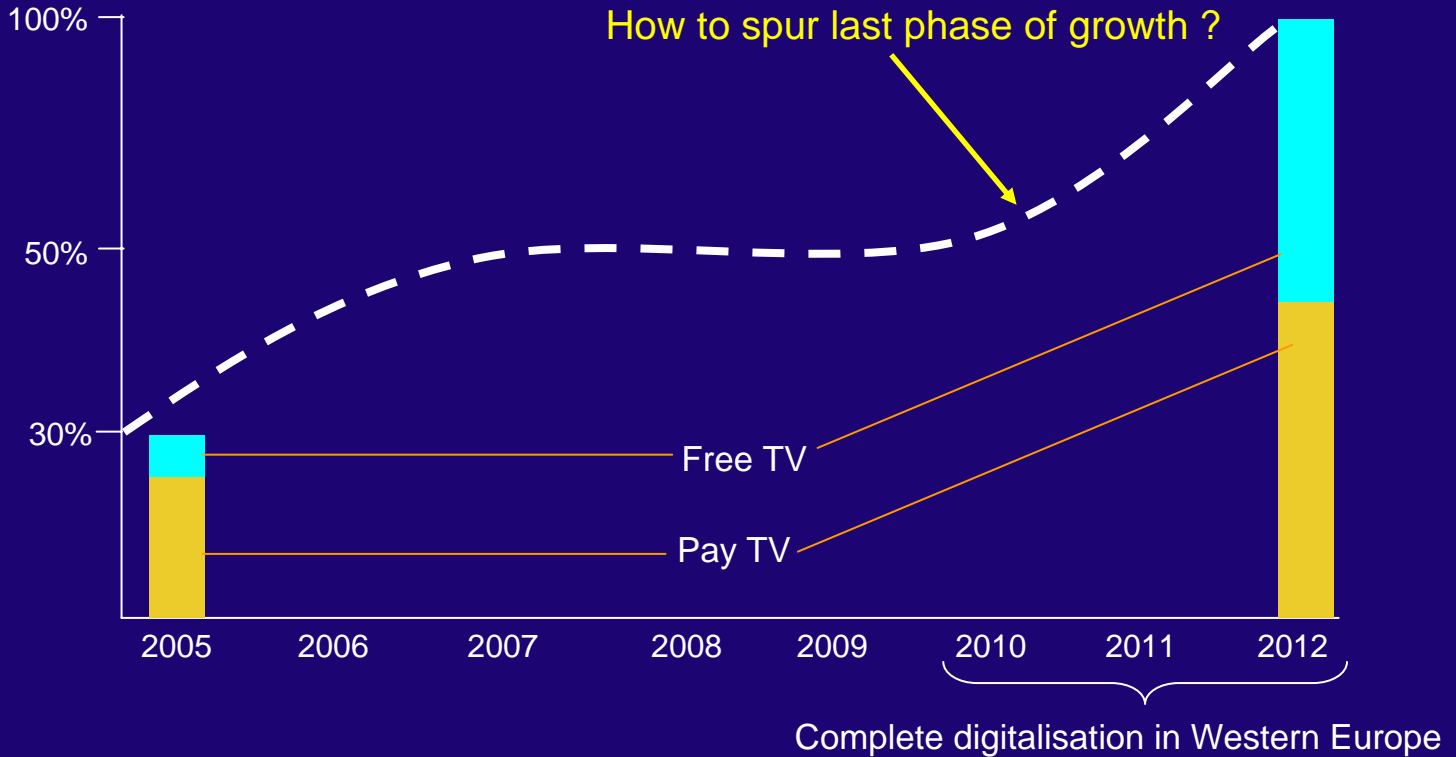
**Switzerland**

- ◆ Swisscom, DVB-H, Berne. 2006

- ASO: choose your own meaning...
  - ❑ Analogue Switch-Off
  - ❑ Analogue Shut-Off
  - ❑ Analogue Switch-Over
- ...and prepare for it!
- DigiTAG / EBU report available thru DigiTAG
  - ❑ [www.digitag.org](http://www.digitag.org)

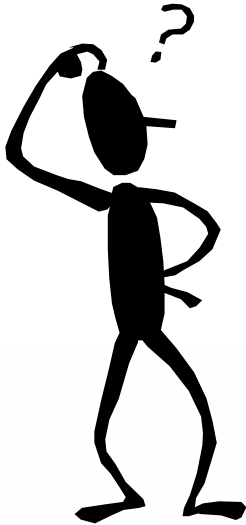


<b>Country</b>	<b>DTT launch</b>	<b>ASO date</b>	<b># of years</b>
Luxembourg	2006	2006	1
Netherlands	2003	2006	3
Denmark	2006	2009	3
Malta	2005	2010	5
Germany	2002	2008	6
Finland	2001	2007	6
France	2005	2011	6
Switzerland	2001	2008	7
Sweden	1999	2007	8
Italy	2003	2012	9
Spain	2000	2010	10
Belgium	2002	2012	10
UK	1998	2012	14



“... Digitisation leaves an **undecided** but **considerable** amount of spectrum in the relevant bands for more services such as broadcasting or other telecommunications services...”

European Commission

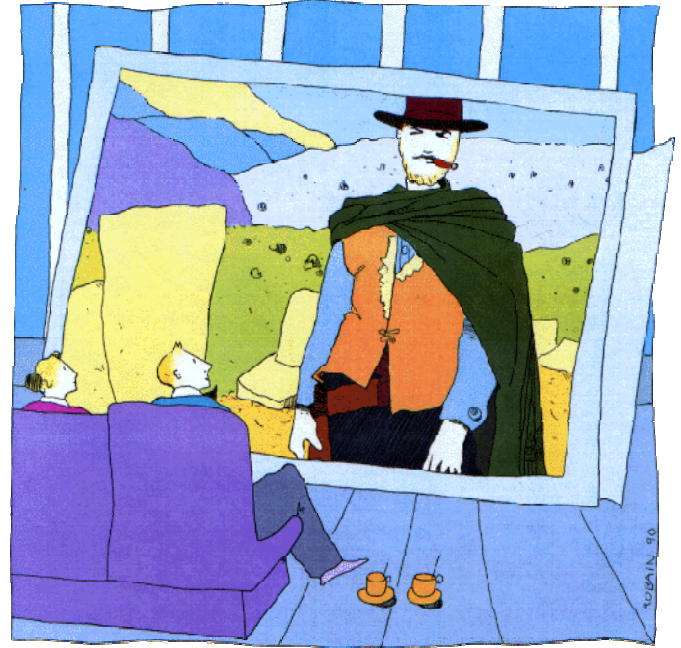
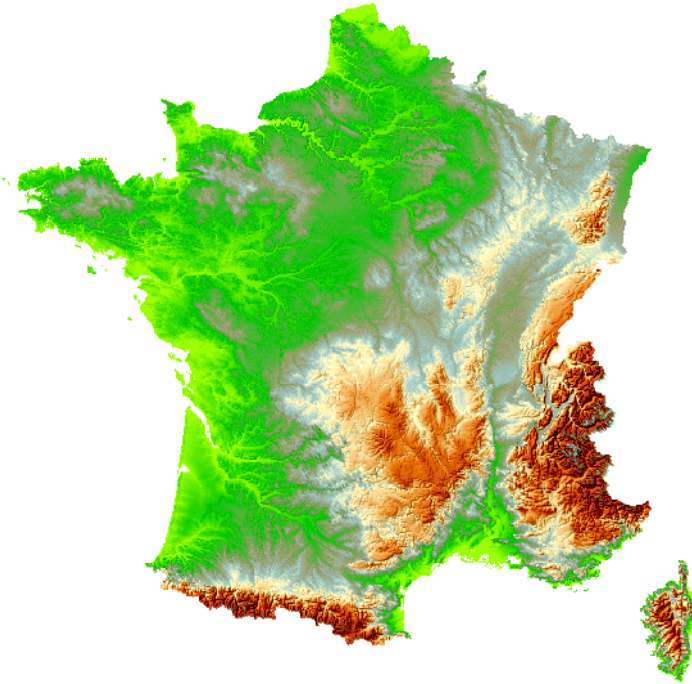


- How much spectrum?
- For what purpose?
- Who will decide?

- Broadcasters need UHF spectrum to enable HDTV and mobile TV
- Telcos want it to increase their services to mobile phones
- Regulators want to release the saved spectrum for money



## A brief focus on France Preparing future: HDTV



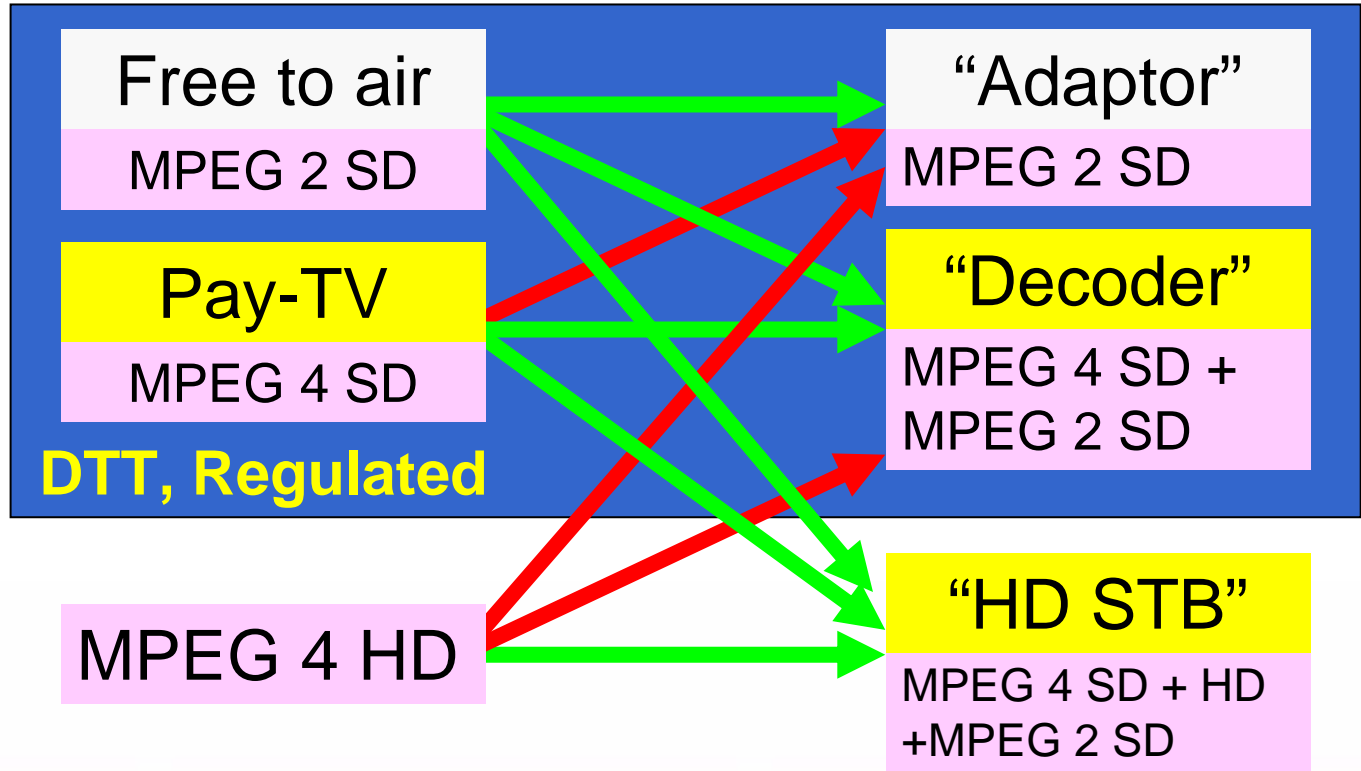
## A case study: France 2004 a difficult year of discussions!

Latest News	Press Releases	DigiTAG Webletters
<a href="#">Archives</a>		
	France - DTT plays hide and seek	
28/04/2004	An interesting article from ...	
	France - M6 adds to HDTV call	
03/06/2004	M6 chief executive ...	
	France - TF1 plans DTT route to HDTV	
21/06/2004	French broadcaster TF1 ...	
	France - Call for a single standard on DTT	
13/07/2004	Three French media groups ...	
	France - MPEG2 and MPEG4 may co-exist on French DTT	
12/07/2004	French industry minister Patrick Devedjian officially launched the HD Forum	
	France to launch free-to-air DTT using MPEG-2	
09/11/2004	The French Prime Minister has confirmed that free-to-air digital terrestrial	
	France - TF1 supports MPEG-2 for DTT	
29/11/2004	Patrick Le Lay, head of French commercial broadcaster TF1, has announced	
	France - Government selects MPEG-4 standard for pay DTT services	
24/12/2004	The French Prime Minister has opted for the use of the MPEG-4 standard for	

*Almost 1 year lost!*

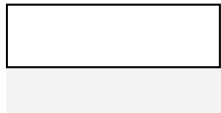


What could be a mess... was decided  
(2004)



French example

TNT network	R1	R2	R3	R4	R5	R6
Programs						
					Not	
					yet	
					allocated	

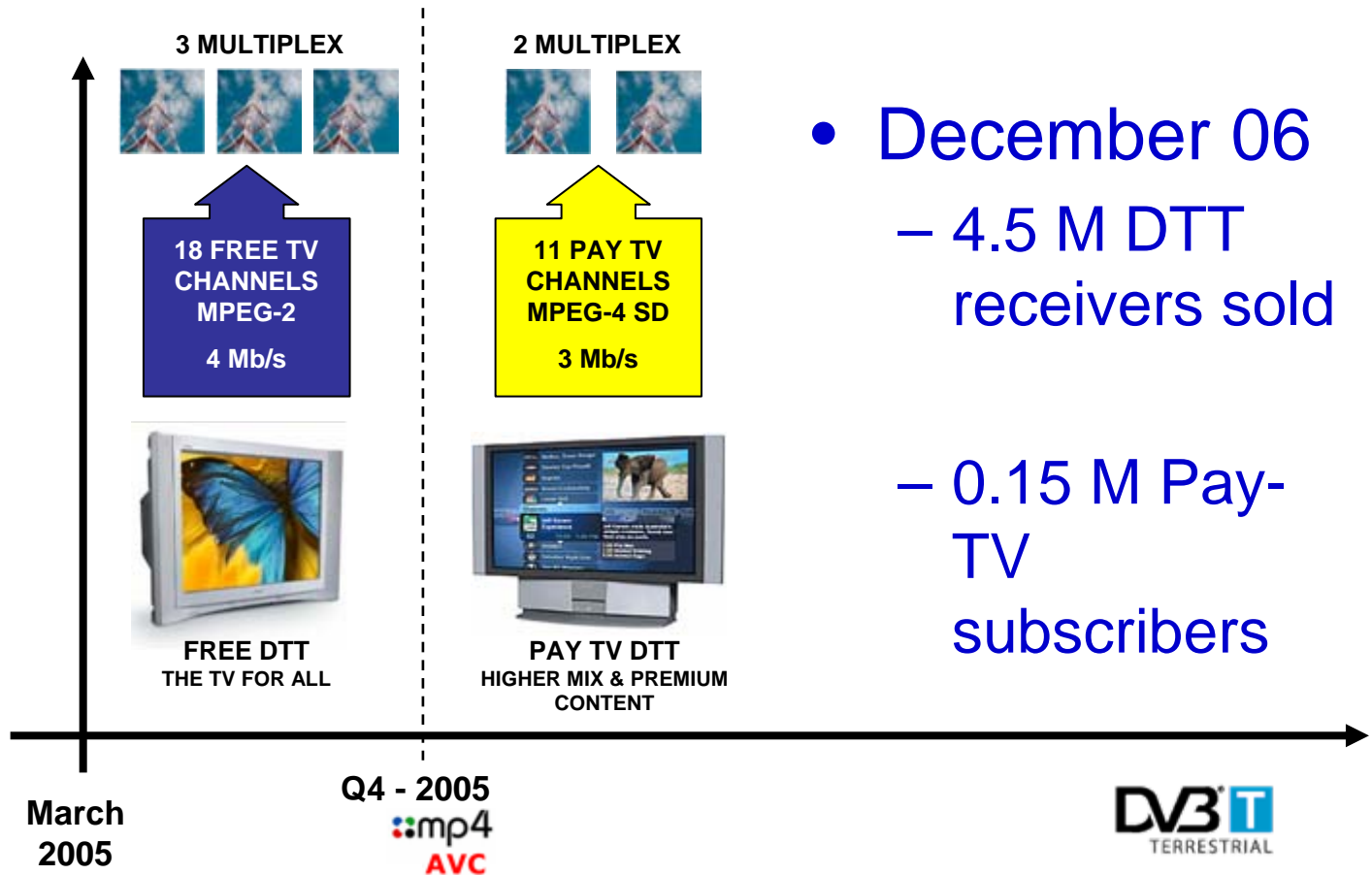


Free TV,  
MPEG 2



Pay TV, MPEG 4

## And it worked!



- **December 06**
  - 4.5 M DTT receivers sold
  - 0.15 M Pay-TV subscribers

- DTT is a success
  - ❑ 15% households equipped (9.4% Q3 2006)
  - ❑ 63% population covered
  - ❑ Free TV (MPEG-2) and Pay-TV (MPEG-4) in 5 multiplex
  
- A challenge: maximizing digitalization before the ASO (NB: while 4.5 millions DTT receivers were sold, almost 11 millions TV sets have been sold in parallel...).
  
- Political will to prepare next steps: "Télévision du futur"

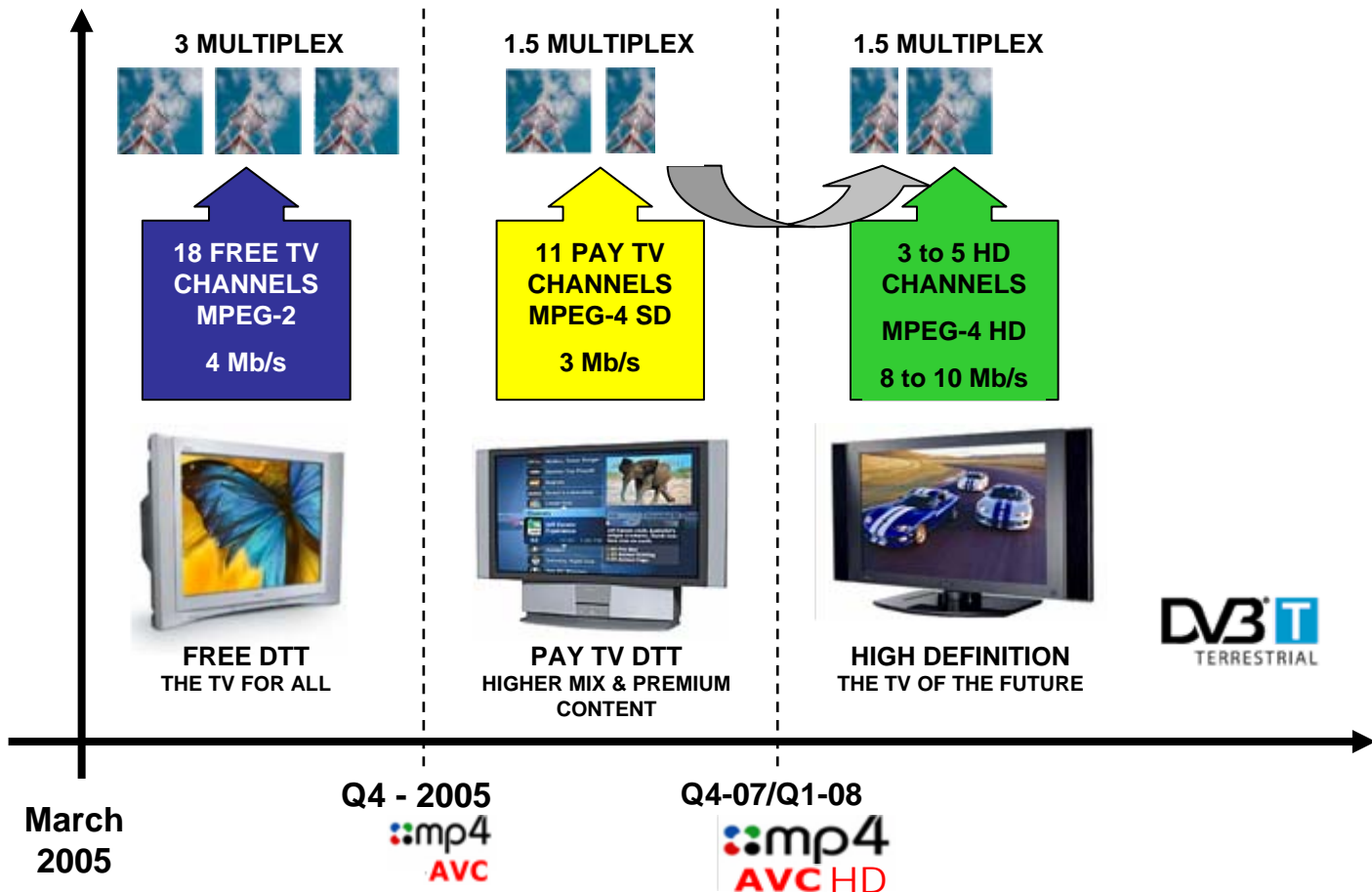
## But, more regulation is needed

- Since RRC-06, ASO is set on Nov 30, 2011
- The Key challenges:
  - ❑ maximising digitalisation before the ASO (NB: while 4.5 millions DTT receivers were sold, almost 11 millions TV sets have been sold in parallel...)
  - ❑ Pay TV's relatively low penetration is not sufficient to drive massive HD rollout. So Free to Air HDTV is indeed considered essential on DTT.
- A new Media Law was necessary to conduct the ASO, and to open towards the « Television of the Future » (voted February 2007).

- The new law (February 2007)
  - ❑ ASO starts March 2008, finished 30 November 2011
  - ❑ Funding for low-income households
  - ❑ Obligation of digital tuners in all sets from 2008
    - Q1 2008 for SD sets
    - 1st December MPEG4 AVC for labelled HD sets
  - ❑ Broadcasters must cover 95% of France
  - ❑ Free satellite offer will be provided by government to complete
  - ❑ Digital dividend mainly reserved for broadcasting
    - “la majorité des fréquences ainsi libérées reste affectée aux services audiovisuels”
    - CSA has been given authority to allocate these new frequencies to HDTV and mobile TV services.

# DigiTAG France

From beginning 2008



Conclusion: What was the main success factor?





Not in that way!



Yes in that way!

