

1st Conference on the Digital Dividend

April 16th 2009 – Lisbon, Portugal

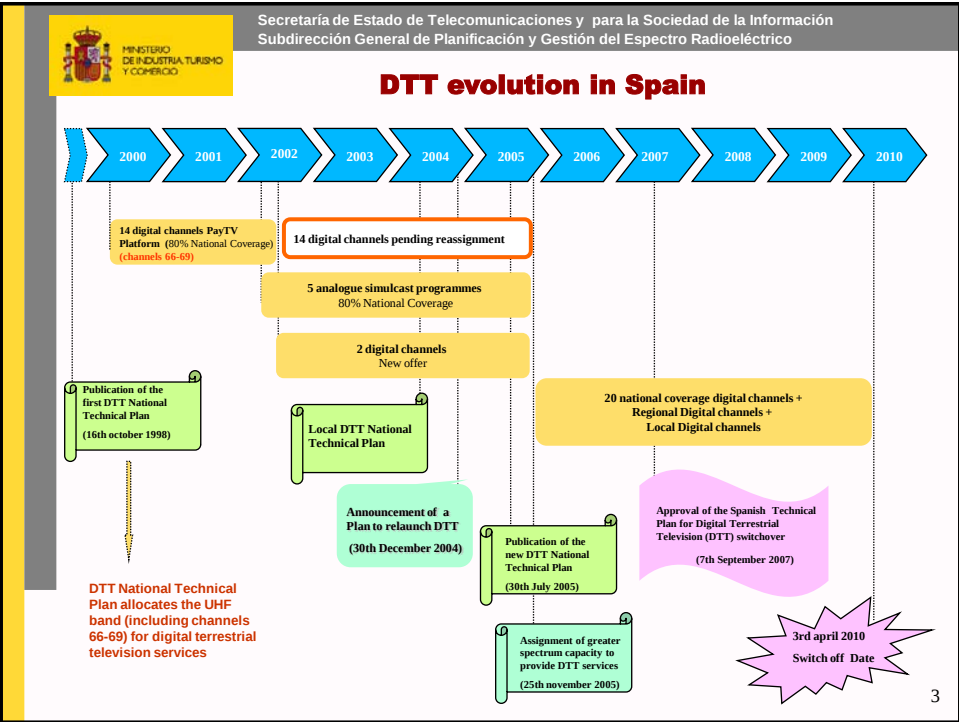
DTT IN SPAIN

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INTRODUCTION

- Spain has one of Europe's highest terrestrial television penetration rates ($\approx 80\%$).
- Coverage of analogue terrestrial TV is more than 99% of the population.
- Spain was the 3rd country of the European Union to introduce Digital Terrestrial Television (DTT).
- The adopted model in Spain has taken into account the administrative organization of the State.
- DTT implicates a new business model for TV operators.

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PLAN TO RELAUNCH DTT

On the 30th of December 2004, the Government announced a Plan to promote Digital Terrestrial Television

This Plan includes:

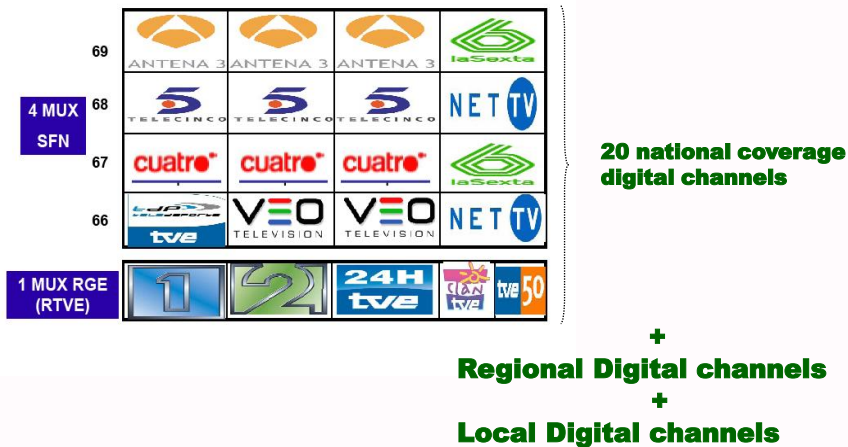
- ✓ Modification of the National Technical Plan on DTT.
The new National Technical Plan was published on 30th July 2005
- ✓ Assignment of greater spectrum capacity to provide DTT services.
Council of Ministers agreement on 25th November 2005 assigned greater spectrum capacity to the existing operators and introduced a new DTT operator
- ✓ Moving forward the switched off date (from 2012 to 2010).
The new National Technical Plan for DTT establishes analogue switched-off date in Spain on 3rd April 2010
- ✓ AGREEMENT with the Spanish audiovisual sector to drive DTT forward
The "Commission for monitoring the switch over process towards DTT" was established on 22 February 2005

New National Technical Plan on DTT

- Approved by Royal Decree 944/2005.
- Strongly supports DTT, moving forward the switched off date (from 2012 to 2010).
- Establishes two scenarios: during the transition period and after the analogue TV has been switched off.
- Facilitates the progressive transition from analogue terrestrial television to digital terrestrial television.
- Makes the incrementation of TV offer possible, providing greater spectrum capacity for new digital TV channels.
- Makes the introduction of new TV services possible, and foresees the evolution to high definition television.
- Establishes Broadcasters DTT coverage obligation:
 - 98% for national and regional public broadcasters
 - 96% for national private broadcasters

National Technical Plan on DTT

**DTT offer in Spain during the transition period
(december 2005 – 3rd april 2010)**



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National Technical Plan on DTT

**DTT offer in Spain after the switch off
(after the 3rd april 2010)**

1 multiplex for mobile TV with national coverage

6 digital multiplexes for national private broadcasters

2 digital multiplexes for the national public broadcaster (RTVE)

2 multiplexes for regional broadcasters (public or private) for each Autonomous Communities

1 multiplex for local TV (291 local areas)

TV móvil			
National	National	National	National
National	National	National	National
National	National	National	National
National	National	National	National
National	National	National	National
National	National	National	National
RTVE	RTVE	RTVE	RTVE
RTVE	RTVE	RTVE	RTVE
Regional	Regional	Regional	Regional
Regional	Regional	Regional	Regional
Local	Local	Local	Local

Royal Decree 944/2005 establishes that when an operator owns an entire multiplex, they will be able:

- to include as many digital channels as possible taking into account technological evolution.
- to include high definition channels given that they follow the conditions that will be established by the government .

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AGREEMENT WITH THE SPANISH AUDIOVISUAL SECTOR TO DRIVE DTT FORWARD

The “Commission for monitoring the switch over process towards DTT” was established on 22 February 2005 in order to reach an agreement with the audiovisual sector.

PRESIDENT:

- ✓ **Secretary of State for Telecommunications and Inform. Soc.**

✓ **PARTICIPANTS:**

20 members representing the audiovisual sector:

- TV operators
- Network operators
- Manufacturer Associations
- Installation companies Associations
- Professional Associations of telecom engineers
- Urban property Administrators
- Department Store Associations
- Publicity Associations
- Audiovisual producers Associations
- National Consumer Institute
- Autonomous Communities

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AGREEMENT WITH THE SPANISH AUDIOVISUAL SECTOR TO DRIVE DTT FORWARD

The “Technical forum on Digital TV” was established on 2nd February 2005

- ✓ **The objective is to have a Forum to deal with the technical aspects of Digital TV, in which to establish initiatives to promote and develop Digital TV.**
- ✓ **This technical forum covers all sectors (satellite, cable, terrestrial, ADSL,...) and it is open to the participation of all entities involved in Digital TV.**
- ✓ **Main activity areas: DTT reception, DTT coverage, content offer, communication plan, other technical and service aspects.**

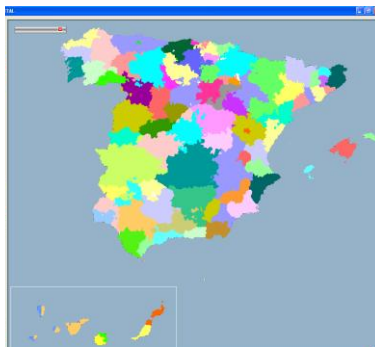
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SPANISH TECHNICAL PLAN FOR DIGITAL TERRESTRIAL TELEVISION SWITCHOVER

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Spanish Technical Plan for Digital Terrestrial Television switchover

- Approved by the **Council of Ministers** on September 7th 2007
- Sets analogue switch-off date in Spain for 3rd April 2010
- Switch-off will take place progressively starting June, 30th 2009
- **Divides Spain into 90 switchover areas** named “**Transition Projects**”



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Spanish Technical Plan for Digital Terrestrial Television switchover

Switch-off procedure

- ❑ **Exact analogue switch-off date** is decided individually for each Switchover Project
- ❑ Switch-off decision is made by the Government

Requirements for the Switch-off of any Project

- ❑ DTT coverage similar to analogue TV coverage
- ❑ **Household adoption** of DTT sufficient for an adequate technological substitution

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Switch-off milestones

Phase 1:

Before 30th June 2009

**Analogue TV will be switched off in 32 Switchover Projects
Projects with less than 500.000 inhabitants**

Phase 2:

Before 31st December 2009

**Analogue TV will be switched off in 25 Switchover Projects
Projects with population between 500.000 and 700.000 inhabitants**

Phase 3:

Before 3rd April 2010

**Analogue TV will be switched off in 33 Switchover Projects
Projects with more than 700.000 inhabitants**

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Spanish Technical Plan for Digital Terrestrial Television switchover

Phase 1: 32 Switchover Projects

30th June 2009



Phase 1: 25 Switchover Projects

31st December 2009



Phase 1: 33 Switchover Projects

3rd April 2010



DTT IN SPAIN TODAY

DTT in Spain Today

Current DTT offer in Spain:

- 5 multiplexes with national coverage
- 1 multiplex at each Autonomous Communities (2 multiplexes in some of them).
- 1 multiplex digital local television (291 local areas)



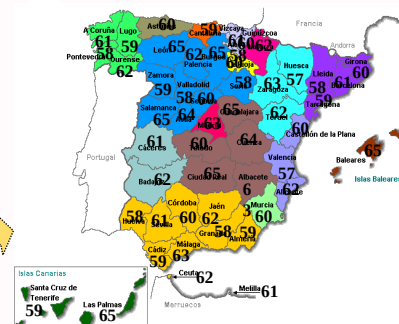
Planning of the public mltiplex (MUX RGE) with regional disconnexions

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DTT in Spain Today

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Planning of the regional múltiplex with provincial disconnexions

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DTT in Spain Today

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Example: 8 local areas in the Autonomous Community of MURCIA



291 local areas for digital local television

DTT in Spain Today. Main figures

- 93,52 % of population have DTT coverage. The highest coverage of principal European countries
- More than 18 million DTT decoders sold.
- Effective connection to DTT in more than 67 % of households.
- 65,6% of buildings that need to adapt its antenna has already been adapted, a figure which represents that more than 92% of residential buildings are ready to receive DTT.
- Connection to DTT channels, considering other digital platforms (cable, satellite, IPTV) is over 76,7%.
- Direct share of DTT is 26,2%.
- Analogue TV share is under 52,5%.

REGIONAL RADIOCOMMUNICATION CONFERENCE FOR PLANNING OF THE DIGITAL TERRESTRIAL BROADCASTING SERVICE IN PARTS OF REGIONS 1 AND 3, IN THE FREQUENCY BANDS 174-230 MHZ AND 470-862 MHZ (RRC-06)

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RRC-06 CONFERENCE

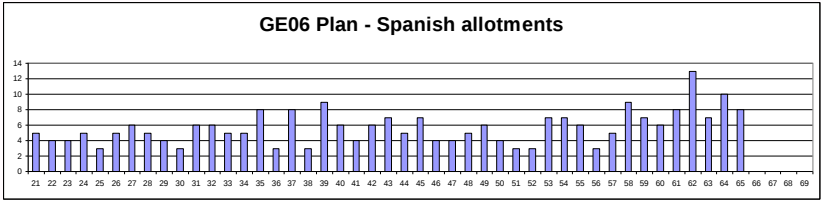
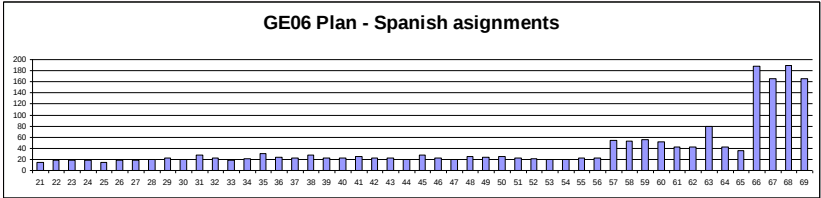
Adopted the Regional Agreement relating to the planning of the digital terrestrial broadcasting service in Region 1 (parts of Region 1 situated to the west of meridian 170° E and to the north of parallel 40° S, except the territory of Mongolia) and in the Islamic Republic of Iran, in the frequency bands 174-230 MHz and 470-862 MHz (Geneva, 2006).

- ☐ It includes the DVB-T Plan assignments and the DVB-T Plan allotments for the 470-862 MHz band.
- ☐ It establishes the Procedure for modifications to the Plans and procedure for coordination of other primary terrestrial services.

Spain has got 1955 assignments and 257 allotments at Geneva 06 Plan.

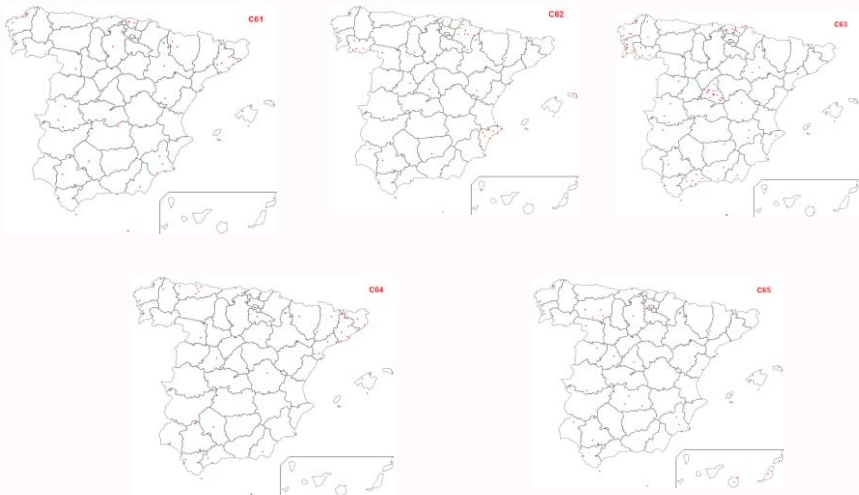
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GENEVA-06 PLAN



GENEVA-06 PLAN

ASSIGNMENTS WITHIN THE 790-862 SUBBAND



GENEVA-06 PLAN

ASSIGNMENTS WITHIN THE 790-862 SUBBAND



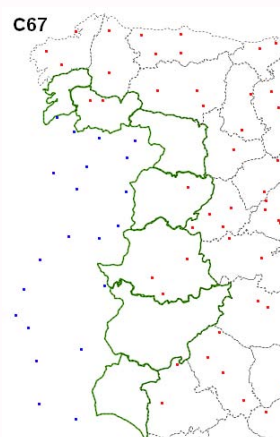
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GENEVA-06 PLAN

ASSIGNMENTS WITHIN THE 790-862 SUBBAND

CHANNEL 67 COORDINATION

C67, C69
Preferential use by Portugal



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790-862 MHz SUB-BAND

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790-862 SUB-BAND

✓ **790-862 MHz sub-band is allocated for DTT in Spain.**

Some difficulties have been identified for freeing up the 790-862 MHz sub-band in Spain and it would most likely be a complex process that takes a long time to implement.

At the moment there are not any decision regarding this subject.

There are some essential requirements and conditions that should be addressed, specially those related to spectrum planning.

- New Spectrum Planning to include all the multiplexes in the 470-790 MHz band.
- International Coordination of new allotments/assignments would be required to reallocate the existing ones in the 790-862 sub-band. This process should be based on bilateral negotiations.
- Planning of the new multiplexes based on the reallocated allotments/assignments.

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