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Development of Digital TV in Europe

2000 Report

Spain

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Contents

1 Digital TV market overview

1.1 Roll-out of digital services

1.1.1 Satellite digital services

Two satellite-based digital TV platforms were operating in the Spanish market in 2000: Canal Satélite Digital (launched February 1997; via Astra) and Distribuidora de Televisión Digital - Vía Digital (launched September 1997; via Hispasat). They continue to experience strong growth with a combined 1.500.000 subscribers by mid 2000. The satellite digital market has been boosted by the conversion of Canal+ analogue terrestrial subscribers.

1.1.2 Cable digital services

Analogue Cable TV started to develop in Spain in the early 90´s before any specific regulation for this sector was in place. In 1995, the Parliament decided to regulate this sector, and it approved the Cable Telecommunications Act. This Act divides the country in geographic areas: in each area up to two concessionaires are authorised to provide services (cable TV, Internet access and voice communications). One concession is reserved to Telefónica Cable (a subsidiary of the Telefónica Group) and the other (the so called "second concession") is to be assigned through a call for tenders. However, Telefónica competed under a restriction: its cable subsidiaries could only begin operations two years from the day the concession was granted in each market to a competitor. The two-years moratorium has already expired in all areas. In 1999, the Ministry responsible for communications rejected the request, from other digital cable operators, to extend the moratorium to 5 years.

Although the 1998 Telecommunications Act abrogated the 1995 Cable Telecoms Act, the latter was applied during all the licensing process and its broadcasting provisions still remain in force. By the end of 1998, the Spanish Government had organised 38 call for tenders to provide digital cable telecommunication services.

Most of the "second concessions" have been assigned through calls for tenders. However, six territories were not awarded a second licence due to the lack of candidates: the areas of Castilla-La Mancha and Extremadura, Ibiza-Formentera and Menorca Islands and the cities of Ceuta and Melilla in North Africa. In economic terms, most of these areas are of secondary importance and population is very sparsely distributed. Telefónica Cable is therefore the only operator in those territories.

Additionally, the cable-operators which were operating in Spain before the legal framework was established in 1995. These cable-operators have not been awarded concessions. Some transitional legal provisions temporarily authorise them to remain active although they are not allowed to upgrade their networks to digital. AEDISCA allegedly represents more than 1 million homes passed and 300,000 subscribers.

The roll-out of cable-networks is behind schedule. This fact is partly due to construction problems and delays in getting planning permissions. By mid-2000, no more than 400 000 households were connected to "new" cable networks (i.e., networks of the cable operators which obtained their licenses according to the 1995 Cable Telecommunications Act). This delay may play to the adantage of satellite and DTTV operators. Telefónica new ADSL service (available in some parts of Spain from 2000), if swiftly implemented, may also attract customers for highspeed Internet access services, who might otherwise have opted for cable modems.

1.1.3 Situation of MMDS

MMDS has not gone further than technical trials.

1.1.4 Situation of terrestrial digital television

The legal framework for Digital Terestrial Television has been defined by the Forty-fourth Additional Provision of Law 66/1997, of December 30 1997 and the Decree 2169/1998, on the National Technical Plan on Digital Terrestrial Television (DTTV) .

The National Technical Plan currently identifies five national multiplexes [four single frequency network (SFN) multiplexes and one multiple frequency network (MFN) multiplex], and one regional SFN multiplex. It also states that frequencies will be reserved for up to 3 additional regional or local multiplexes, and up to 2 additional local multiplexes. The National Technical Plan also establishes that, once the switch-off takes place (initial target date: 2012), the existing analogue terrestrial TV broadcasters will be allowed to operate a multiplex each. The multiplexes can carry at least 4 programmes, unless the Ministry for Science and Technology decides, by means of a Ministerial Order, that a multiplex can carry more programmes. The Ministry has already decided that the national MFN multiplex will carry five programmes (article 5 of the Ministerial Order of 04.12.1998).

Some digital programmes have been reserved for existing analogue terrestrial broadcasters. The state-owned RTVE will operate two digital programmes in the national MFN multiplex, and the three remaining digital programmes in that multiplex have been reserved for the existing national analogue private broadcasters (Antena 3 TV, Sogecable and Telecinco), which will initially operate one digital programme each. These private broadcasters shall start broadcasting in digital no later than April 2002. At regional level, the 1998 National Technical Plan reserves two digital programmes in the MFN regional multiplex for the public regional analogue broadcasters that were authorised to provide TV services at the time the National Technical Plan was passed.

The remaining digital programmes will be operated by new entrants. In order to provide DTTV services, these new operators must have been previously granted a concession following a public tender. The new concessionaires of DTTV services must broadcast non-encrypted programming for at least four hours per day and thirty-two hours per week. For the rest of the week, they may broadcast free-to-air TV services or pay-TV services, depending on the conditions set out in their licences.

In June 2000 the situation of digital terrestrial television in Spain was as follows:

Category of service	Scheduled Services	Broadcasters	Status
National services	Services provided by existing national analogue broadcasters (TVE, two programmes; private broadcasters: one programme each)	TVE Antena 3 Telecinco Sogecable	Launch no later than April 2002
	Pay-TV package: 14 programmes	Quiero TV"	Launched in May 2000
	2 new free-to-air programmes	Two new entrants	Call for tender launched Decision November 2000
Regional services	Services provided by existing public regional broadcasters (2 programmes)	Existing regional public broadcasters	Madrid – Launch of service expected for January 2001 (Telemadrid)
	Two new programmes in the regions were programmes have been reserved for regional public broadcasters	One or two new entrants	Madrid – Launch of services expected for November 2000 (Onda 6) and January 2001 (Quiero TV)
	Four new programmes in the remaining regions	One to four new entrants	Navarra and La Rioja: Project of call for tenders
Local services			No project so far

1.1.5 Situation of xDSL

The Ministerial Order of 26.03.1999 obliges the dominant operator in the telecommunications market, Telefónica, to invest in ADSL. This Order establishes a schedule for the deployment of the new technology, whose aim is to ensure that most of the population can rapidly have access to ADSL services. In 2000, Telefónica has started proposing ADSL services that compete with fast Internet access over cable networks. Although Telefónica has been granted cable licenses in all geographic areas, it is planning not to invest in cable and to opt for ADSL technology instead, in order to use its upgraded public switched telephone network for the provision of broadband communications services (which might include TV-like offers).

1.1.6 Market development

1999 TV market revenues amounted to 3047 million € (up 20%). Digital television amounts to 15% of the total market (13.8% in 1998). The digital television market remains essentially subscription based.

The switch to digital of the Spanish market is driven by the increase in the number of subscribers to digital satellite services and the switch of Canal+ subscribers from analogue terrestrial reception to digital satellite reception. However, this switch remains slow: the advertising market for commercial and public analogue terrestrial broadcasters remains dynamic; the roll out of digital cable services is behind schedule, and digital terrestrial TV services have just been launched in May 2000.

Key players

Canal Satélite Digital was the first digital platform to start operating in Spain. This group, whose main shareholder is Sogecable (a company jointly controlled by Canal+ and the Spanish media group PRISA), built its package on the existing analogue pay-TV of Canal+. Operations started in February 1997 and by the end of August 2000 had 904,000 subscribers. Securing the rights to broadcast Professional Football League matches until 2003 has considerably enriched the contents it offers to subscribers.

Distribuidora de Televisión Digital started in September 1997 under the commercial name of **Vía Digital** and backed by Telefónica, the largest telecom operator in the Spanish-speaking world with a 50% share of the market. At the end of August 2000 number of subscribers reached 600,000. Vía Digital has experienced numerous changes in its ownership. Telefónica has seen its share increase up to 68.6%, but it now retains only a 48% share, with the Dutch investment fund Strategic Money Management becoming in January 2000 the second largest shareholder.

Vía Digital acquired the rights to broadcast the main bullfighting events as well as all football matches in the European Championship League. In June 1999, Telefónica and Sogecable reached an agreement regarding the pooling of their broadcasting rights. Following this agreement, Vía Digital has been authorised to broadcasts matches of the Spanish “Liga” and “Copa” in pay-per-view, and Sogecable has been authorised to broadcast matches of the European Champions League.

There have been persistent rumours about a merger between the two satellite digital pay-TV platforms. In July 1998 and January 1999, both satellite operators reached an initial agreement to merge, but the merger did not happen due to problems raised by valuation issues and regulatory approval.

Three major players compete in the ***cable market:***

- ✓ Telefónica Cable, the incumbent telecommunications operators, which has the right to serve all the Spanish households;
- ✓ Agrupación de Operadores de Cable (AOC) will serve 80% of Spanish households;
- ✓ Cableuropa (Ono) will serve 20% of Spanish households.

In December 1999, the cable-operators members of AOC formed the company Estreno Digital to develop common television services to feed their cable networks. Estreno Digital has launched "Mirador", a 6 channels digital pay-per-view service. Ono decided to launch its own pay-per-view service.

Table 1: Major DTV platforms in Spain

Name of the service	Major shareholders End of August 2000	Date of launch	Nb of subscribers Mid 2000
Canal Satélite Digital (distributed by Astra)	Sogecable Time Warner Promociones Audiovisuales Reunidas Antena 3 TV	February 1997	904,000
Vía Digital (distributed by Hispasat)	Telefónica Strategic Money Management Televisa Direct TV Recoletos TV3 Media Park	September 1997	600,000
Ono	SpainCom Banco Santander Ferrovial Multitel	1999	41,000
Agrupacion de Operadores de Cable[1]	Telecom Italia Endesa Unión Fenosa	1999	120,000
Quiero TV	Retevisión Media Park Carlton Communications	May 2000	<100,000

Quiero TV is the key player on the ***terrestrial digital market***. Quiero TV's shareholders are:

- ✓ Retevisión (49%)
- ✓ Productions Company Media Park (15%)
- ✓ Sofisclave-98 (15%)
- ✓ Six savings banks (12%)
- ✓ British audiovisual group Carlton Communications (7.5%)
- ✓ Regional Basque cable operator Euskaltel (1.5%).

The commercial launch of Quiero took place on 5 May 2000. Quiero's first commercial transmissions cover around 60 per cent of the Spanish population. The company plans to reach 85 per cent by the end of 2000.

Quiero competes head to head with digital satellite platforms and also with the analogue terrestrial service Canal+. Canal+ will eventually start broadcasting in digital format, but it is still unclear if the company will favour a switch of its analogue subscribers to digital terrestrial transmission or digital satellite transmission.

[1] Different shareholding structures in the different local franchises.

1.1.7 Barriers to competition

As regards pay-TV, the market seems to remain organised around a limited number of key players, among which two telecommunications companies hold very strong positions: Apart from their activities in the telecommunications market, Telefónica and Retevisión are two very strong players in the television market and both operate cable networks. Should the cable market develop in Spain, the question of access of competing pay-TV operator (such as Canal+) to cable networks could arise.

On the free-to-air television market, the launch of terrestrial digital television is likely to increase the level of competition, even if the sustainability of new advertising funded channels remains to demonstrate. The situation of public broadcaster RTVE is also at stake, as its digital strategy has yet to be adopted, while the company remains subsidised to compensate heavy losses.

1.2 Details of the services

1.2.1 Number and type of services

The increased demand for content from Canal Satélite Digital and Vía Digital along with the high expectations created by the new cable networks have fuelled the growth of the content business in Spain: there are 200 independent TV/ thematic TV/production companies and their turnover amounts to €250 million. It is nonetheless a small market when compared to other European countries.

More than 50 new channels have been created to satisfy the needs of satellite operators. These new channels are covering new genres such as travel, fashion or 24-hour news that were not widely available on the free-to-air TV offer previously.

Entrants in the digital TV channel editing business come from many different related backgrounds: platform operators (Sogecable and Vía Digital), generalist TV companies, both public (such as RTVE) and private (Antena 3), new ventures in content production backed by investors from outside the industry (such as Media Park) and multinational corporations (Multithematiques or Disney).

Multinational corporations are interested in the Spanish market. The French producer Multithématiques supplies Canal Satélite Digital with Seasons and Meteo, having reached an agreement to develop specific content for Spain. Some multinational corporations produce Spanish-speaking channels or translate theirs channels into Spanish, like Disney (Disney Channel), Sony (AXN), Time Warner (CNN+), Hearst (Cosmopolitan), Pearson (Hallmark) or News Corp. (Fox Kids). A smaller share of contents is provided by other multinationals such as NBC without any translation or adaptation to the Spanish market.

In order to compete with analogue operators, digital TV operators also offer interactive TV services, as pay-per-view, electronic banking, sport statistics, interactive games, weather reports, stocks exchange information, SMS messages and remote and teleshopping services.

1.2.2 Details of the DTV offers

Digital TV operators generally have a similar structure, comprising a basic package with a variable number of channels (between 22 and 50) and different additional options which can be combined. These include cinema channels, cartoons, theme-specific channels and pay-per-view events. Premiere movies and sport events, bullfighting and live music concerts are usually offered as pay-per-view.

It is worth mentioning that some of the most popular and successful channels are included in the packages of most digital operators. The contents which set one apart from the others are some premium channels which include films and sport (like Canal + and Vía Digital’s Gran Vía), and the pay-per-view channels which offer football matches in pay-per-view.

The importance of exclusive rights to major sport events has resulted in a race among satellite operators when seeking the rights to major sports events. After having fiercely competed against each other for years, trying to secure the exclusive rights of the leading Spanish football clubs, Telefónica Media and Sogecable reached in June 1999 an agreement regarding the pooling of their broadcasting rights, in particular to the Spanish “Liga” and “Copa”, and to the European Champions League.

This agreement was notified to the European Commission in September 1999. The Commission, following complaints from Quiero TV and AOC (the Spanish Cable Operators Association), said that the agreement could have restrictive effects in several markets, including the market for the wholesale of these exclusive rights, as Telefónica and Sogecable could abuse of their position to foreclose the market to new entrants. In September Telefónica and Sogecable reached an agreement with Ono in order to share these rights, and in June 2000 they finally decided to reach similar agreements with Quiero TV and AOC.

Both Vía Digital and Canal Satélite Digital’s interactive services are offered using the return channel through the public switched telephone network, which requires the installation of a modem in the set top box.

Two cable operators currently offer digital TV services: Euskaltel, in the Basque Country, and Madritel, in the Autonomous Community of Madrid. Both offer the possibility to get telephone, TV and Internet services. In order to reduce the gap between cable operators and digital satellite operators, cable operators are offering lower prices than satellite providers, in particular for the registration and decoder rental fees.

Canal Satélite Digital

Canal Satélite Digital broadcasts more than 60 television channels, 32 radio stations and some interactive services (electronic banking, teleshopping, weather services, stocks exchange information, music services, interactive games, sport information).

Structure of Canal Satélite Digital offer (prices per month)	
Basic package	42 TV channels, 43 audio and radio channels and 20 pay-per-view programmes at PTA 2595 - 15.6 €- (with an additional decoder rental of PTA 1150 -6.9 €- and a connection fee of PTA 15 000 – 90.1 €)
Premium packages	Canal Plus Digital : four channels at PTA 3750 – 22,5 € Premium Plus : Basic + Canal Plus Digital at PTA 5995 – 36 € Premium Plus Disney : Basic + Canal Plus Digital + Disney Channel at PTA 6590 – 39,6 € Premium Plus Cinema : Basic + Canal Plus Digital + five cinema channels at PTA 6995-42 € Premium Plus Familiar : Basic + Canal Plus Digital + Disney channel + five cinema channels at PTA 7590-45,6 € Formula Familiar : Basic + five cinema channels + Disney at PTA 3995- 24 € Formula Cine : Basic + five cinema channels at PTA 3595- 21.6 € Formula Disney: Basic + Disney at PTA 3495- 21 € Other options : Seasons, Real Madrid, six music channels, Medicina TV
PPV offer	20 PPV channels - Cinema at PTA 600 – 3.6 € ; football events at PTA 995 – 5.9 € ; high interest football events at PTA 1850 – 10.9 €

Vía Digital

Vía Digital, backed by Telefónica has changed its strategy and reduced its fees and the number of channels offered. In May 2000, Vía Digital has included a new channel in its offering called Megatrix (launched in collaboration with Antena 3), which is targeted at children. Included in the basic package, the 24-hour channel will propose series, films, sports and games.

Structure of Vía Digital offer (prices per month)	
Basic package	45 TV channels, 49 audio and radio channels at PTA 2500-15 € (with an additional decoder rental of PTA 1200 – 7,2 € and a connection fee of PTA 15 000 – 90,1 €)
Premium packages	Basic + Cine Cinemático (four cinema channels) at PTA 3200 – 19,2 € Basic package + Première (four channels dedicated to cinema, sports events and live programmes) at PTA 4495 – 27 € Supervía : Basic + Cine Temático + Première at PTA 4995 – 30 € Vía Estrella : Basic + Premiere + Fútbol Total (a channel dedicated to football with events from the UEFA Cup, European Champions League, Spanish and other European Leagues) at PTA 5000 – 30 € Via Total : Basic + Cine Temático + Première + Fútbol Total at PTA 5500 – 33,1 € Other options : Canal Barca (dedicated to the Barcelona football team) at PTA 750 – 4,5 €; Fútbol Total or Playboy at PTA 1495 – 9 €
PPV offer	30 PPV channels Cinema films at PTA 500 – 3.0 €; football events at PTA 995 – 5.9 €; high interest football events (Real Madrid-Barcelona) at PTA 1825 –10.9 €- and boxing events at PTA 750-4.5 €.

Interactive services include electronic banking with three major firms (BBV, La Caixa and Argentaria) and other services as Compra Activa (ticket booking), Bolsa Activa (Online access to the Stock Exchange market), Meteo Activa (weather channel), Fútbol Activo (football channel), Juegos Activos (interactive games), Tráfico Activo (trafic update) and interactive advertising.

Regarding Internet, Vía Digital and Terra Networks (Telefónica's Internet portal) are carrying out tests in order to launch a high speed Internet access service through the Hispasat DBS platform which would allow customers to receive data at a speed of 2Mbits/s and send information at 56Kbits/s. The platform will launch Internet access through the television set later 2000.

Ono

Cableuropa was established in 1992 with the aim of playing a leading role in the starting market of the digital cable services. Cableuropa has created the brand Ono to unify the identity of its eleven subsidiary local cable operators.

Since May 1999 Ono provides TV, telephone and Internet services in five territories: the cities of Albacete, Cádiz and Valencia and the regions of Mallorca and Murcia. Ono has launched in April 2000 on a trial basis a commercial service of interactive digital TV.

Madritel (AOC)

Madritel is controlled by the Auna Group (Telecom Italia/Endesa/Unión Fenosa) local cable operator in Madrid area (with three licences). Its shareholders are the Spanish electric utilities Unión Fenosa (24.25%) and Endesa (23.25%), Telecom Italia (23%), Cable Total (15%), Supercanal (7.5%) and Ineuropa (7%).

Madritel offers two basic TV options with 21 and 32 channels for € 8.9 and 17.2 per month. In November 1999, Madritel has signed an agreement with CosmoCom and Siemens to deliver interactive customer service from cable subscribers's television sets (via television remote control devices equipped with keyboards)

Quiero TV

Quiero proposes **15 theme-specific TV channels**[2], five pay-per-view channels and five audio channels.

Quiero programming line-up (May 2000)	
Studio Universal	Movies
Calle 13	Movies
Palomitas	Family cinema
Gran Vía	Generalist channel
Showtime Extreme	Movies
E-music	Interactive music channel
Geoplaneta	Documentary channel
Beca	Documentary channel
Turner Classic Movies	Cinema
Cartoon Network	Cartoons
Eurosport	Sport
Club Super 3	Kids channel
Buzz	Dedicated to kids and teenagers
Factoría de Ficción	Spanish sit-coms channel
El Bus	24-h TV games channel
Quiero Club Cine (2)	Movies PPV
Quiero Club Deportes	Sports and bullfighting PPV
Quiero Club Privado (2)	Adult PPV

Source : Quiero TV

[2] Club Super 3, Buzz and Showtime Extreme share the same channel, so the offer would really consist of 13 pay-TV channels, plus a free-to-air promotional channel.

In October 2000 Quiero will begin to charge its customers: a connection fee of Ptas 9950 (€ 59.8), a monthly subscription price of Ptas 3750 (22.5 €) for the 14-channel package (unlike other digital platforms, Quiero's digital offer is not divided into different packages) and Ptas 1000 (6 €) for the hire of the set-top-box. In addition, subscribers will have to pay an extra Ptas 4950 (29.7 €) if they want to get the wireless keyboard required to carry out Internet functions.

Regarding movies, Quiero has signed deals with several US companies including Universal, Paramount and Time Warner. Under its agreement with Universal, the Studio Universal movies channel is exclusive to Quiero. In fact, one of the most important issues for Quiero is to find content for its channels.

Besides the pay-TV services, Quiero is offering interactive services (such as telebanking, games, leisure and travel guides, and music) and e-commerce (books, software, plane tickets, cinema or theatre tickets). Internet functionality includes access to the Web, chat and e-mail. Quiero has opted for OpenTV as its software provider for interactive services (expecting a smooth migration path to the MHP standard).

1.3 Operators and market structure

1.3.1 Concentration of the pay-TV market

The Spanish pay-TV market shows a high degree of concentration.

Indeed, the telecommunications and media industry has seen the developments of three major groups that account for the majority of the business:

- ✓ The first group was built around **Telefónica,** the first telecommunications operator in the Spanish-speaking world, which is the major shareholder of Vía Digital (digital satellite), Telefónica Cable (digital cable) and Antena 3 (terrestrial analogue). Telefónica also owns the third Spanish radio network, Onda Cero, and the Dutch content provider Endemol, and it has a 30% stake in the production company Mediapark.
- ✓ The second group comprises **Prisa**, one of the major shareholders of Canal+ (terrestrial analogue pay-TV) and Canal Satélite Digital (digital satellite) through Sogecable, who manages both companies and also provides audio-visual contents. PRISA is also the most important radio group in Spain, as well as the leader in the press market.
- ✓ Finally, companies in the **Auna** Group (Telecom Italia and the Spanish electric utilities Endesa and Unión Fenosa), owners of Retevisión (second operator of basic telephony and former monopolist in the market of broadcasting carrier services) and Amena (third operator of mobile telephony). These companies have shareholdings in several cable companies (Madritel, Menta, etc) and also in Onda Digital/Quiero TV, a company that holds a national DTTV license allowing it to operate 14 pay-TV channels; a regional DTTV license allowing it to operate a free-to-air channel in the Autonomous Community of Madrid; and a national DAB (digital radio) license.

1.3.2 Agreements between satellite operators, cable operators and DTT operators

There are several programming agreements between TV operators in the Spanish market. Canal Satélite Digital includes Canal+ programming in their Premium pack; they also broadcast international emissions by the Andalusian TV. Ono and Cable Antena, a subsidiary of Sogecable (the main shareholder of Canal Satélite Digital), have reached an agreement for cable emission of 16 TV channels. Vía Digital airs theme-specific channels produced by RTVE; it also offers programmes of the regional television stations that are its shareholders. Quiero TV has reached an agreement with Telefónica to include Vía Digital's premium channel Gran Vía in its package. The 24-hours games channels "Gran Hermano" (Big Brother) and "El Bus", which are produced by the Dutch company Endemol (now a Telefónica subsidiary) have been shown in both Vía Digital and Quiero TV.

1.3.3 Vertical integration

Despite the strong vertical integration process which has taken place between the service provision and the television channels provision, strong international brands (such as Disney or Viacom) as well as "independent" TV services editors have managed to enter the market. e.g. Multipark and RTVE. However, only a few independent TV channels with private financing offer thematic programmes in Spain.

Sogecable operates Canal +, an analogue terrestrial pay-TV channel which is offered, as a premium channel, in only one digital platform, Canal Satélite Digital, whose main shareholder is also Sogecable. This company has also established a subsidiary, Citsa, to create channels such as 40 TV (music), Estilo (fashion), Sportmanía (sport) and Viajar (travel and tourism). Sogecable has reached agreements with multinational companies to produce some channels (CNN+, with Time-Warner; Fox Kids, with News. Corp.). Through its subsidiary Cable Antena, Sogecable also supplies several cable operators (Ono; the Catalan cable operator Menta; the Galician operator R, etc.) with contents.

Vía Digital has developed cinema channels such as Club Cinema, Cine 600, Canal 18 and Gran Vía. These channels, as well as others aired by Vía Digital, are also included in the package of Telefónica Cable (on trials).

RTVE has developed focused channels for Vía Digital, such as Cine Paraíso or Canal Nostalgia, that offers classic movies and TV oldies. Regional TV companies supply regional channels. RTVE has also developed a 24-hour news channel.

Table 2: Main TV market players' in the new Spanish thematic TV channels capital

Market player	Control
Sogecable	40 TV, Estilo, Cinemanía, Estilo, Documanía, Viajar, Sportmanía, Canal C:
RTVE	Cine Paraíso, Canal Nostalgia, Teledeporte, Alucine, Canal Clásico, Hispavisión, Canal 24
Vía Digital	Cine 600, Canal 18, Gran Vía

But vertical integration also takes place in other steps of the value chain.

The first example is that of companies linked to Telefónica, the most important telecom group in Spain: Telefónica owns 23% of Hispasat, the Spanish communications satellite operator; it owns 48,6% of Distribuidora de Televisión Digital, parent company of Vía Digital. Moreover, it is the main shareholder in Antena 3 TV, with a 48% stake, and it is allowed to provide cable TV services nation-wide through its subsidiary Telefónica Cable.

Other Vía Digital shareholders, such as Televisa, Media Park and regional TV broadcasters are content suppliers for Vía Digital and other TV operators. Media Park also participates in Quiero TV, the digital terrestrial pay-TV platform, with a 15% share.

A second example can be found in the link between Cableuropa (Ono) and Multitel Cable, which owns 17% of Cableuropa, a 3% of Multicanal (another Spanish content provider,) and is a shareholder of Lince, the third operator in the basic telephony market.

1.4 Technical issues

1.4.1 Decoder issues

The Directive 95/47/EC of the European Parliament and the Council of 24th October on the transmission of TV signals is incorporated into the Spanish legal system through Law 17/97. This Law also introduces additional measures aimed at the liberalisation of the industry and develops the framework for the TV signal transmission and conditional access services regulation.

The Law aims to protect the public interest in terms of access to information and to guarantee healthy competition in TV services through digital satellite, cable and terrestrial TV systems.

After the original version of the Law was brought before the European Court of Justice by the European Commission, the Spanish Government decided to amend it by means of Royal Decree-Law 16/97. This provision deals with requirements for conditional access, definition of services and regulation for the transition from installed decoders to the future decoders. The amendments introduced on the Law 17/1997 by the Decree-Law 16/1997, guaranteing freedom of choice to the final user in terms of decoder, closed the dispute regarding multicrypt and simulcrypt decoders.

Under the new regulation the market will decide which is the dominant system, provided it is open and compatible. Article 7 of the Law 17/1997 establishes that decoders must be directly and automatically open, whether because they use a multicrypt system, or because the decoder's owners reach an agreement with the other digital TV operators. The national regulator, the Comisión del Mercado de las Telecomunicaciones ("CMT", Telecommunications Market Commission) has the responsibility to approve the agreements reached by the operators, assuring that the agreements' terms are fair, transparent and non-discriminatory, and allow the consumers to receive all the digital TV services with a single decoder. If the operators fail to reach such an agreement, the CMT is allowed to establish the legal, technical or economic conditions necessary to allow the decoders to be directly and automatically open. This regulation is similar to the UK regulation. Under this legal framework, Canal Satélite Digital opted for a Simulcrypt solution while Vía Digital chose to implement Multicrypt module in its decoders.

As far as SetTopBox provision is concerned, there are no Spanish manufacturers of decoders for Digital TV. Existing satellite digital TV platforms have signed procurement agreements with foreign suppliers: Canal Satélite Digital signed an agreement with Philips; Pioneer and Sony for the supply of decoders. Nokia, Echostar and Thomson supply the system used by Vía Digital. Quiero TV (formerly Onda Digital) has selected an Open TV-based set-top-box from Sagem with a 56K modem and a credit card sold for e-commerce –similar to that used by DTH platform Vía Digital.

Two cable operators (Madritel and the Basque operator Euskaltel) have started to provide conditional access services for digital TV. Euskaltel has reached an agreement with SAGEM for the supply of decoders, while Madritel uses decoders manufactured by Italtel and Advanced Digital Broadcast.

Operators using decoders have mainly chosen equipment which require using the Simulcrypt solution. Digital terrestrial TV will allow for the use of current TV systems, although it will be necessary to use digital signal decoders.

Decoders are rented by the pay TV operators and are not available for purchase in Spain.

The National Association of Electronics and Telecommunication industries (ANIEL) supports the use of API MHEG-5 European Profile, as an interim solution until the DVB-MHP is made available, but there is no common API at present. The mandatory common interface in new generation sets will only reach the market in the mid-term because of the long life of the current installed base of TV sets.

Although the Spanish legislation does not expressly regulates APIs, the Telecommunications Market Commission, invoking its duty of safeguarding competition in the telecommunications and audio-visual services markets, adopted a Resolution in September 2000 stating that it will investigate the impact of the use of proprietary APIs in the Digital Terrestrial TV market.

Table 3: Decoders on the Spanish market

Operators	CA Technology	Interactive services technology API	Free to air compatibility (Y / N)	16 : 9 compatibility (Y / N)	Integrated modem (Y/ N)
Canal Satélite Digital	Mediaguard	MediaHigway	Y	Y	Y
Vía Digital	Nagravision	Open TV	Y	Y	Y
Quiero TV	Nagravision	Open TV	Y	Y	Y
Madritel	NDS Videoguard	Open TV	Y	Y	Y
Euskaltel	Nagravisión	Open TV	Y	Y	Y

1.4.2 Widescreen (16:9)

The household’s equipment rate in 16:9 TV sets is still very low. In 1999, it reached 1,7%. People who bought wide-screen sets represent mainly a minority group from upper-middle class.

However, digital broadcasting by satellite may, to some extent, progressively change the current situation:

- ✓ Canal Satélite has a premium channel (Canal + 16:9) and a PPV channel expressly devoted to wide-screen.
- ✓ Vía Digital also broadcasts 16:9 programmes, but not on a regular basis.

1.4.3 XDSL

Telefónica, through its unit Telefónica Interactiva, launched in September 1999 a high speed Internet access service (GigaADSL) based on the Asymmetric Digital Subscriber Line Technology. The service will be available to Telefónica's Internet access service provider, TeleLine, as well as to rival service providers. According to observers, if swiftly implemented this service could undermine the cable operator's offer of highspeed Internet access via cable modem.

Over the next three years, Telefónica will invest € 240 million in its ADSL service.

Even if Telefónica considers the Video On Demand service really interesting (trials are going to be started), the company doesn't presently declare any definite plan for its commercial launch.

1.5 Conclusion

The Spanish TV market entered a new era with the launch of the first digital channel in February 1997. Viewers are benefiting from an increasing diversity in programmes and channels, as well as from the availability of new interactive services. However, the digital TV market is hardly growing faster than the total market.

In the subscription TV market, the increase of competition may be faster than the increase of the market itself. Even if the number of subscribers to digital satellite increases, it is due to a large extent by the switch of analogue customers to digital service. In this context, new entrants may face difficult times. The situation of cable remains uncertain, as cable networks are challenged both on the TV market (by satellite and terrestrial digital TV) and on the fast Internet market (by ADSL).

Global competition and concentration of key players can describe the Spanish TV market's competitive situation. A limited number of major players compete over all platforms (cable, satellite, terrestrial). The trend to concentration can be explained by the fact that the limited remaining potential for growth of the market prevents any strategy based on only one delivery network.

In this context, the Spanish framework for digital terrestrial TV favours the entry of new competitors to existing analogue broadcasters, a premiere to a certain extent in the European digital terrestrial scene. These new entrants will face a head to head competition with powerful "multiplatforms" players and whether they will find any space in the market remains uncertain.

2 Key figures for the Spanish market

2.1 Country fundamentals

	1994	1995	1996	1997	1998	1999
Population (millions)	39.220	39.260	39.300	39.330	39.600	39.650
Households (millions)	11.700	11.700	11.800	11.800	11.855	12.000
GDP (in Euros billions)	388.852	419.378	442.708	468.168	496.890	523,5

2.2 Equipment

As of 31 of December	1994	1995	1996	1997	1998	1999
TV households (millions)	11.620	11.630	11.720	11.740	11.810	11.900
TV households (% of total households)	99.3%	99.4%	99.3%	99.5%	99.6%	99.8%
TV Households with 2 TV sets or more (millions)	5.840	6.170	6.430	6.820	7.550	7.973
TV Households with 2 TV sets or more (% of TV Households)	50.3%	53.1%	54.9%	58.1%	63.9%	67%
TV Households with 16:9 Television sets (millions)	0.000	0.000	0.020	0.060	0.120	0.700
TV Households with 16:9 Television sets (% of TV Households)	0.0%	0.0%	0.2%	0.5%	1.0%	5,8%
VCR Households (millions)	6.240	6.550	7.000	7.390	8.000	9.000
VCR Households (% of TV Households)	53.7%	56.3%	59.7%	62.9%	67.7%	75%
Digital STB Households (millions)	0.000	0.000	0.000	0.350	1.000	1.300
Digital STB Households (% of TV Households)	0.0%	0.0%	0.0%	3.0%	8.5%	11%
IDTV Households (millions)	0.000	0.000	0.000	0.000	0.000	0.000
Digital TV Households (% of TV households)	0.0%	0.0%	0.0%	0.0%	0.0%	0.000
Digital Households (millions)	0.000	0.000	0.000	0.350	1.000	1.300
Digital Households (% of TV households)	0.0%	0.0%	0.0%	3.0%	8.5%	11%

2.3 Television market estimates*

Millions €	1993	1994	1995	1996	1997	1998	1999
Analogue TV Market							
Public funding		0.0	0.0	142.9	70.6	73.7	70
Advertising		1276.9	1329.0	1382.3	1478.0	1686.5	2075.0
Subscription		243.0	314.6	385.9	393.7	421.7	447.0
Total analogue TV		1519.9	1643.6	1911.1	1942.3	2181.9	2592.0
Digital TV Market							
Public funding		0.0	0.0	0.0	0.0	0.0	0.0
Advertising[3]		0.0	0.0	0.0	9.0	19.2	24.9
Subscription		0.0	0.0	0.0	89.0	331.3	430.2
Total digital TV		0.0	0.0	0.0	98.0	350.5	455.1
TV Market							
Public funding		0.0	0.0	142.9	70.6	73.7	70
Advertising		1276.9	1329.0	1382.3	1487.0	1705.7	2100.0
Subscription		243.0	314.6	385.9	482.6	753.0	877.2
Total TV market.		1519.9	1643.6	1911.1	2040.3	2532.4	3047.1

* **"Public funding"** comprise grants and licence fees, but not authorisation of excessive debt or debt write-offs by the national and regional Governments; **"Advertising**" also includes sponsoring expenditures whereas **"Subscriptions"** cover subscriptions to the basic multi-channel package as well as subscriptions to Premium pay-TV services. Figures for all years have been restated in the 2000 report.

2.4 Details of the subscription-TV market

Cable

	1994	1995	1996	1997	1998	1999
Home passed (millions)	0.750	0.900	1.500	2.300	2.500	3.900
of which digital (millions)	0.000	0.000	0.000	0.000	0.000	0.500
Home passed (% of TV households)	6.5%	7.7%	12.8%	19.6%	21.2%	32.8%
of which digital (% of TV households)	0.0%	0.0%	0.0%	0.0%	0.0%	12.8%
Analogue Basic Subscribers (millions)	0.140	0.140	0.290	0.420	1.600	1.800
Digital package subscribers (millions)	0.000	0.000	0.000	0.000	0.010	0.050
Analogue Basic Subscribers (% of TV households)	1.2%	1.2%	2.5%	3.6%	13.5%	15.1%
Digital package subscribers (% of TV households)	0.0%	0.0%	0.0%	0.0%	0.1%	0.4%

[3] Estimate of advertising on thematic channels.

Satellite

	1993	1994	1995	1996	1997	1998	1999
Satellite households (millions)		0.300	0.400	0.550	0.710	1.400	1.500
Satellite households (% of TV households)		2.6%	3.4%	4.7%	6.0%	11.9%	12.6%
Satellite subscribers (millions)		0.020	0.040	0.100	0.350	0.954	1.325
Satellite subscribers (% of TV households)		0.2%	0.3%	0.9%	3.0%	8.1%	10.5%
of which digital (millions)		0.000	0.000	0.000	0.350	0.954	1.325
of which digital (% of TV households)		0.0%	0.0%	0.0%	3.0%	8.1%	10.5%

Terrestrial TV

	1993	1994	1995	1996	1997	1998	1999
Analogue Pay-TV services							
Pay-TV subscribers (millions)[4]		970	1.205	1.366	1.211	1.009	1.005
Pay-TV subscribers (% of TV households)		8.6%	10.4%	11.7%	12.5%	13.5%	8.4%
Digital TV services							
Homes covered (millions)		0.000	0.000	0.000	0.000	0.000	0.000
Homes covered (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IDTV households (millions)		0.000	0.000	0.000	0.000	0.000	0.000
IDTV households (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pay-TV households (millions)		0.000	0.000	0.000	0.000	0.000	0.000
Pay-TV households (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

[4] Terrestrial part of Canal+ Subscribers. The figure shows a decrease in the number of analogue terrestrial subscribers as subscribers move to digital satellite