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Development of Digital TV in Europe

2000 Report

Republic of Ireland

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Contents

1. Market Overview

There have been a number of positive developments which have created a more attractive prospect for digital television:

- Sky has started to actively promote its digital satellite services in Ireland in conjunction with Eircom;
- The cable companies NTL and IMC have been rapidly upgrading their networks and will be launching services in Q4 2000;
- The MMDS operators have gone through mergers and consolidation and have refocused on broadband delivery;
- International media groups such as Granada Media and Liberty Media have committed large investments to the sector.

Progress towards the introduction of digital terrestrial television has been disappointing. It had been hoped that DTT could have been launched during the latter part of 2000. Much of this delay has been due to difficulties in the passage of the Broadcasting Bill which, *inter alia*, enables digital terrestrial television (DTT).

1.1 Roll-out of digital services

1.1.1 Delayed Broadcasting Bill.

The Broadcasting Bill has had a long passage after it was introduced to Parliament in May 1999 and was still not resolved over a year later in spite of having high priority. Whilst there is political agreement on the need to introduce digital terrestrial television there were several controversial issues which led to delays. The possible launch date slipped from autumn 1999 back to summer 2000 and finally into 2001.

There has been a long debate between the government and the national broadcaster RTÉ as to the role of a public service broadcaster in the digital age. RTÉ had to argue its case for a unique position as a public service broadcaster. It feared that Irish culture, as presented by the national broadcaster, would be superseded by consumerism. It also emphasised the role of a public service broadcaster in a small democracy. The contentious practical matters were the role that RTÉ would play and the financial consideration it would receive for the disposal of its transmission assets.

RTÉ wanted to establish a company, Digico, the role of which would be to construct and operate the multiplexes, encrypt and transmit the signals and manage the subscriber relationship. Digico was to promote the development of multi-media services and the information society. RTÉ proposed that it would transfer its transmission network assets to Digico in exchange for a 40% stake.

Other broadcasters were less than happy with the RTÉ proposals. They feared that one of their main competitors would seem to have an advantageous position in the market. RTE would be able to influence transmission policy. Furthermore, Digico would benefit from receiving transmission fees from RTE whereas cable operators could not charge for public service broadcasting. TV3 also argued that any over-valuation of the transmission assets might be construed as state aid and would run counter to European Commission rules.

In late 1999, local radio stations and TV3 began a vigorous political campaign against RTE's Digico proposals. It involved local radio stations putting pressure on politicians in their catchment area. The local radio stations were convinced that digital radio would come under the Digico umbrella. The lobbying group, Independent Broadcasters of Ireland (IBI), took the credit for the government's change of mind.

The government eventually decided to reject the RTE proposals and press ahead with the privatisation of the transmission business reserving a 28% stake for RTE. A number of companies have expressed interest in participating in the transmission company including NTL and Crown Castle who run the ITV and BBC digital terrestrial (DTT) networks respectively in the UK. RTE is to be kept separate from the multiplex operation. There are still questions to be resolved regarding the licensing and regulation of the multiplex operator. There is a 10% data maximum on each multiplex.

The difficulties about the size of RTÉ's shareholding in Digico centred around a disagreement between the station and AIB Corporate Finance on the value of its transmission network. RTÉ maintained that the network is worth €100-€115M and therefore entitled it to 40 per cent of Digico. However, AIB, which is advising the government on the creation of the digital network believed the network was worth around €50M. The gap between the estimates was due to different views about the commercial use of the transmission assets in the future.

1.1.2 Satellite digital services

Digital television in the Republic of Ireland originally commenced as an overspill of digital satellite signals from SkyDigital launched to the UK market in October 1998. Although decoders were made available to Irish viewers from the beginning of 1999 there was no subsidy arrangement. Now that the success of SkyDigital has been demonstrated in the UK, active marketing has commenced in Ireland and Sky have established a sales office in Dublin.

Satellite has never had the level of penetration in Ireland compared to the UK due to the lack of indigenous programming. This situation may begin to change if the other platforms delay digitisation too long. Although 'digiboxes' were available from the beginning of 1999 to the Irish market, the SkyDigital proposition was much less attractive than in the UK due to the absence of a subsidy on the set-top box: the cost of the equipment was around €580. Furthermore, subscribers in Ireland do not benefit from the BBC digital services which are disabled from the smartcard. Sales of SkyDigital were accordingly severely limited.

The delays on the other digital platforms gave a new window of opportunity for digital satellite. Sky announced at the end of summer 2000 that it would be entering into a marketing agreement with Eircom, formerly Telecom Eireann. Under the agreement, a 'free' digital set-top box and mini-dish is being made available to television viewers in Ireland (see details below). This is a landmark development for digital television in Ireland. The full marketing power of Eircom and Sky is likely to accelerate the sales of digital subscriptions.

Sky had 613,000 payTV subscribers in Eire at mid-year 2000 (see table below). This was a modest 4% increase on the preceding year. The vast majority of these were cable (or MMDS) subscribers.

Subscribers to Sky Channels

	Opening as at 30/6/99	Q1 As at 30/9/99	Q2 As at 31/12/99	Q3 As at 31/3/00	Q4 As at 30/6/00
Digital	753,000	1,279,000	2,065,000	2,751,000	3,583,000
Analogue	2,707,000	2,303,000	1,901,000	1,405,000	930,000
DTH	3,460,000	3,582,000	3,966,000	4,156,000	4,513,000
Cable	3,189,000	3,325,000	3,306,000	3,211,000	3,122,000
ONdigital	204,000	363,000	527,000	647,000	740,000
Eire	589,000	591,000	605,000	609,000	613,000
Total	**7,442,000**	**7,861,000**	**8,404,000**	**8,623,000**	**8,988,000**

Source: BSkyB

1.1.3 Digital cable services

There were no digital cable services in the Republic of Ireland at mid-year 2000. However, both NTL and IMC announced that they would be launching later in the year following local trials. A typical package comprises 40-50 channels as well as telephony and internet access.

NTL is the main cable company both north and south of the border. NTL became the dominant cable operator in Eire through the takeover of Cablelink. In the north, NTL commenced its digital cable service, Digital Plus, in May 2000. Digital Plus costs €22 per month for a basic package of channels as well as a telephone line. This compares favourably with SkyDigital if the cost of a telephone service is added to their pricing. Internet access and premium TV channels would be available for extra charges.

In a cultural breakthrough, television viewers in Northern Ireland are to receive RTE 1 and Network 2 as part of NTL's basic digital package. The two channels will join BBC, UTV, Channel 4 and Channel 5 on Digital Plus. This is the first time that the RTE channels have been made available north of the border. Subsequently both TV3 and TG4 (the Irish-language channel) entered into discussions with NTL for inclusion (they are on the analogue cable service with single figure status).

Given that the price of basic cable TV is capped according to a regulatory formula, extra revenues to recover the digital investments must come from telecommunications services. NTL has been replacing the old analogue network with a fibre optic network to enable digital services. The total investment to roll out the broadband cable network and bring the internet to "every parish in the country" is €1 billion. This is a 750 MHz two-way digital cable network capable of delivering at least 300 TV channels, voice telephony and high-speed internet access. The entire network, passing some 350,000 homes in Dublin, is due to be completed by the end of 2002. By 2003 there may be 300 digital channels in all. NTL plans to begin transmitting its digital service in the last quarter of 2000 and will roll out the service over a three-year period.

Following a period of consolidation after merging with the other MMDS operators and refocusing on the cable business, IMC began to build invest €450 M in its fibre-optic and wireless network backbone. It will begin rolling out cable services, including digital TV, in the a similar timeframe to NTL. IMC signed a deal with German technology group Siemens AG for high-speed communications equipment worth €23.4 million over three years. Siemens and IMC will jointly roll out the infrastructure, design services, plan network solutions and provide on-site technical support. IMC, whose broadcasting remit is mostly concentrated in the south has been recabling Cork and will start on Limerick later in 2000. The IMC package of services is expected to include e-mail, near-video-on-demand, voice and high-speed internet.

NTL is investing €289 million in its infrastructure in Northern Ireland over the next four years where its network passes some 180,000 homes. NTL also built a customer call centre in Northern Ireland to provide service and support to cable customers across Europe. This is expected to create more than 850 new jobs over four years.

1.1.4 Situation of MMDS

The prospects for MMDS are not promising and it seems likely that the MMDS operators will use cable or DTT in the future. The privately-owned MMDS/cable operators, Princes Holdings, Cable Management Ireland, and Noir/Suir effectively lost their battle with the government regarding exclusive franchises. They had argued that their licences precluded digital terrestrial television from starting. Subsequently, from the last quarter of 1999, the three main MMDS operators merged. Irish Multichannel (IMC), the second largest cable company merged with Cable Management Ireland (CMI) the third largest cable operator.

Liberty Media engineered the deal through a take-over of CMI, which already held 50% of Irish Multichannel through Princes Holdings. The other 50% of IMC is held by Independent News & Media. Liberty Media is an AT&T company and holds a significant stake in Telewest. The combined group has over 260,000 subscribers with 600,000 homes passed. Parts of the network use MMDS while others, particularly in the north Dublin area cabled by CMI, are already upgraded.

1.1.5 Situation of terrestrial digital television

Following the wrangling with the government about the terms of its participation in Digico, RTÉ deferred its plan to begin digital television services in October 1999. This came as a disappointment to the channel. It had wanted to start as soon as possible - particularly before SkyDigital and NTL could get their services off the ground. As a result of this delay, there will be considerable competition from other platforms when DTT eventually gets off the ground. For this reason, RTE has been investigating ways of enhancing the DTT offering. These include incorporating a wireless return path (see below later) and a set-top box with video storage.

Digico is conceived as comprising a free basic tier with progressively more expensive tiers above including pan-Irish and British channels. The government is making it a licence condition that the service must provide 98 % coverage. The government has not announced any end-date for analogue broadcasting.

1.1.6 ADSL

ADSL technology has been tested in a variety of trials with the purpose of delivering digital television, telephony and high speed Internet access in an integrated package down one wire. If successful, ADSL is expected to launch in 2001 – amongst the earliest in Europe. The two main projects are :

- Eircom

Eircom (formerly Telecom Eireann) is competing fiercely with Ireland's cable companies which are moving into the provision of telephony. Eircom fears losing market share as did BT which lost 40% of its customers to NTL in Northern Ireland. Eircom’s initiative on ADSL follows the disposal of its stake in Cablelink in 1999. Eircom has committed over €1 billion to roll out broadband technology, purchase content and market the services. The network has been tested and operational trials are underway. These cover services such as video-on-demand, fast Internet, TV-email, broadcast TV and e-commerce. Details of content and roll-out dates for the ADSL service have not been revealed.

Eircom has introduced BSkyB to the trials - the two companies already have a marketing arrangement for SkyDigital. Eircom has also struck deals with the UK video-on-demand companies Future TV and Yes TV. There have also been discussions with RTE and TV3 as well as the UK terrestrial broadcasters BBC, ITV and Channel 4 although existing exclusive broadcasting rights would seem to preclude access to the most popular channels.

- Ocean, the joint venture between BT and the Electricity Supply Board

The tests are being conducted in Dublin. ADSL is likely only to be provided to urban areas since rural coverage of ADSL cannot be achieved for technical reasons. Full multimedia applications can only be carried for a range of three kilometres between the subscriber's home and the local exchange.

The Telecoms Regulator (ODTR) has issued a consultation paper on the use of ADSL technology to deliver digital television services and the internet. It is examining the implications this will have for the legal and regulatory frameworks over the next 3-4 years. The consultation extends until September 2000.

1.1.7 Internet

Irish residential Internet penetration is 19% which compares to 31% of UK households. Less than half of those who do have access to the web at home use it and Irish residents also spend less time online than their UK counterparts. Given these statistics there appears to be strong potential for growth particularly if the cost of the internet can be controlled through bundling into other services.

Eircom, the former state-owned telco, is the leading internet service provider (ISP) having access to 1.58m fixed lines. The internet subscriber base at Eircom almost tripled in 1999 and is now at some 243,000 customers. Eircom is planning a separate stock exchange listing for its internet related businesses by the year end. Eircom intends to focus on ADSL and broadband.

The most significant new ISP entrant is Unison, an Independent Newspapers/ Princes Holdings joint venture operating on the Irish Multichannel (a Princes Holdings' subsidiary) network. It delivers the internet directly to the TV set using the technology from UPC’s Chorus. The Unison box retails at €500 and provides basic Internet activities such as surfing the net and e-mail. This service may eventually be replaced when broadband becomes available.

1.1.8 Market development

Ireland is rather a small market to support five delivery systems (satellite, cable, MMDS, DTT and ADSL). There is considerable risk to an individual operator in launching digital services. In these circumstances, it is necessary to have financially strong groups who see Ireland as a strategic investment rather than as a short-term opportunity. Such players must expect to gain revenues not just from digital television but also from additional services. The two multi-national media groups that are set to transform analogue Ireland into a digital television market are Sky and NTL. In addition there are likely to be UK participants in the new transmission and multiplex companies. It is likely that the shape of the Irish digital TV offerings will follow very closely that for the UK.

As of mid-2000 there were around 70,000 Irish subscribers to SkyDigital. The rate of take-up of digital satellite in Ireland was lower than for the UK because decoders have not been subsidised. The creation, in the summer of 2000, of a marketing arrangement between Sky and Eircom is likely to make a big difference to the attractiveness of the digital satellite proposition. Irish customers can benefit from the interactive services on the Digibox. It was the absence of an equivalent of Open which held up the possibility of a subsidy previously.

Table A: Digital services in Ireland – June 2000

Name of the service	Ownership	Date of launch	No of subscribers
SkyDigital	BSkyB	1st Jan 1999	70,000 (est)
Digico	?	Q4 2001 (est)	-
NTL	NTL	Q4 2000 (est)	-
IMC	Princes Holdings, Liberty	Q4 2000 (est)	-

1.1.9 Barriers to competition or market development

The Irish television market is perhaps the most competitive in Europe. With four or five delivery platforms there is a danger that the Irish television reception market may become fragmented. It is clear that if any platform is delayed then it will have little chance of catching up with the competition, which will be well-established in this small market. Whilst this may not impede the growth of digital reception, it may result in some players achieving a dominant position.

It is likely that there will be limited interoperability between the digital platforms in respect of their interactive services. This arises from the competitive nature of the market where each operator will attempt to capture a segment. This potential problem will be difficult to remedy since the main satellite system is controlled from another country.

The ‘deflector’ problem, which could be a potential barrier to the adoption of DTT, has been largely overcome. Under the guise of community TV, the ‘deflector’ operators (i.e. re-transmitters) supply terrestrial and TV channels over unlicensed local networks usually without paying any fees to programme providers. Unless these are closed down then the implementation of digital terrestrial television, which uses the same frequencies, will be limited. There are about 25,000 deflector subscribers remaining.

The political system found it very difficult to handle given the distribution of subscribers in marginal constituencies. Closing deflectors is not popular since viewers would have to start paying for their television in order to achieve parity with the South/East parts of Ireland that can access the programming for free through signal overspill. This continues to be a significant political problem that can only be dissipated when digital signals are received nationally.

The deflector problem was addressed directly by the regulator, ODTR, which licensed the illegal operators on a temporary basis until digital terrestrial was launched in the affected areas. The licenses are for analogue carriage only. The deflector operators must pay licence fees in the meantime and can expect that the channels they provide will also wish to seek formal arrangements for carriage. The matter is not finally resolved since there are legal actions pending from both the MMDS operators, who were granted exclusive licences in 1990, and also from deflector companies themselves who want to be included in the digital licensing process. Most of the major cable and MMDS operators have been awarded new licences for digital cable and MMDS services.

The main factor which impedes the progress of digital satellite is the non-availability of popular programmes on satellite for broadcasting rights reasons. This is partly a reflection of the situation in the UK whereby ITV does not permit its services to be carried on satellite. The situation is further complicated by the desire of Irish viewers to receive BBC programming. BBC is available on the same satellite as SkyDigital. However, the Irish viewers do not get access to the BBC. Eventually, the main BBC terrestrial services may have to become a pay TV service outside the UK.

1.2 Details of services

Only digital satellite is presently available. The indications are that the digital cable services will be rolled out in the fourth quarter 2000 and will comprise 40-50 TV channels.

1.2.1 Number and type of services

SkyDigital has set a high standard to follow in terms of the size of the offer, with over 60 thematic channels. The SkyDigital service has been described in the UK report. There is one Irish channel on SkyDigital, Tara, which is a compilation of Irish programming, largely fed by RTÉ, targeted at the large Irish community in the UK and across Europe. It is one of the fastest growing channels in the UK in terms of audience share. Its inclusion in the SkyDigital Family Pack has improved its sales further. Otherwise, there are no plans to carry UK TV on satellite for the Irish market.

Sky announced that it had entered into a marketing agreement with the telecoms operator eircom. Sky is offering a ‘free’ digital set-top box and minidish to television viewers in Ireland from September 2000. Initial indications are that the offer will be a success. The consumer offer includes a number of services including digital TV viewing, residential and mobile phone services and high-speed (incl ISDN) internet access. In addition, customers from Eircom's mobile subsidiary, Eircell, will have access to Sky Sports content on their WAP phones.

The cost of a standard SkyDigital installation is €80. To benefit from the offer it is necessary to take out a subscription for a year. Subscription packages are as for SkyDigital UK customers. Package prices range from €15 to €60 per month. The cost of high-speed internet access is €160 to install and €58 per month rental.

1.3 Operators and market structure

The main television operators are RTE, TV3 and NTL.

1.3.1 RTÉ

RTÉ currently runs three television stations - RTÉ1, Network 2 and TG4 - together with four radio stations - Radio One, 2FM, Lyric FM and Radio na Gaeltachta. It also maintains a transmission network.

RTE is in a difficult position in the run-up to digitisation. In the last year it :-

- lost the initiative in the development of digital television in Ireland
- failed to win support for a licence-fee increase (currently €105)
- failed to obtain indexation of the licence fee
- lost some of its most important programming to TV3
- lost its head of television

RTE's digital strategy has been disturbed by the long-standing disagreement with the government on valuing the transmission assets. The matter was only resolved in the summer 2000. RTE will own 28 per cent of the new transmission company, while employees who transfer to the new company will get another 5 per cent through an employee share option programme. RTÉ expects to receive in the order of €75M from the sale of its analogue transmission system.

RTE is facing a period of reducing revenues in real terms as the licence fee fails to keep up with the rising cost of content and as market share and advertising revenues are eroded by competition and from the range of channels provided by the multi-channel operators. After a small financial surplus in 1998, RTÉ had an operating deficit of €28M in 1999. The main revenue items were as follows :

RTE Revenues

Licence fees	€107M	33%
Commercial revenue	€220M	67%
Exceptional : sale of Cablelink stake	€205M	

Significant losses are forecast for 2000 and beyond. It seems inevitable that there will be cutbacks at the station. RTE argued that its public service broadcasting remit would be compromised as a result. RTE is in a quandary as to how to respond to the arrival of digital.

The licence fee was not increased. It will receive cash from the sale of its transmitter network to a new company. The Cablelink and Transmission transactions have provided funding which therefore did not fall on the licence payers. However there remains a funding question in the medium to long term.

The arrival of TV3 and its subsequent strengthening through the equity stake and programming from Granada Media has been the immediate cause of RTE's predicament. Some of the most popular prime-time programmes, including ratings-topper Coronation Street (owned by Granada), are no longer available to RTE - damaging even further the advertising potential. Other Granada programming such as Blind Date may erode further the RTE market share. Sports rights are also being bid out of reach – Champions League football having gone to TV3.

RTE is a very strong brand and it can produce high quality content of national interest. For digitisation RTE proposes to launch a regionalised news service ; an education/learning channel and a youth channel. The newly-appointed head of television is also quoted as looking at international strategic alliances.

Finding a definitive role will be a challenge for RTE as more programming that was previously bought by RTE becomes available through the digital networks. TG4 (formerly TNaG) the state-supported Irish-language channel is also seeking help to fulfil its public service broadcasting remit.

In 1999 RTE established the DTT Network Company which arranged €17M financing to start the upgrading the terrestrial network. However, this arrangement was undermined when the government decided to separate the transmission network from the multiplex operation. RTÉ will not receive a share of the multiplex operator.

1.3.2 TV3

TV3 is the only independent television broadcaster and went on air in September 1998 and has made an immediate impact in a market previously monopolised by the state broadcaster. TV3 has built up an audience share of just under 10% of viewers. TV3 revenues have grown by 80% in 1999 and the company expects to become profitable in 2000. Advertising rates have been reduced but the overall size of the commercial market has grown.

TV3 was created by the 45% involvement of CanWest (which also has an 29.9% equity stake in UTV, the Northern Ireland ITV franchise) and latterly by a 45% equity stake from Granada Media (subject to regulatory approval) which owns several UK ITV franchises. It is clear that TV3 would feature prominently in any DTT or digital cable programming line-ups. TV3 expects be awarded at least two digital channels in the DTT spectrum.

TV3 broadcasts over 1,000 hours a year of original indigenous programming, made up of news, current affairs, some light entertainment, and two hours five days a week of Ireland AM, the country's first breakfast television show.

1.3.3 Cable

Cable is well established in Ireland primarily due to the demand for UK terrestrial television channels. NTL had 364,000 subscribers and Irish Multichannel (in which the Independent

News & Media company has a 50 % stake) had 250,000 subscribers at mid-2000. This represents slightly more than half of the 1.2 million Irish telephone-households. Cable penetration in the densely populated urban areas is well over 80%. NTL is focusing on Dublin, Waterford and Galway whereas Irish Multichannel is taking Cork, Limerick and the southern half of the country.

NTL inherited licences to provide analogue services over cable and MMDS in its franchises for 15 years, with exclusive rights for five years. It also has a full service licence which allows it to provide public telephony, Internet and other value-added services throughout Ireland. The penetration rate is 83% of homes passed. NTL achieves 92% of customers subscribing to both telephony and television in its UK franchises.

1.4 Technical issues

The digital cable and terrestrial services are yet to be defined.

1.4.1 Decoder issues

SkyDigital uses the Videoguard conditional access system and the OpenTV API. The interactivity is via Eircom.

RTÉ is involved in a technical investigation to enhance the DTT platform through integrating a wireless return path for interactivity. The WITNESS (Wireless Interactive Terrestrial Systems) project is a European collaborative effort under the DVB umbrella. The idea is to use the same frequency range as for DTT. If successful, this technology would mean that DTT operators would not rely upon third party telephony operators to offer interactive services. Furthermore, it may be possible to use the terrestrial television frequencies for delivering high-bandwidth internet services. There would be a low cost and continuous connection between the consumer and the wireless network provider.

1.4.2 16:9

Apart from SkyDigital and FilmFour there are no 16:9 services in Ireland.

1.4.3 Portable reception

Portable reception remains a unique advantage that DTT would have over the other broadcast delivery systems.

1.5 Conclusions

The development of the market for digital television in Ireland will follow closely that in the UK particularly through the influence of SkyDigital, NTL and Granada/TV3. There have been a number of positive developments which have created a more attractive prospect for digital television:

- Sky has started to actively promote its digital satellite services in Ireland in conjunction with Eircom;
- The cable companies NTL and IMC have been rapidly upgrading their networks and will be launching services in Q4 2000;
- The MMDS operators have gone through mergers and consolidation and have refocused on broadband delivery;
- International media groups such as Granada Media (via TV3), NTL and Liberty Media (via IMC) have committed large investments to the sector;
- The problem of illegal analogue retransmission (the ‘deflector’ problem) has been addressed and appears to be of reducing significance.

On a more negative note:

- Progress towards the introduction of digital terrestrial television has been disappointing. DTT may not launch until the end of 2001;

- There is emerging a potential new problem of incompatibility of the interactive service offerings of the different digital platforms;

- The role of public service television is coming increasingly under strain. RTÉ will need to find subscription funding to supplement the revenues from the licence fee and advertising.

2 Key figures for the Irish market

2.1 Country fundamentals

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Population (millions)	3.40	3.45	3.55	3.63	3.72	3.80	3.88
Households (millions)	1.13	1.12	1.13	1.14	1.14	1.15	1.17
GDP (in Euros billions)		45.4	49.2	55.3	63.8	67.7	nd

2.2 Equipment

As of 31 of December	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
TV households (millions)		1.04	1.05	1.06	1.07	1.08	1.13
TV households (% of total households)		92.9%	93.2%	93.5%	94.1%	94.3%	96.5%
TV Households with 2 TV sets or more (millions)		0.278	0.311	0.382	0.455	0.477	0.532
TV Households with 2 TV sets or more (% of TV Households)		26.7%	29.6%	36.0%	42.4%	44.0%	47.1%
TV Households with 16:9 Television sets (millions)		0.000	0.000	0.001	0.002	0.005	0.02
TV Households with 16:9 Television sets (% of TV Households)		0.0%	0.0%	0.1%	0.2%	0.5%	1.8%
VCR Households (millions)		0.70	0.74	0.77	0.81	0.84	0.91
VCR Households (% of TV Households)		67.6%	70.3%	72.9%	75.3%	77.8%	80.2%
Digital STB Households (millions)		0.000	0.000	0.000	0.000	0.000	0.034
Digital STB Households (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	3.0%
IDTV[1] 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%
Digital Households[2] (millions)		0.000	0.000	0.000	0.000	0.009	0.034
Digital Households (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.8%	3.0%

[1] Integrated Digital TV Set

[2] Sum of Digital STB homes and digital IDTV Households

2.3 Television market estimates

Millions Euros	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Analogue TV Market							
Licence fees		82.700	83.900	91.000	100.300	104.714	107.00
Advertising[3]		97.000	104.000	115.000	124.000	133.920	275.00
Subscription[4]		93.600	119.900	141.300	164.200	181.932	263.00
Total analogue TV		273.300	307.800	347.300	388.500	420.567	645.00
Digital TV Market							
Licence fees		0.000	0.000	0.000	0.000	0.000	0.000
Advertising		0.000	0.000	0.000	0.000	0.000	0.000
Subscription		0.000	0.000	0.000	0.000	0.225	25.00
Total digital TV		0.000	0.000	0.000	0.000	0.225	25.00
TV Market							
Licence fees		82.700	83.900	91.000	100.300	104.714	107.00
Advertising		97.000	104.000	115.000	124.000	133.920	275.00
Subscription		93.600	119.900	141.300	164.200	182.157	288.00
Total TV market.		273.300	307.800	347.300	388.500	420.792	670.00

[3] Including advertising on cable and satellite channels
[4] Subscription to basic cable and pay-TV

2.4 Details of the subscription-TV market

Cable

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Home passed (millions)		0.50	0.51	0.52	0.55	0.59	0.62
of which digital[5] (millions)		0.00	0.00	0.00	0.00	0.00	0.00
Home passed (% of TV households)		48.0%	48.0%	49.0%	51.3%	54.0%	54.9%
of which digital (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Analogue Basic Subscribers (millions)[6]		0.42	0.46	0.47	0.43	0.45	0.49
Digital package subscribers (millions)		0.00	0.00	0.00	0.00	0.00	0.00
Analogue Basic Subscribers (% of TV households)		39.9%	43.7%	44.3%	40.1%	41.5%	43.3%
Digital package subscribers (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Satellite

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Satellite households[7] (millions)		0.068	0.081	0.092	0.104	0.116	0.128
Satellite households (% of TV households)		6.5%	7.7%	8.7%	9.7%	10.7%	11.3%
Satellite subscribers[8] (millions)		0.060	0.075	0.087	0.098	0.110	0.127
Satellite subscribers (% of TV households)		5.8%	7.1%	8.2%	9.1%	10.2%	11.2%
of which digital (millions)		0.000	0.000	0.000	0.000	0.009	0.070
of which digital (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.8%	6.2%

[5] Homes passed with access to digital services
[6] Subscribers to the lower level of service
[7] Households equipped with a dish
[8] Households subscribing to a pay package

MMDS

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Home passed (millions)	0.235	0.250	0.274	0.354	0.380	0.400	0.420
of which digital (millions)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Home passed (% of TV households)	22.6%	23.4%	25.8%	33.1%	35.1%	37.0%	37.2%
of which digital (% of TV households)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Analogue only Basic Subscribers (millions)	0.065	0.078	0.078	0.092	0.102	0.108	0.120
Analogue only Optional services subscribers (millions)	-	-	-	-	-	0.010	0.015
Digital package subscribers (millions)	0	0	0	0	0	0	0
Analogue only Basic Subscribers (% of TV households)	*6.3%*	*7.4%*	*7.3%*	*8.6%*	*9.4%*	*10%*	*10.6*
Analogue only Optional services subscribers (% of TV households)	-	-	-	-	-	*0.9%*	*1.3%*
Digital package subscribers (% of TV households)	*0*	*0*	*0*	*0*	*0*	*0*	*0*