institut
de l'audiovisuel
et des télécommunications
en europe

Development of Digital TV in Europe

Ireland / 1999

January 2000
70052 - 2 -

1 Digital TV market overview

Digital television started in Ireland at the beginning of 1999 with SkyDigital broadcast from the UK. Although Sky faces no competition for digital television, take-up has been limited by the lack of any special marketing deals for Ireland. The government published a Broadcasting Bill in May 1999 and has committed to the launch of digital terrestrial television following its introduction in the UK, including Northern Ireland. The largest cable company, Cablelink, was taken over by NTL in April 1999. NTL is leading the introduction of digital cable in the UK and also owns the franchise for Northern Ireland. NTL intends to upgrade the cable network in preparation for digitisation although there are no immediate plans for a launch of digital services. The small size of the Irish market and the fact that there are four competing delivery systems implies that there is considerable risk in launching digital services for all operators.

1.1 Roll-out of digital services

1.1.1 A new Broadcasting Bill.

The Irish government introduced a Broadcasting Bill in May 1999, the first in Ireland since 1988. The main purpose of the bill is to enable digital television to be licensed and proposing the creation of a new company, Digico, to build and operate the digital terrestrial infrastructure. The Bill is expected to become law by the end of 1999. Services are expected to commence in 2000.

Moreover, the Irish Radio and Television Commission is to be renamed the Broadcasting Commission of Ireland. It will be funded by the Exchequer rather than by the broadcasters. It will be responsible for programming and advertising standards on all new commercial channels. It will also cover any new digital subscription or pay-per-view channels from RTE. Within the Commission, a separate body, the Broadcasting Complaints Commission would be responsible for matters of ‘taste and decency’.

The new Broadcasting Bill also reaffirmed the importance of public broadcasting in Ireland in a society where so many of the services are ‘non-Irish’. However, the issue of funding RTE has not been resolved. The €88 licence fee is not inflation index-linked and the income of RTE is declining in real terms. This places greater pressure on TnaG, the Irish-language service, for which RTE provides at least a third of programming costs. RTE will be required to provide an annual report on how the television licence fee has been expended. This will add to the debate about the definition of ‘public service’ and also the costs of digitisation.

The majority of digital services available in Ireland will either be British or American. In order to promote Irish programming the new Broadcasting Bill requires RTE to provide €20 million per annum to the independent programming sector.

1.1.2 Satellite digital services

Digital satellite services started at the beginning of 1999 when Sky Digital, the UK package, was marketed to Irish consumers. The SkyDigital proposition in Ireland is much less attractive than in the UK due to the absence of a large subsidy on the set-top box and the non-availability of the BBC (See below in the «details of services» section).

Sales of SkyDigital have therefore been limited according to early market reports. The existing analogue satellite subscribers to Sky Multichannels, some 116,000 households (10% of the total) at the end of 1998, will need to find an alternative for when Sky terminates its analogue service at the end of 2002. SkyDigital will be the only digital television service in Ireland until Digico is operational. It is this window of opportunity which Sky is working to develop.

1.1.3 Cable digital services

There are no digital cable services in Ireland. However, there were major developments in 1999. The major Irish cable company, Cablelink, with its customer-base mainly in the Dublin area, was taken over by NTL in April 1999. NTL paid around €745 million, for a company with 360,000 subscribers. This equates to around €2000 per subscriber which is four times the original expectation of the value of the business. It sets a new benchmark for European cable customer valuations, the previous highest having been €1100 in Switzerland. The average annual revenue per subscriber is about €140.

There were five bidders and the final choice involved some controversy with one of the losers, ESAT, taking the matter to court. NTL has admitted that it may have paid a high price given that there appeared to be more investment required to upgrade the Cablelink network than originally expected. It has announced its intention to build a fibre optic network to enable digital services. This will be 750 MHz two-way digital cable network capable of delivering at least 300 TV channels, voice telephony and high-speed internet access.

NTL plans to start its digital upgrade within six months although it has not committed to any start date. Industry sources suggest that the first digital services would be launched in 2000. Cablelink had already committed to introducing digital services by the end of 1999. According to industry sources, a period of five years is required before an upgrade is complete. Estimates of the total cost of upgrading the Cablelink networks in Dublin, Galway and Waterford range between €250M to €375M. A similar sum had already been committed for the development of the network in Northern Ireland, bringing the total infrastructure investment to €750 M. It will be necessary to integrate cable operations in Northern Ireland and the Republic of Ireland. There were 65,000 cable subscribers in the North as of mid 1999.

NTL is strongly placed in respect of digital technology as it is launching a digital cable service in the UK in the autumn of 1999. It has an exclusive licence for cable TV in Northern Ireland and is therefore positioned to provide a pan-Irish network. Its plans include the Sirius project for the construction and upgrading of communications links between the British mainland, at Scotland, and Northern Ireland using SDH (synchronous digital hierarchy) technology.

Using a sophisticated network, digital cable traffic may be routed through UK nodes in servicing customers in Ireland. There is also the opportunity to offer competitive telephony pricing on the high-value Dublin-UK route.

The price of basic cable TV is regulated and is capped for the next five years. This means that extra revenues to recover the digital investments must come from new services such as telephony and internet access. There is also the possibility that digital service providers such as SkyDigital may permit local advertising to be inserted on Irish cable networks. Cablelink holds licences to provide analogue and digital television 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 of Cablelink is 83% of homes passed. NTL achieves 92% of customers subscribing to both telephony and television in its UK franchises with a churn rate of under 15%.

The problem faced by cable in Ireland is the period, up to five years, needed to upgrade networks. By 2005, SkyDigital will have been gaining subscribers since the beginning of 1999 and Digico will have been operational since summer 2000. The pressure is certainly on cable to digitise rapidly.

1.1.4 Situation of MMDS

The prospects for MMDS are looking increasingly limited. The privately-owned MMDS 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.

Following the take-over of Cablelink by NTL, the MMDS operators have been in discussions with NTL about futher rationalisation within the industry. The high prices per subscriber can only be justified through the use of interactive services. It is anticipated that the 100,000 subscribers to MMDS services will shift over to digital terrestrial when that is launched. Cabling the more remote areas of Ireland is not economic.

1.1.5 Situation of terrestrial digital television

The Irish government introduced its Broadcasting Bill in May 1999 and announced its plans for the creation of a digital terrestrial television company, Digico, expected to launch services in the summer of 2000. Investors for Digico are being sought. They must be able to demonstrate commercial expertise as well as financial strength.

RTE, the national broadcaster, would take a shareholding of up to 40% in the venture and would have exclusive rights to the widest coverage multiplex of the six multiplexes identified (See Table A). In exchange for its stake in Digico, the RTE transmission network will be privatised.

Each multiplex would carry between five and six channels. 30 transmitter sites can cover 98% of the country. The cost of building out the digital network is expected to be •50 million shared between RTE and private investors.
Furthermore, RTE estimates that the additional cost of providing three additional channels will be around •20M per annum. RTE's ability to finance this was greatly enhanced when it received •170 million from disposing of its 25% stake in Cablelink to NTL.

The Irish government has not announced any end-date for analogue broadcasting. It is anticipated that the Irish plans will follow closely behind those of the UK.

The introduction of DTT in Ireland can take advantage of the fact that technology costs have decreased since the UK launch. Consequently there is industry speculation that the set-top box may have more processing power storage capacity e.g. so that viewers could record programmes directly.

Table A: Proposed services on Digital Terrestrial Television

Multiplex	Owner	Channels offered
1	RTE	RTE1, Network2, RTE News, RTE Plus Learning
2	TV3/TnaG	TV3, TnaG
3	UK channels	BBC1 NI, BBC2 NI, UTV, C4, C5
A	Undecided	Subscription TV, pay per view, internet and other interactive services
B	Undecided	
C	Undecided	

The composition of Multiplexes A-C is as yet undecided. It is expected that all six multiplexes would be operated by DigiCo (see below).

ONdigital, the UK digital terrestrial package, is not officially available in Ireland although there is some overspill from Northern Ireland and mainland UK. This digital overspill from the UK has emphasised the problem of the ‘community television’ stations. These stations carry additional popular programming around Ireland especially in the South and West of the country. The purpose of these stations is to provide the popular UK channels such as the BBC for those households which could not otherwise receive them. This is an important and even political issue in Ireland since only the more populated east and northern parts of the country receive broadcasts from the UK. The introduction of DTT has marked the end of the period of tolerance for the ‘community television’ stations.

These stations, the self-styled ‘deflectors’, have been issued with temporary licences. There are about 150,000 households which use this method of reception. The fact that the ‘community’ stations do not pay copyright fees and are acting illegally is an embarrassment for the government which has made the granting of a temporary licence conditional on compliance with tax and planning permission regulations and demonstrating that copyright and royalty payments will be made.

1.1.6 Market development

Sky has focused its market development efforts on the UK - the launch of digital satellite in Ireland came three months after that in the UK. As of mid-1999 there are estimated to be around 9,000 Irish subscribers to SkyDigital. The rate of take-up of digital satellite in Ireland has been lower than for the UK because decoders are not subsidised and there are no services customised to Irish requirements. It is expected that the take-up of digital satellite in Ireland will accelerate, particularly with the delay in the digitisation of terrestrial and cable. There is also evidence that the take-up of digital terrestrial TV in Northern Ireland has been slow compared to other parts of the UK. This may be because Irish viewers have on average access to more programming than those in the UK due to the cross-border broadcasting.

The future evolution of digital television in Ireland involves three main players (see Table B): SkyDigital, Digico, and NTL. NTL, having taken over Cablelink, is engaged in take-over discussions with other cable operators in Ireland.

Table B: Digital services in Ireland

Name of the service	Ownership	Date of launch	Nb of subscribers
SkyDigital	BskyB	1st Jan 1999	9000 (est)
Digico	RTE – 40%	July 2000 (est)	-
NTL	NTL	Jan 2000 (est)	-

More generally, positive market developments can be observed :

- ✓ The confidence shown in the Irish market by NTL indicates that it needs to be fully exploited if the investment is to make a return.
- ✓ There has been a follow-on effect, since RTE can use the income it derived from the sale of its share in Cablelink to build up the digital terrestrial business. RTE has no interest in the MMDS networks.
- ✓ BSkyB is expected to permit Irish advertising to target the Irish segment of their service. The Sky One channel has a 3% audience share.

1.1.7 Barriers to competition or market development

The Irish market is perhaps the most competitive in Europe. There are four delivery platforms – each of which is going digital. There is a real danger that the Irish television reception market will become very fragmented. It is clear that if any platform delays then it will have little chance of catching up with the competition, which will be well-established in this small market.

There are three main potential barriers to the further development of the Irish market – the community 'deflector' stations , the status of public service broadcasting and the non-availability of Irish TV stations on satellite for broadcasting rights reasons….

- ✓ The spontaneous 'community' stations which take up UHF bandwidth contrary to local frequency planning. Unless these are closed down then the implementation of digital terrestrial television, which uses the same frequencies, will be limited. This may present some political difficulties since viewers would have to go from free TV to payTV in order to watch the same range of programming. Irish Multichannel, the MMDS operator, has increased the pressure by taking legal action against the state.
- ✓ There is a concern whether RTE can continue in the medium term to receive not only advertising revenues but also the licence fee revenues. It becomes more difficult for RTE to defend itself against charges of subsidy when there are other new advertising-supported broadcasters on digital. The Irish are looking closely at the European discussion regarding the funding of public service broadcasting, in the context of Protocol 32 of the Amsterdam Treaty.
- ✓ Irish broadcasters have not made their services available on satellite. One of the main reasons for this is that they do not have the satellite broadcasting rights for many of the programmes which are from the UK e.g. RTE carries Coronation Street which Granada does not permit to be carried on satellite. Coronation Street can be received in Ireland both from RTE and also, in the 60% of the country which can receive it, from UTV – Ulster Television, the ITV franchise in Northern Ireland, which is part of the UK. UTV has from time to time threatened recourse to legal action to enforce its exclusive rights to programmes. On the other hand, a major proportion of UTV's revenue derives from the south – so there is a delicate balance on cross-border broadcasting

1.2 Details of services

It is premature to define the digital services that will be available. However, it is clear that SkyDigital has set a high standard to follow in terms of the size of the offer, with over 50 channels of thematic channels.

1.2.1 Number and type of services

The SkyDigital service has been described in the UK report. The details of the services to be offered by Digico and NTL have not yet been determined.

It may be worth mentioning anyway that there is one Irish channel on SkyDigital, Tara, which is a compilation of Irish programming, largely fed by RTE, targeted at the large Irish community in the UK. 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. There is market support in the UK for extending the coverage of Tara amongst local cable. There is seen to be a need to improve Anglo-Irish understanding and to counteract the lack of Irish programming in the UK.

1.2.2 Details of the DTV offers

It is likely that the shape of the Irish digital TV offers will follow very closely that for the UK. Already the pattern has been set with SkyDigital. The SkyDigital proposition in Ireland is however much less attractive than in the UK. Whereas in the UK new subscribers only need to pay an installation fee of €64, in Ireland there is no subsidy on the Digibox which therefore was fully priced at €760. This is because Open, the interactive service from British Interactive Broadcasting, is not available in Ireland. However, to stimulate sales, Sky brought down the price of the Digibox to €400 in June 1999. There is no requirement for Irish subscribers to connect their phone to the Digibox thus limiting the oppportunities for interactive services. Furthermore, subscribers in Ireland do not benefit from the BBC digital services which are disabled from the smartcard.

The offering from Digico is likely to comprise a free basic tier with progressively more expensive tiers above including pan-Irish and British channels.

The rights to the most popular sporting events are currently with RTE. However, the arrival of a new, Canadian funded broadcaster, TV3 in September 1998 is introducing competition to the Irish market and there is no guarantee that the sports programming currently carried by RTE will remain part of its schedules. Soccer remains the most popular sport in Ireland – with international matches pulling the largest audiences. The regular interest is mainly in English football clubs especially Manchester United, Liverpool and Arsenal where large Irish communities live. The broadcasting rights for these Premier League teams reside with BskyB.

1.3 Operators and market structure

The payTV market in Ireland is dominated by BSkyB. At the end of 1998 there were 576,000 subscribers to BSkyB services in Ireland, including all delivery systems. On the TV edition market segment, the basic services offered by cable and MMDS have however led to European channels such as Euronews (1.1MTVhh) and Eurosport (0.64MTVhh) becoming two of the most widely receivable services in Ireland.

In the second part of 1999 it is expected that negotiations will take place between Digico and NTL, the new digital platform providers, and Sky which controls some of the most popular programming. It is possible that there will be little interoperability between digital satellite and digital terrestrial. This potential problem arises because the main satellite system is controlled from another country.

The proposals contained in the Broadcasting Bill 1999 will reduce the amount of vertical integration in Ireland. RTE would lose its transmitter network in exchange for a stake in Digico. Satellite has never had the level of penetration in Ireland which the UK could achieve. The ability to receive content from both RTE and the BBC has determined which platforms are able to thrive. Since these are public service broadcasters, it has not been necessary to commit to a particular delivery system.

The emergence of the Canadian company CanWest as a 29.9% investor in UTV in Northern Ireland and as the principal shareholder in TV3 in the Republic is also a significant development. CanWest will have some influence over the speed of digitisation in both parts of Ireland e.g. through the participation of UTV and TV3 in DigiCo.

1.4 Technical issues

The digital cable and terrestrial services are yet to be defined. This implies that no technical problems have been identified which affect the interoperability of receivers.

1.4.1 Decoder- issues

The Digico venture is looking at the possibility of using a wireless return path using SFDMA technology. RTE has been working on an EU funded project along with CCETT from France which has developed the technology known as WINDS (Wireless Interactive Network for Digital Services). The receiver includes a low-power transmitter sending data signals back to Digico's masts up to 30 km away from an existing rooftop or even set-top aerial. Using GSM-type technology, the spectrum is split into numerous narrow channels and the receiver-transmitters search for a clear return path, using a TCP/IP internet protocol.

It is reported that Digico plans to launch with a receiver that houses a 25Gb hard disk. This will let the viewer store up to 10 movies for later viewing. However, this remains a matter of speculation.

These features will distinguish the terrestrial set-top box from the satellite digibox. It is therefore possible that there will be little interoperability between the two services, although this is to be confirmed. SkyDigital uses the Videoguard conditional access system and the OpenTV API.

1.4.2 Widescreen (16:9)

Apart from SkyDigital and FilmFour there are no 16:9 services in Ireland. RTE no longer broadcasts in PAL+, the widescreen analogue format. Instead it is focusing on digital widescreen production.

1.4.3 Portable reception

Portable reception was not initially an issue in the promotion of digital terrestrial reception. Indeed the reverse was true. Early plans to specify a set-top box with a large amount of storage and a return path suggested that portable usage would not be a priority.

1.5 Conclusion

Digital services were received in Ireland from the beginning of 1999 with the marketing of SkyDigital. SkyDigital may struggle to improve the market share (10%) enjoyed by satellite :

- ✓ It does not offer the same level of set-top box subsidy as in the UK.
- ✓ Households will require to subscribe to Digico or the cable platform in order to receive the BBC and UTV (Ulster TV) as these British channels are not available on satellite for audiovisual rights reasons. Furthermore, since these other platforms are digitising they will soon be able to offer the key Sky programming.

Specific findings include:

- ✓ Digital terrestrial and digital cable services will be launched during 2000. These are likely to include value-added packages such as telephony, interactivity and internet access.
- ✓ The development of the market for digital television in Ireland will follow closely that in the UK.
- ✓ Although there will be more non-Irish programming available in Ireland, there will also be more Irish programming available in the UK, and on the Astra footprint. This is apparent with the success of Tara TV in the UK.
- ✓ The market share of MMDS is likely to decline as the operators participate in Digico, the digital terrestrial platform, or else merge with NTL, the cable company.
  RTE will need to find subscription funding to supplement the revenues from the licence fee and advertising. The role of public service television is coming increasingly under strain.

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	
Households (millions)	1.13	1.12	1.13	1.14	1.4	1.5	
GDP (in Euros billions)		45.4	49.2	55.3	63.8	67.7	

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	
TV households (% of total households)		92.9%	93.2%	93.5%	94.1%	94.3%	
TV Households with 2 TV sets or more (millions)		0.278	0.311	0.382	0.455	0.477	
TV Households with 2 TV sets or more (% of TV Households)		26.7%	29.6%	36.0%	42.4%	44.0%	
TV Households with 16:9 Television sets (millions)		0.000	0.000	0.001	0.002	0.005	
TV Households with 16:9 Television sets (% of TV Households)		0.0%	0.0%	0.1%	0.2%	0.5%	
VCR Households (millions)		0.70	0.74	0.77	0.81	0.84	
VCR Households (% of TV Households)		67.6%	70.3%	72.9%	75.3%	77.8%	
Digital STB Households (millions)		0.000	0.000	0.000	0.000	0.000	
Digital STB Households (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	
IDTV[1] Households (millions)		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%	
Digital Households[2] (millions)		0.000	0.000	0.000	0.000	0.009	
Digital Households (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.8%	

[1] Integrated Digital TV Set

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

2.3 Access to DTV

Cable

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Home passed (millions)		0.50	0.51	0.52	0.55	0.59	
of which digital[3] (millions)		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%	
of which digital (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	
Analogue Basic Subscribers (millions)[4]		0.42	0.46	0.47	0.43	0.45	
Digital package subscribers (millions)		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%	
Digital package subscribers (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	

Satellite

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Satellite households[5] (millions)		0.068	0.081	0.092	0.104	0.116	
Satellite households (% of TV households)		6.5%	7.7%	8.7%	9.7%	10.7%	
Satellite subscribers[6] (millions)		0.060	0.075	0.087	0.098	0.110	
Satellite subscribers (% of TV households)		5.8%	7.1%	8.2%	9.1%	10.2%	
of which digital (millions)		0.000	0.000	0.000	0.000	0.009	
of which digital (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.8%	

[3] Homes passed with access to digital services

[4] Subscribers to the lower level of service

[5] Households equipped with a dish

[6] Households subscribing to a pay package

Terrestrial TV

	1993	1994	1995	1996	1997	1998	1999
Analogue Pay-TV services							
Pay-TV subscribers (millions)		0.00	0.00	0.00	0.00	0.00	
Pay-TV subscribers (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	
Digital TV services							
Homes covered (millions)		0.00	0.00	0.00	0.00	0.00	
Homes covered (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	
IDTV households (millions)		0.00	0.00	0.00	0.00	0.00	
IDTV households (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	
Pay-TV households (millions)		0.00	0.00	0.00	0.00	0.00	
Pay-TV households (% of TV households)		0.0%	0.0%	0.0%	0.0%	0.0%	

MMDS

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

2.4 Television market estimates*

Millions Euros	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Analogue TV Market							
Public funding		82.700	83.900	91.000	100.300	104.714	
Advertising[7]		97.000	104.000	115.000	124.000	133.920	
Subscription[8]		93.600	119.900	141.300	164.200	181.932	
Total analogue TV		273.300	307.800	347.300	388.500	420.567	
Digital TV Market							
Public funding		0.000	0.000	0.000	0.000	0.000	
Advertising		0.000	0.000	0.000	0.000	0.000	
Subscription		0.000	0.000	0.000	0.000	0.225	
Total digital TV		0.000	0.000	0.000	0.000	0.225	
TV Market							
Public funding		82.700	83.900	91.000	100.300	104.714	
Advertising		97.000	104.000	115.000	124.000	133.920	
Subscription		93.600	119.900	141.300	164.200	182.157	
Total TV market.		273.300	307.800	347.300	388.500	420.792	

** "**Public funding**" comprise grants and licence fees; "**Advertising**" also includes sponsoring expenditures whereas "**Subscriptions**" cover subscriptions to the basic multi-channel package as well as subscriptions to Premium pay-TV services.*

[7] Including advertising on cable and satellite channels

[8] Subscription to basic cable and pay-TV