



## The new opportunities for delivery

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### Comprehensive overview

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Nowadays in France, 99,9 % households receive 7 analog channels



Nowadays, 20,8 % of households already subscribed to digital television

2005 : move to digital terrestrial television



## DTT Comprehensive overview

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**1998**

**1998**

Launch of a mission of reflection on DTT in France. This will ends in the recommendation of the opening of 6 multiplexes and a proposition of a calendar of deployment.



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## DTT Comprehensive overview

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**1998**

**2000**

**2000**

The new audio-visual law defines the DTT legal frame.



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## DTT Comprehensive overview

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1998

2000

2001

### 2001

Calls to candidatures for the exploitation of 33 services with public and local programs.

Beginning of TDF DTT broadcasting experiment from the Eiffel Tower.



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## DTT Comprehensive overview

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1998

2000

2001

2002

### 2002

69 programs editors supply to obtain a DTT license.

Starting up for TDF of the digital distribution from the Eiffel Tower.

Mission Boyon: modalities and cost of frequency replanning, definition of public utility channels and development conditions of local TV.

Beginning of analog frequencies replanning



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## DTT Comprehensive overview

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1998 2000 2001 2002 2003

### 2003

End of first 17 frequencies refitting.

Signature of the agreements between publishers and regulator (CSA).

Appointment between multiplexes operators and publishers of services.

Pursuit by Daniel Boudet de Montplaisir of the mission Boyon about DTT.

Announcement of the DTT launch between December 2004 and March, 2005.



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## DTT Comprehensive overview

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1998 2000 2001 2002 2003 2004

### 2004

Grouping on a single multiplex of 6 public channels.

R5 consultation to enhance expectations and projects of the various actors.

8th of November: DTT launch fixed to March 1st 2005 for free channels and to September 1st 2005 for payTV.



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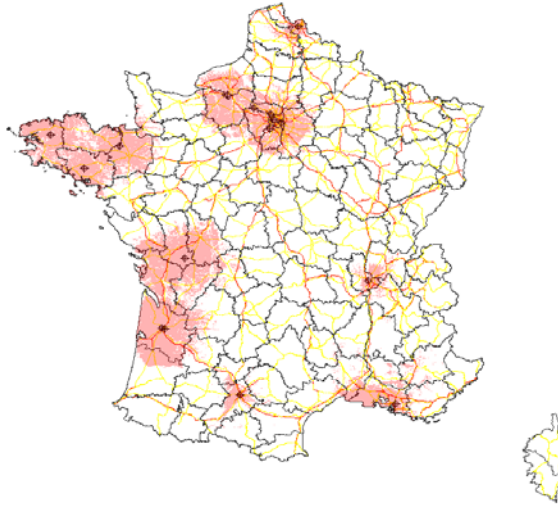
## DTT: What schedule today?

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### DTT pre-launch on 15 January 2005

A meeting of the suppliers of the free channels on the future French DTT service and the Minister of Culture, Renaud Donnedieu de Vabres, has decided on a **pre-launch on 15 January 2005**, from the Eiffel Tower transmission site.

The pre-launch will enable early adopters in Paris to try out the reception and it will also enable antenna installers to get ready for the launch.



### March 2005

▶ **Launch of 14 free channels**

▶ **Switch on 17 digital stations**

Paris (4 stations), Marseille (2 stations), Bordeaux (2 stations), Niort, Mantes, **Lille**, Rouen, Rennes, Brest, Vannes, Lyon, Toulouse ville.



▶ **coverage : 35% households**

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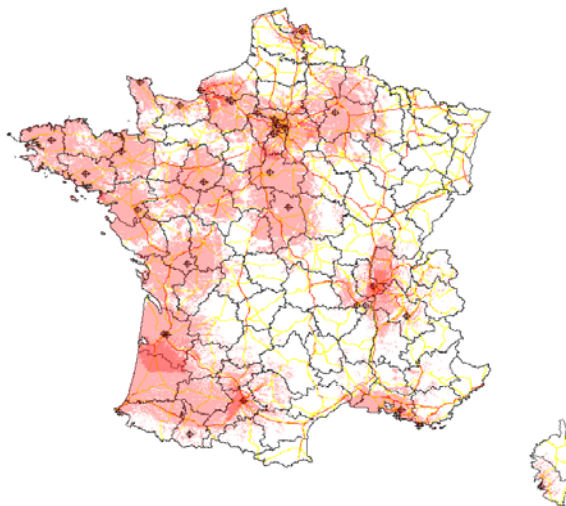
## DTT: What schedule today?

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### September 2005

▶ **15 more stations**

▶ **coverage 50% households from 32 stations**



### September 2005 to March 2006

Pay TV Commercial launch

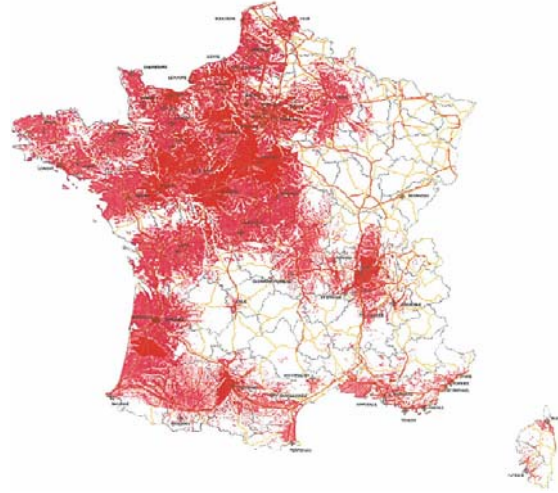


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## DTT: What schedule today?

### Mid-2006

- ▶ 59 stations for a coverage about 65% households



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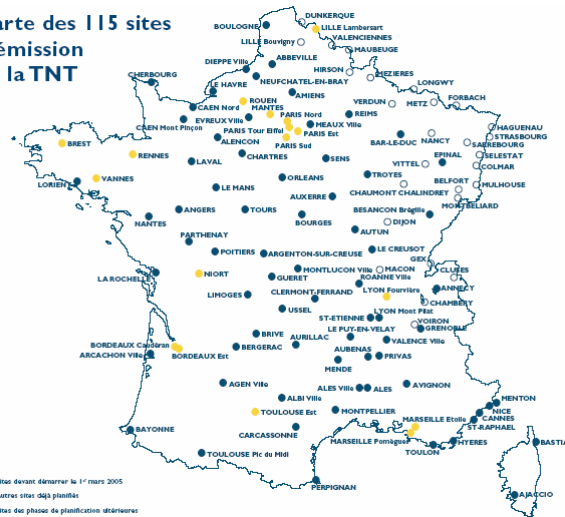
## DTT: What schedule today?

### 2007/2008 :

- ▶ 115 stations deployed for a coverage area about 85% households

Should be earlier if first deployments are successful

### Carte des 115 sites d'émission de la TNT



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## HDTV: What schedule today?

### 2004: busy context

Actors had long time in mind the 1990's disillusion  
No peace in French HD debate  
Forecast is more and more unsettled!

### Anyway

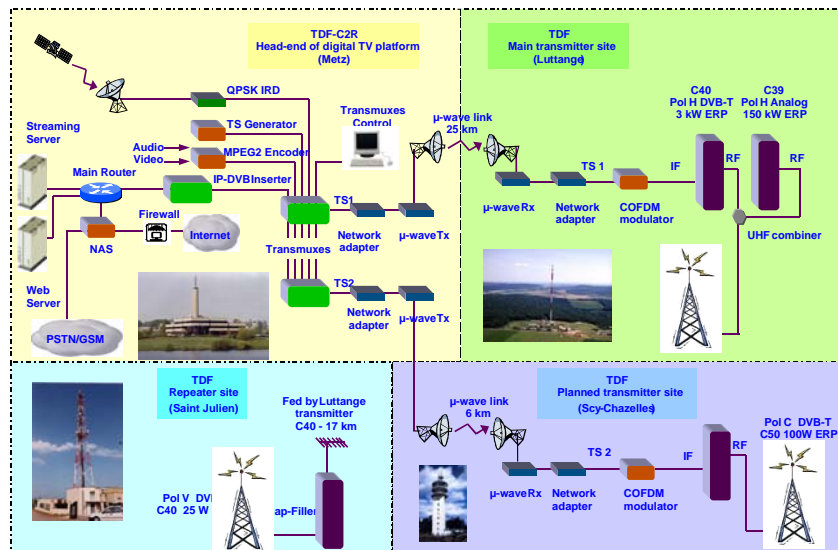
Several trials and initiative exist  
Several enthusiast debates  
Some opportunities?!



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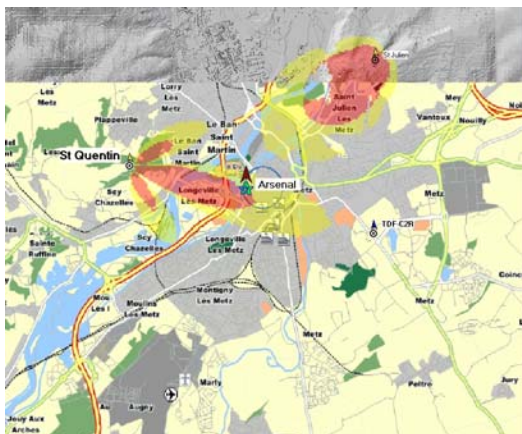
## HDTV First Test Trials TDF demonstrates WM9 720p datacast over DVB-T

October 2003,  
TDF  
experiments  
HDTV on a real  
DTT network



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## HDTV First Test Trials TDF demonstrates WM9 720p datacast over DVB-T



DVB-T coverage area around Metz

### DVB-T set up parameters

Channel	C40 (626 MHz)
FFT	8k
Modulation	64 QAM
Guard Interval	1/32
Code rate	2/3
Bite rate	24 Mbits/s

### Coding technology

IP stream bitrate	7992 kbps
Picture resolution	1280x720 (720p)
Frame rate	25 Fps
Audio codec	Microsoft WMA9, 192 kbps (CBR), 48 kHz stereo sound
Video codec	Microsoft WMV9 (CBR)
Original source	D5 tape from Euro1080 (1080i)



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## HDTV comprehensive overview



French industry minister Patrick Devedjian officially **launched the HD Forum on July 8th**. At the same time an **HDTV channel was launched to provide a signal source for test and demonstration purposes**, using a transponder made available free of charge on Eutelsat Hotbird.



The forum intends to push HDTV on all digital transmission media, cable, satellite, ADSL and eventually DTT. The industry minister, Patrick Devedjian added that he expected HDTV to rapidly migrate to DTT and be a motor for its take up.

**MPEG2 and MPEG4 should co-exist later on French DTT??**



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## HDTV comprehensive overview

### No peace in French HDTV debate

8th of October, The industry minister, Patrick Devedjian, came out strongly for the camp who felt that **HDTV should be launched via DTT, using the MPEG4 standard**:

- (1) it can be introduced without affecting the channel selection made by the CSA,
- (2) MPEG 4 is now a mature format,
- (3) there is no legal reason preventing the use of a format (MPEG4) on DTT,
- (4) the State has invested in new applications using MPEG4 as part of its research support programme,
- (5) French and European industry has a lead in know-how on this format, while the USA is trying to impose its competing WM9 format.
- (6) the timetable to roll out DTT set by the CSA can be maintained. He said that cable and satellite only reached a small proportion of viewers and it was not fair to deprive the rest of access to HDTV.

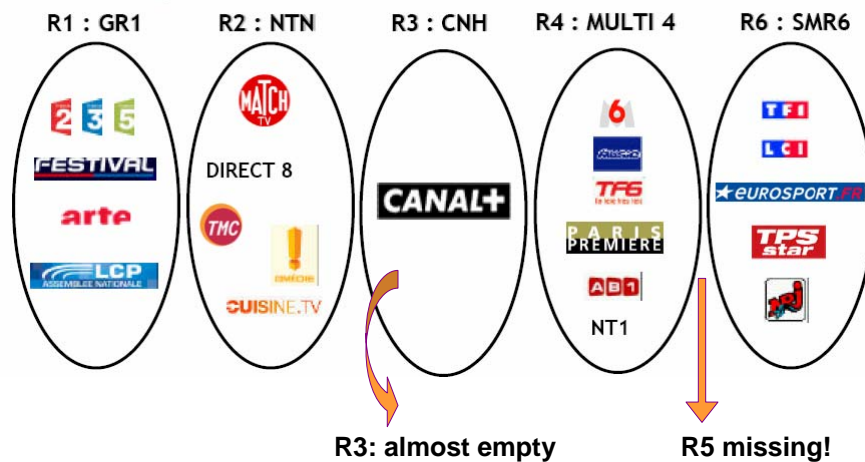
8th of November, **counter arguments** included that any change would introduce **additional new, unforeseen delays**; new entrants had invested heavily on the strength of the existing timetable, it would **degrade bandwidth available** for standard definition programmes, and that people going to the expense of buying HDTV would be natural subscribers to cable, satellite or ADSL.



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## Opportunities for HDTV in France: Terrestrial network

*Actual composition of DTT licensed multiplex*



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## Opportunities for HDTV in France: other networks

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Let's listen to Mr Dusautoir!

