DIGITAL TELEVISION IN **IRELAND:** LOCAL FORCES IN A **GLOBAL CONTEXT**

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Abstract

It is becoming clear that as digital television is rolled out across Europe, it is now in a "shake-out" phase where some institutional actors fail and others consolidate their activities. Digital Terrestrial Television (DTT), hailed a few years ago as the platform most likely to succeed because of its universal reach and its low cost to both signal distributors and viewers, is now suffering severe reversals in many parts of Europe. This paper explores the reasons for this in one part of Europe, where DTT didn't even get to the point of being launched, despite the fact that intense planning took place over several years, involving both the public service broadcaster RTE and the Government. Political inertia, long delays and the collapse of global investor confidence in new media combined to freeze out the development of DTT and open the way for global operators to launch both cable and satellite platforms and seize new opportunities in a wide-open Irish market. The lesson for other parts of Europe is how easily democratic control of a major new communication technology can slip away, despite the best intentions of planners at the highest level, and how global forces, responding only to market imperatives, slip in to fill the void when national planning collapses. A case study approach demonstrates the detail of how the efficacy of national sovereignty in communication policy is eroded in an environment that is increasingly globalised.

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Introduction

When digital compression technology emerged in its perfected form out of the electronics laboratories of universities and large companies ten years ago, it was a technology in search of a purpose. The public was unaware of it and there was no consumer demand for any of the services it might provide. The story of digital television today is largely the story of who gains advantage by controlling terrestrial, cable or satellite platforms and how consumers will be persuaded to part with their money for a new kind of communication and entertainment that will be available on more channels and will have some form of interactive capability. Six years on from the launch of the first digital television services, major questions still remain. How attractive are at the new uses of digital technology being developed every month by electronics laboratories? How many of us are interested in them to the extent of paying for them? Will the future be driven by consumer use as planned by global media corporations or by surprise uses generated unexpectedly by the early adopters, like the SMS "texting" phenomenon in mobile telephony that no one could foresee? Will service providers be able to survive the awesome competitive forces that are being unleashed in this period of corporate shake out and consolidation and will they be able to develop a business model which allows the benefits of digital technology to be provided on a near universal basis?

Four years ago, the promise of digital television was huge and much of the early excitement centred around Digital Terrestrial Television (DTT). The British Government published a White Paper, then new legislation, allowing the most affordable distribution platform with the potentially widest reach in the population, to take off quickly. This was digital terrestrial television (DTT). Michael Green, Chairman of Carlton, declared that "every single television household will be watching DTT at some point in the future. It's only a question of time." Today, like the dotcom hype, the huge optimism about DTT has collapsed. Headlines in respectable broadsheets announce the end of digital television. On the same weekend in March 2002, Kirch in Germany was in freefall towards bankruptcy, ITV Digital was placed in administration by its owners Carlton and Granada, and the cable giant NTL was heading for receivership under the weight of its massive debts. Misjudging the cost of content and the rate of subscriber growth has devastated ITV Digital, as the value of many television companies across Europe started to fall sharply in a process that is now turning into a massive shake out, fuelled by fierce competition and the strains of carrying expensive debt. The demand for Hollywood product on premium channels remains very slow and there is no sign of profits from television for hopeful football clubs. Kirch's demise, as a conglomerate controlling newspapers, film production, cable and broadcasting, was the larger corporate collapse in German post-war history.

In the last few years, heavy expenditure on content (mostly Hollywood films and football) was gambled in order to lure new subscribers. In Italy, Murdoch's Stream channel and Vivendi's Telepiù competed furiously on this basis. It is now likely that pressure from bankers will force them to merge. ITV Digital invested almost one billion pound sterling in its service but attracted only 1.2 million subscribers out of 24 million households. Kirch had failed to lift its subscriber base over 2.4 million subscribers. The mistakes (as well as the high stakes) in recent digital television strategies are acutely captured in one telling transaction: ITV Dig-

ital, having paid 350 million pounds sterling for Lower Division football rights, found itself paying £1.2 million for a Nottingham Forest versus Bradford City match which attracted a total of 1,000 viewers.

The collapse of DTT in Britain, with millions of pounds owed to football clubs, is a blow to UK ambition to be the first fully digital television nation by 2010. The British Government had hoped that 80% of the population would have switched to digital television before then and the remaining "analogue refuseniks" (as the Murdoch tabloids call them) would be pushed into digital television by an impending analogue switch-off date. This would then allow the government to raise large sums of money in "spectrum farming," as the wasteful use of the electromagnetic spectrum would yield to its more efficient use to provide new generation telephony services.

So, who gains from the present failure of DTT? This paper takes a detailed historical look at how digital television policy was shaped in one country — Ireland — so that we can better understand the forces at play, both local and global, in the initial stages of the development of a major new communication technology. The two chief protagonists in this case are Government and the public service broadcaster RTE (Radio Teilefis Eireann) which took the lead role in establishing a digital policy in the mid-1990s. In effect, this attempt at policy-making is now in disarray and market forces are presently the primary drivers in the rollout of digital television. In summary, the Government rejected RTE's plan for DTT in 1999 and imposed its own: RTE was required to sell 72 % of its transmission system and it would be excluded from the business of marketing and managing a DTT service. RTE's argument for a "unitary model," where both the transmission and the multiplex operations would remain in a single company that would attract private investors into partnership with the public broadcaster, was set aside, after successful lobbying from the private broadcasting sector. Now, there is little interest among investors in buying RTE's transmission network and only a single bidder for the multiplex operation licence who, unable to attract the investors he needed, has already withdrawn. The Government's decision in effect put DTT on the back foot and opened the way for two rival platforms, both of them controlled by multinational media conglomerates: cable and satellite.

A great deal of press discussion of digital television assumes that the larger countries in Europe will drive the agenda for all the others. This may not always be the case and it is worthwhile to examine the different regions of Europe separately to see how the global dynamic in digital television is bedding in with local political and economic interests. This paper examines the debate about digital television that took place in Ireland between 1995 and 2000, most of it behind firmly closed doors in the Boardroom in RTE, the Cabinet Room in Government Buildings and the Ministry in change of broadcasting. This debate illustrates how local policy issues in a small corner of the European Union reverberate with concerns about how the challenges presented by digital technology assume the dimensions of "influence at a distance" at the heart of globalisation theory (Giddens 1990; Harvey 1989; Hirst and Thomson 1996; Robertson 1992).

The Beginnings

The first formal consideration of digital television and its implications for RTE took place in November 1995, in response to a management document which ex-

panded on RTE's response to the Green Paper on Broadcasting, published earlier that year: "The impact of Digital Technology on the Transmission of Television Services" (RTE 1995). This focused on digital terrestrial television (DTT), comparing it with cable, MMDS and the satellite technologies to determine where the thrust of a public service interest should be aimed. Each platform has a different configuration of advantages and disadvantages in respect of technical capabilities, number of channels delivered, interactive potential via a "return path," affordability, subscriber management system and crucially, ownership and control. Unlike the earlier debate about the establishment of analogue television in Ireland, which took place in the 1950s (Savage 1996), the debate about digital television originated in and was profoundly shaped by RTE, as the first and main mover of new ideas regarding the future of broadcasting, without any contribution from politicians or Government departments until near its denouement. But like the debate in the 1950s, this one was driven by the belief that doing nothing about developments in television technology would lead to Ireland being colonised by British television interests because of the accessibility of Irish audiences to signals originating north of the Border or from transmitters across the Irish Sea in Wales. Interest in UK television services gave some impetus to the development of significant investment in cable in Ireland in the 1960s and 1970s and it was likely the same could happen with digital television.

RTE's first communication with the Government on digital television, its response to the Green Paper on Broadcasting published in 1995, highlighted the national interest and the danger of leaving this whole field of cultural and economic activity to international market forces alone. The government was urged to outline at an early stage its position on the introduction of digital broadcasting services and the new regulatory arrangements that would be needed. This document also highlighted the need for appropriate alliances, if RTE was to meet the challenge of new production and transmission opportunities. Senior staff in RTE throughout 1996 were visiting British broadcasters to establish contact with the principal players there. It was beginning to emerge early in 1997 that a strategic alliance with a commercial partner would be needed, to develop the digital transmission infrastructure and also to ensure that links with broadcasters in Northern Ireland should be considered, with a view to providing an all-island transmission system that would guarantee universal availability to all parts of Ireland. Major questions for RTE itself were beginning to arise, including the investment needed, the impact on advertising revenue of universal multichannel reception, audience fragmentation and the cost of providing new services. Major decisions would also have to be made regarding the cable company Cablelink, jointly owned by RTE and the (not yet privatised) telecommunications company Telecom Eireann, as it moved towards digital television. Should RTE sell its share or think of investing in a capital investment programme to enhance the cable infrastructure and bring it to digital capability? The BBC had decided to spend two thirds of the 150 million pounds it received from the sale of its transmission system to NTL to fund its new digital services. Since digital television would run in parallel with analogue services as an extra cost with no immediate revenue, it was emerging as an imperative for all broadcasters to plan to induce audiences to switch from one to the other in as short a space of time as possible.

It was envisaged in 1997 that RTE would have majority control of any new structure, which would reflect its historical and current position in providing the transmission backbone in Irish broadcasting. Requesting a once-off capital grant from the government might be sufficient to kick-start the conversion of the transmission system to digital capability, but in the balance of opinion in RTE at that stage, it was more realistic to expect the Government to require RTE to bring in a partner who would supply the necessary capital. An astute reading of the ethos of the centre-right government then in power was that RTE would never be given total ownership of the digital system. This would be either completely in the private sector or placed in the ownership of a public-private partnership of RTE along with other interests.

The first major plans for digital television was submitted to the Government by RTE in October 1997 (RTE 1997), urging swift government action to the light of British plans to upgrade the Northern Ireland transmission system to DTT operations by the end of 1999. It suggested Government policy should embody some key principles: universal access for all households; reception throughout Ireland of all television services originating on the island; early introduction of digital services; national regulation of digital broadcasting; maximisation of Irish content; a competitive market for delivery systems; better use of existing assets (spectrum, transmission infrastructure, reception antennae); compatible standards throughout the island of Ireland. First estimates put the cost of the DTT transmission system at £35 - 40 million, which might be as little as 1/10 the cost of a cable or MMDS system. RTE would need to spend a further 35 million pounds to fully digitise production operations.

This key document is very tightly framed within a discourse of "the nation." This is true of many RTE policy documents and indeed most internal debates in RTE in this period. The introduction of digital television is seen as a defining moment in the development of mass communication in the country, as the new digital delivery systems of cable, satellite, terrestrial and telecommunications networks begin to alter fundamentally the public's access to new ICTs. A coherent national strategy is advocated, so that Ireland can have a viable long-term presence in the broadcasting and multimedia industries, with a digital agenda that avoids control by multinational interests situated outside the state, with all the subsequent loss of strategic control that this implies: introduction of dependencies on foreign content and likely damage to indigenous audio-visual industries. The emphasis in this discourse is on ensuring that the new technology will carry Irish content and that the public interest will have a controlling influence on media performance.

The DTT Decision

After much research and consultation with broadcasters elsewhere, RTE was opting very firmly for DTT. There were both economic and technological reasons for this. DTT is the most economic means of delivering digital signals to everyone, since it builds on existing transmission networks and achieves penetration levels closely matching existing analogue patterns of reception. It achieves very high population coverage for a relatively small investment, so using the "legacy network" as a primary delivery system meets universal service obligations in a cost-effective way.

Satellite transmissions, on the other hand, cannot effectively serve viewers in urban apartment buildings because of zoning restrictions on dishes or lack of "line of sight" to enable receiver dishes to "see" the satellite arc on the equator from north-facing buildings or where shadows from other buildings intervene. Direct TV in the US reported that only 60% of TV homes could get line of sight to its satellite orbital position because of "urban clutter" and UK estimates put a theoretical upper limit on satellite access at 70%. The active, electronically amplified antennae for satellite leads to higher costs than passive DTT receivers, as they require maintenance periodically.

Could hybrid cable/MMDS systems achieve the goal of a universal service obligation? Cable penetration has now reached saturation penetration level of 50 % of Irish homes and this situation is not likely to change with the introduction of digital television, since additional capital and operating costs will be needed to upgrade from analogue services before any attempt can be made to reach new subscribers where homes are not already passed by cable. In rural areas, cable is obviously an uneconomic option because of large distances between homes creating diseconomies of density. And MMDS "fill in" would require a much better network of transmitter sites at high cost to compete with the universal coverage potential provided by the terrestrial network that requires far fewer transmitters. MMDS has a further economic limitation, in that it is restricted by hilly terrain, dense foliage and high-rise buildings, as Bell Atlantic was discovering in northeastern US. In Europe generally and particularly in the UK, the consensus was emerging in 1997 that DTT was the preferred platform for discharging the universal service obligation of public service broadcasters, because it benefited from intensive transmission re-use and did not require expensive cable upgrading.

RTE originally envisaged that a Broadcasting Act would be passed in 1998, which would allow for a search for a strategic partnership to be completed and DTT to be launched by September 1999. But the Broadcasting Act wasn't passed for another three years. Whence the delay? The possibility was raised in 1997 that different Irish broadcasting interests pulling in different directions would create a scenario where policy-making fails to promote an effective and timely framework for the implementation of digital television service. From a contemporary perspective, it is worth revisiting those 1997 predictions of what would happen if no government action were taken.

Firstly, Ireland would suffer a loss of sovereignty in the management of spectrum usage and the creation of media policy, because of the imminent rollout of digital satellite and DTT services in Britain and Northern Ireland. BSkyB was ready to launch its digital satellite service and the BBC, not yet in agreement with BSkyB, planned to offer on the same Astra 2A satellite a range of current free-to-air services, new digital free-to-air services and a number of subscription services in partnership with Flextech. Both Sky and British Digital Broadcasting were free to market themselves in the Republic of Ireland, as they held all pan-television rights for both the UK and Ireland. Divis transmitter near Belfast was about to become the first DTT station on the island of Ireland, with extensive over-spill into the Republic of Ireland. In the absence of an Irish digital television service, Irish viewers would purchase equipment to receive the British DTT and digital satellite services, accepting de facto both Electronic Programme Guide and Conditional Access stand-

ards established in Britain to facilitate British channels. Commercial pressures on British broadcasters would lead to an increase in the power of their DTT transmissions, in order to serve their target markets better, with the effect of considerably extending the over-spill into the Republic. The West and South of Ireland would be digitally disenfranchised, being out of reach of over-spill, and a "digital deflector" problem would be likely to emerge, with all the political problems that attended Government attempts to shut down illegal analogue deflector operators in the mid-1990s in order to recover spectrum for other uses. All the British broadcasters would be likely to set up subsidiary companies in Ireland to market their wares and collect subscription revenues from DTT over-spill and digital satellite, thus taking more of the media budget out of Ireland, with subsequent damage to the whole Irish film and television production sector.

Secondly, the Government's ambitious plan to exploit the benefits of the Information Society depended on its ability to accelerate the convergence of television and interactive services delivered via the Internet. New telecommunications systems, including GSM, UMTS and ADSL, were being developed so that interactive broadband services could be delivered to mobile hand-held devices and through the "local loop " to homes and offices. But none of this technology had the ability to reach 95% of the population in a short space of time. DTT could do this and thus extend the Internet potentially to the whole population once analogue TV became a thing of the past. Several West European countries were rapidly developing policies and regulatory framework for DTT for these very reasons, including the US, UK, Sweden, Denmark, Norway, Finland, Germany, Spain, Australia, New Zealand, Canada and Japan.

Financing the Vision

The RTE proposal in 1997 was that a National Broadcasting Commission should be established to regulate the new system and deal with issues of pluralism and media ownership, licensing conditions for new broadcasters, ensuring competition policy and monitoring content to safeguard broadcasting standards and program diversity. Creating a competitive market in digital delivery systems would bring a number of strategic benefits to Ireland, including faster rollout of infrastructure, a wider choice of services and (perhaps) lower consumer prices. This would also be in line with European Commission policy. Competition Policy Directorate DG 4 had already vetoed a number of digital television platform proposals that would have created national monopolies or damaged the development of competing digital infrastructures, in Germany Scandinavia and Spain. The regulator would also, of course, deal with technological issues, including the building of a common technology area with the UK. Economies of scale and scope in production of television receivers could be achieved and benefits of large-volume UK receiver price reductions could be passed through to Ireland. Roll-out in Ireland would be accelerated through early delivery of transmitters and related equipment. Interoperability with Northern Ireland would be easier, as would access to UK audiences of Irish originated services.

In the light of later public debates and acrimony over the question of why RTE wasn't established in the Broadcasting Act (2001) as the sole operator of the DTT system, it is interesting to note that as early as 1997, RTE recognised that it was

unlikely that public finances would be made available to fund what would probably become a viable commercial business and that RTE would not be able to finance in any realistic timeframe the entire digital supply chain directly from its current revenue sources. After all, it would also need funding to upgrade its production infrastructure and to generate new programming. So it suggested that what was becoming a dominant trend in other parts of Europe should be adopted in Ireland too — an alliance with other interests which would bring in funding and new expertise, thus sharing risk and reducing the requirement for public money. The RTE transmission system was already a common carrier for other television and radio services, so this model could be extended quite easily to facilitate all licensed DTT services, with the service charges determined by an independent regulator, thus reducing competition policy problems. Because of Ireland's small size, in terms of television households, GDP/capita, and the penetration of VCR, cable and satellite, models evolving in Scandinavia, especially Finland, were closely observed. YLE, the public service broadcaster in Finland, owned the network for all commercial and public radio and television transmission. In the middle of 1996, the Ministry of Communication asked YLE to establish a separate transmission company to operate at arm length from YLE, and also a separate company for DTT multiplex transmission. Ownership of this multiplex company would include YLE and the commercial companies TV 3 and Channel 4, and it would use the existing YLE network to roll out DTT. These developments at YLE were being closely studied in RTE.

The RTE plan argued that important economies of scale could be achieved in a small country by integrating subscriber management, viewer navigation systems, multiplex operations and the transmission function in a unitary operation. This single business entity would also be more likely to roll out the service more effectively than a separate set of operators at each point in the value chain. Strategic partners in this DTT company — DIGICO — might include telecommunications operators, or other transmission companies, pay-TV operators and investment institutions as equity partners. RTE would retain the largest shareholding in the new entity, which would market and operate six multiplexes, including the Conditional Access System needed for pay-TV services, the EPG and the subscription management system, though some of these functions could be sub-contracted to third parties, as was happening in the US and UK. DIGICO would be regulated by a National Broadcasting Commission, within the framework of Irish and EU competition law, to ensure fairness in relationships with all service providers. RTE could make a contribution in kind to marketing the take-up of digital television through use of its airtime on the existing analogue channels. Assuming a launch of DTT in September 1999, the Millennium celebrations would create considerable national interest in the benefits of wide-screen digital television.

Range of Interests

It was difficult to enthuse senior civil servants about digital television and convince senior politicians that now was the time to move, wisely but quickly, on building this part of the Information Society vision. It was as if the vision embedded in the international jargon of proposal documents and commissioned reports, was itself paralysing rather than energising. When actual decisions were needed, the

apparatus of Government froze. This was partly due to the lack of expertise in Government departments in new challenges such as digital television and the increasing tendency to reach for the Yellow Pages and call the local branch of one of the international consultancy groups. But it was also due to the slow recovery in the Civil Service from the regime of the previous Government, where the emphasis had been on protecting the core values of public service broadcasting at European level and intensifying supervision of RTE at home via a new regulator, rather than getting fixed on the challenge posed by digital compression and convergence technologies.

A report commissioned by RTE from BDO Simpson Xavier (1998) confirmed the costings put forward by RTE and placed a valuation on its transmission network in the event of a possible sale of its assets. The business plan it developed assumed RTE would sell the existing network to a new joint venture company — DIGICO — comprised of RTE and other investors and then pay this company an annual fee for the analogue and digital transmission of its services while the period of simulcasting lasted. The proposed transaction structure would allow RTE to convert assets, which have a diminishing value, into a significant equity interest in this new entity without any conditional cash requirement. DIGICO would acquire a working network and be able to defray the start-up operating deficits of the digital operation with positive cash flow generated by the analogue distribution fees. If the assumptions of the projected financial performance were valid and if the projections were achieved, RTE would participate in the success of a potentially very profitable company. As the BDO report put, "DIGICO represents the marriage of the highest market share content provider in the Irish market and the largest concentration of technical expertise in DTT in Ireland, with private investment capital" (BDO Simpson Xavier 1998).

The BDO analysis supported the RTE argument that DTT has a competitive advantage due to a low capital cost for distribution in comparison to satellite and cable. This cost advantage would be passed through to viewers, enabling DIGICO to offer them a more competitively priced service, both in areas not currently served by existing subscription services (because not economically viable for alternative means of delivery) and in markets currently having access to subscription services. DTT would offer lower infrastructure capital costs and wider market coverage than is economically feasible for cable (though not satellite). It would offer less interactivity capacity than cable but perhaps more than satellite, assuming the wireless return path for DTT over a large customer base can be successfully deployed. (One system in development is the EU-funded Wireless Return Channel System, using Synchronous Frequency Division Multiple Access technology.)

The dominant Government interest in digital technology is the desire to realise the full value of the spectrum, replacing inefficient analogue television spectrum consumption with more efficient digital distribution. The Irish Government was slow, however, to develop this interest in the late 1990s. The dominant consumer interest is in increased choice of television channels and in reaping the rewards of the convergence of the Internet with digital television. This interest was beginning to grow in the popular press in Ireland at this time. The dominant commercial interest is driven by opportunities created by the interactivity of digital delivery in such areas as product marketing and Internet services. The dominant external pres-

sure, apart from terrestrial over-spill from UK transmitters into some parts of Ireland, was coming from the market entry of dominant satellite distributors such as BSkyB, which can increase the geographic size of their markets with very little additional capital expenditure. Not only would a foreign "gate-keeper" have a large degree of control over what people watch, by controlling the selection of channels carried, but if the dominant platform is a foreign operation, a significant amount of economic activity will also transfer overseas.

One of the key contributions of the BDO report was in calculating a range of value for the RTE network and therefore the purchase price in the event of RTE separating its distribution function from its existing organisation, as the BBC had done, and then outsourcing its transmission to a new entity in which it would be a stakeholder. This would allow RTE to convert a cost centre into a profit centre, increase the residual value of RTE assets and achieve a higher rate of return for DIGICO than if it were to pursue digital distribution independently, with a separate digital television network in which RTE would have no equity interest, paying an annual fee to access its own sites. If most of the elements of the BDO business plan held up, the creation of DIGICO as a new economically viable entity would secure the development of a national platform for Irish broadcasting in the digital age, provide a new domestic alternative to foreign competition and retain some control over the future economic potential of interactive marketing in what would be called "e-commerce" a few years later.

Challenging the Unitary Model

While the BDO report was in preparation, the Office of the Director of Telecommunications Regulation was also commissioning a report on the economic, spectrum management and other technical implications of DTT, from London-based consultants National Economic Research Associates and Smith System Engineering Ltd (Nera/Smith 1998). This report raised the question of whether the small Irish market is likely to support all digital media platforms and if not, whether DTT or a digital MMDS will be used to provide universal coverage in rural areas (assuming the cable sector will be a cornerstone in future competition for telephony and interactive services in urban areas). Competition from digital satellite will exist in any future scenario, driven as it is by UK market forces, but, the report suggests, it is unlikely to carry Irish national broadcasting services. (This prediction would prove to be the most unsound of all the forecasts generated in this period, when RTE radio and television services began to be offered on the Sky system in 2002.) The Nera/Smith report went on to warn that delaying the launch of DTT beyond the expected date of 2000 would dampen its prospects seriously, making its financial performance deteriorate as the other transmission systems established an early lead in the battle for digital subscribers. DTT would lose around 50,000 subscribers by delaying its launch to 2002 and 100,000 subscribers by delaying until 2004, shifting its break-even point back to 2010.

The major new element introduced into the Irish digital debate at this period is the recommendation from Nera Smith that there should be a separation of the transmission and the multiplex operator functions for DTT. No rationale is provided for this, especially one to match the very small broadcasting market in Ireland, beyond mentioning the potential for discrimination against other broadcasters exercised by an RTE-controlled company for its own advantage, though the report admits this problem could be controlled a regulator. As the RTE (1998) response pointed out, Nera Smith actually seemed to confuse the separation of functions here with a very different separation of functions between transmission and broadcaster already implemented in the UK, Australia and New Zealand. But this intervention is the origin of the idea in the Irish digital debate of breaking DIGICO in two. Nera Smith provided the opportunity, as a UK-based (therefore perceived as a highly respected and independent) consultant, to those who would go on in 1999 and 2000 to argue — successfully — that RTE should be excluded from multiplex operation completely, a notion that was subsequently written into the new legislation.

In the second half of 1998, the Irish Government agreed on the heads of a new Broadcasting Bill. RTE would form part of a new digital company, with a 40% shareholding, as the Government decided to go forward on the basis of a public-private partnership. The Minister was influenced she said, by RTE's expertise, its infrastructure and its universal service argument in favour of DTT. RTE would have access to one multiplex, TG 4 (the Irish language channel) and TV 3 (the commercial channel) would share another multiplex and the remaining four would be at the disposal of the multiplex operator.

As momentum began to build, driven by very real changes in RTE's organisational structure as it began to prepare itself for digital television, the danger now was that the Irish public would opt in large numbers for satellite or cable delivery, unless they could be convinced to wait for the roll-out of DTT. The vision of digital convergence was finally emerging off the pages of Information Society policy documents and engineers' technical reports and actually beginning to change the structure and behaviour of the most important institution in Ireland's cultural industry. RTE's adviser A.D.Little predicted digital penetration to reach 33% by 2015, with a positive cash flow position by 2002, assuming an investment of £80 million. But finalising a sales structure was complicated by a number of factors, including the size of RTE's shareholding in DIGICO, the need to avoid the question of "state aid" and the Government's need to maximise sale proceeds. The core RTE concern was that it should receive a reasonable market price for the business and it would have to be the final arbiter of this decision. By Autumn 1999, there were already signs that the process was slowing, as was the passage of the Broadcasting Bill through the Irish Parliament. Substantial differences of approach to the sale process and to the valuation of RTE network assets were now emerging between the Government's advisers and those of RTE. A major difficulty had arisen in identifying exactly where the line should be drawn between the value of the network and the overall value of DIGICO, which would have two broad areas of activity — the transmission system and the content provision or retail system, each with a quite separate profile.

The Government advisers tended to see the network in terms of depreciated value (Net Book Value) of the physical assets, with very little value attributed to the earning potential inherent in the network as a distribution system. They therefore wanted to place a modest value on the network and seek agreement that any value above this which might be gained in the actual sale of the network should be regarded as a "digital premium," that is, attributable entirely to the licence to operate the digital multiplexes and therefore to accrue to the Exchequer.

The key issue for RTE was its responsibility to ensure that it would get the best possible price in the sale of its assets, in this case the transfer of its transmission network as a going concern. The issue of state aid in European competition law also loomed large in its deliberations. To sell the network at less than its full market value could constitute state aid to DIGICO in the minds of cable and satellite operators, its would-be competitors. RTE's legal advice was that securing full market value for the network would not constitute state aid, even where the purchaser might be the owner of the multiplex licences and where RTE would retain a shareholding in the new company. There was also a significant issue of public and political perception arising from the successful sale of Cablelink, the cable company partly owned by RTE and sold to NTL at full market value, and this had an important influence on how the Government side was approaching the digital challenge. Rather than paying a "digital premium" to the Government, RTE argued that any cash accruing to itself from the sale of its network should be used exclusively for introducing new digital services, supporting them in their introductory years until their viewership could sustain a claim for public funding for them. This would also ensure there was no "digital licence fee" (a notion then being considered by the BBC as a means to fund the roll-out of digital television in the UK), which would in any case yield very little return in the early years and perhaps act as a disincentive in persuading viewers to switch from analogue to digital receivers.

Squeezing RTE Out

There was still another way to make a play in the preparation for digital television, a radically different approach which would involve pressuring RTE to make a complete U-turn in its digital strategy. At the margins of the negotiations between the Government and RTE, there arose unfocused but persistent talk about RTE's assumed automatic entitlement to a shareholding in DIGICO and concern about the unfair advantage this conferred, relative to any other broadcaster in Ireland. In the eyes of some participants, the involvement of the publicly funded national broadcaster in the state's only terrestrial distribution system was inappropriate. For them, it was even more inappropriate that RTE should seek to get the full market value of the network as well as an automatic legislative right to a shareholding, even if this was being paid for. The accusation could be made that RTE was in a favoured position vis-à-vis other broadcasters. This was becoming a source of real political difficulty and an inhibition to realising the full value of the network, though there was no direct communication from politicians on this.

All the indications at the end of 1999 were that digital television would become a significant platform for the mass roll-out of the Internet and e-commerce. RTE pressed on with elaborating its plans for new digital channels (RTE 1999). Stock market confidence in new technologies was peaking just then and the number of new entrepreneurs entering the "dotcom" business was accelerating. There were no signs yet that the overproduction of PCs and mobile phones would send this whole sector into decline within the year. In this mood of optimistic expansionism in the new media sector, it would be foolishly short-sighted to strip RTE of its network, a major national asset in public ownership, and allow only private interests, whether these would be domestic or global, to reap the benefits of new commu-

nication and information services to emerge at the point of convergence between digital television and the Internet.

The strategic issue was who controls the gateways to the digital economy, those points of contact between households and the burgeoning world of digital information, entertainment and communication services? Digital cable in large cities clearly had a bright future and RTE would have retained its interest in Cablelink if it could, so that it could benefit from new revenue streams, just as the film industry developed interests where it could in multiplex cinemas and video rental chains. Sweden, with its strong tradition of supporting the public interest in broadcasting, was drawing up plans to allow both public and private television, SVT and TV 4, to become shareholders with the state-owned broadcasting network Terracom in the DTT company Senda, so that there would be some sharing of future profits and market power, as well as some allowance for a substantial public service voice to be heard in decisions about the future development of a major multi-service platform in the context of a Digital Society vision. It was also possible that the present very substantial inefficiencies in collecting the licence fee could be overcome in the digital regime by incorporating the fee in the annual rental of a "smart card" that would be necessary to gain access to digital television where all content is encrypted.

Meanwhile, Government advisers were suggesting that RTE should have no share in DIGICO, that the disaggregation of what had been a vertically integrated system since the foundation of RTE in 1961 (programme production, acquisition, scheduling and delivery into homes) was now appropriate. This would side step "state aid" issues, strengthen the rationale for future licence fee increases, avoid the problem of exposing RTE to future cash calls for investment in DIGICO and maximise the value to RTE of its network. If RTE insisted on keeping a shareholding in DIGICO, the sale price of the network would be lower, as buyer interest would weaken in a situation where full ownership of the digital platform was not available. If RTE could abandon its hope of sharing in future digital revenue streams, Government advisers argued, it would realise a higher asset value now for its network. But RTE knew that accepting this argument about reducing the network asset value would mean withdrawing from having any strategic control over the future direction of digital television and being able to ensure that public service goals, as distinct from purely market goals, would play a role in shaping the Information Society. Major decisions would be made in the future by the DTT service provider, including how access to television programmes and channels would be favoured or discriminated against in the design of the EPG and other navigation systems, how consumer choice in e-commerce could be constrained and directed towards particular services, who would be able to "push" targeted programme material, advertising and direct purchase opportunities at viewers, how cross-promotion of services would be regulated and how return paths would be controlled.

Behind all this rethinking of its digital policy in RTE was the protracted disagreement, now running into six months, on the value of the network. The Government's advisers proposed a value of £34 million, where RTE's advisers calculated a "base case of valuation" of £66 million, although RTE was slow to communicate this to the Government since there was still the possibility of a decision to let the market decide the value of the network. In either case, the process could not go forward until this large difference could be reconciled. The Government's view

was that where RTE had a shareholding, there appeared to be no possibility of it getting more than the Government-predetermined value of the network, because of state aid complications. Where there was an agreed market value, there arose the possibility of the Exchequer receiving some or all the excess over the Government's figure. RTE still had the reserve power, granted to it in the Broadcasting Bill, of deciding which assets it would transfer to the new company and therefore in effect of refusing to sell.

Final Decisions

The consensus in RTE at the end of 1999 was to insist on its shareholding in DIGICO, in the belief that even if it could be certain that no public policy objectives would be secured thereby, RTE should be able to benefit financially in the longterm by being part of the revenue-generating platform. If the prospect of longterm commercial potential looked uncertain in any time in the future, it could withdraw from the company. It wanted to obtain a high value from the sale of the network and it wanted to be involved in DIGICO to benefit from long-term revenue streams. By the end of the year, it signalled very clearly to the Government that it was opposed to withdrawing from the shareholding. This set it on a collision course with the Government. It now seemed likely that the Minister would advise Government that there was no longer any public policy need for RTE to have a shareholding in DIGICO, since universal coverage could be guaranteed in the licences issued by the Regulator. A strong lobby organised around TV 3 was arguing against RTE having any shareholding. Drawing on the very successful lobbying experience of its parent company, CanWest in Canada, TV 3 had already lodged a complaint with the European Commission soon after its launch in 1998, alleging that unwarranted state aid is given to RTE through the licence fee and also through "gratuitous" access to the national transmission system. Now it reorganised the loose federation of independent radio stations, formerly known as AIRS, into a new body, the Independent Broadcasters of Ireland (IBI), and convinced them that they too would in time have to work through DIGICO, despite assurances from RTE that this debate was not about radio or DAB. IBI hired a lobbying firm and a competition lawyer and began a political campaign against an RTE shareholding that involved local radio stations around the country putting pressure on politicians in their local area.

Within a month, the Government's digital policy took a new turn. It decided that the transmission system would be separated from the multiplex management function, an idea that originated some years previously in the Nera/Smith report (1998) but had been rejected because no convincing business rationale was offered for such a separation in a very small television economy such as Ireland's. This was a devastating blow to RTE's plans: its principal interest in DIGICO was a commercial one, to secure an income stream in future years for investment in programme production. Its approach to developing strategic alliances was in line with strategies in other state- sponsored companies. Not only would this change of policy cut RTE out of any involvement in digital distribution and delay an already seriously late Bill from becoming law, but seeking private investment for separate companies might well deprive the whole digital venture of the necessary commercial drive. RTE could sell its transmission system on the open market and retain the

proceeds for digital development, but it would have no shareholding in the new multiplex company. The final government decision came in June 2000. RTE would retain a 28% share in the new transmission company and its network employees would get another 5%. RTE would hold no stake in the separate company to be established to retail digital television services to viewers.

At the end of 2002, there is no sign of development in the proposed DTT platform, which was legally provided for in the Broadcasting Bill that eventually become law early in 2001. RTE has abandoned its two-year attempt to sell its network, as the value of it plummets in an uncertain economic climate. There has been only one bidder for the multiplex operator licence — a former RTE executive who played an important role in shaping RTE's digital strategy — but he has not been able to attract the 100 million Euro investment that is needed and has now withdrawn. As Ireland's DTT strategy sinks slowly under the weight of inertia, aided by the collapse in confidence in new media prompted by the rapidly-falling technology stocks on major global markets, both cable and satellite operators are moving in to fill the vacuum, one with more success than the other.

Cable in Ireland is dominated by two major operators, NTL (which purchased Cablelink from RTE and Telecom Eireann for what is now seen as a very inflated price) and Chorus, jointly owned by Denver-based Liberty Media and Dublin-based Independent News & media. At the end of 2002, NTL has 370,000 subscribers, Chorus has 240,000. A wireless network running on microwave technology serves a small proportion of these. Each one has been experiencing poor cash flow problems (its parent NTL Group in the US is negotiating to emerge from Chapter 11 bankruptcy) which prevent them from drawing down more investment funds from banks, which delays the full rollout of digital cable and its related wireless network. This brings them into conflict with the regulator, the ODTR, because they cannot meet the deadlines agreed when they received their licences. The Regulator has already removed Chorus' and NTL's exclusive right to broadcast in their franchise areas in a bid to promote greater competition, but the severe downturn in the technology sector has prevented competitors from taking advantage of this. Chorus is also pulling out of a number of state-backed broadband infrastructure projects, based on high-speed fibre-optic rings serving twenty regional towns around Ireland. These cable companies are failing to increase their average revenue per subscriber because they can not afford to build out so-called "triple play" services: telephony, television and Internet. In yet another shake out and consolidation scenario, it is likely that Liberty Media will rescue NTL, along with Telewest, its UK cable competitor, by buying them out at bargain rates and forcing them to merge. The fact that NTL and Chorus in Ireland run different, incompatible versions of Open TV middleware on their set-top-boxes may present problems in developing interactive services in the future.

Meanwhile, the difficulties in cable and DTT open the way for satellite television. BSkyB is the big winner at this stage, as it already dominates the move to digital television in Ireland. In a short space of time, it has signed up 255,000 households, or 25 percent of the Irish market, and is now the most significant multichannel digital platform, even though, being based in Luxembourg, it is not regulated in Ireland, does not pay VAT at Irish levels, does not pay a levy to the ODTR (the licensed cable companies pay 3.5% of their revenues) and is not subject to price

controls. All of its customers are digital (compared to only 40,000 on Chorus and NTL). Its success is based on its existing subscriber base, on the delays in launching DTT and in rolling out digital cable, as well as on the large economies of scale it can avail of in providing free set-top boxes and controlling sports rights. Impending changes in media ownership rules in the UK may see News Corp, its parent group, consolidate itself further in this part of the world by gaining its first foothold in terrestrial television through a bid for Channel 5. Sky's uptake in Ireland can be largely attributed to its success in persuading embattled RTE to expand its reach across the whole of Ireland (including Northern Ireland) and therefore to increase its viewing figures and advertising revenue, by putting its radio and television channels on the Sky satellite platform. Sky's entry into the Irish market — which would have been regarded by those working on digital television policy back in 1996 as a "doomsday scenario" for Ireland — happened very quietly and very quickly, with almost no public discussion, until the eruption of public anger in the middle of 2002 when Sky purchased the television rights to all Irish international soccer home matches, removing them from free-to-air television. A very embarrassed Government is still attempting to make up for its past negligence, allay football supporters' outrage and implement a "Listed Events" policy, in keeping with the rules of the Television Without Frontiers directive (see Näränen 2002).

There has clearly been a major overestimation of the potential of digital television, the Internet and telecommunications expansion over the last four years right across Europe, so predictions for the future must be very cautious. What will viewers gain in moving from analogue to digital? The dominant European trend at present is against enhancing the high-resolution capability of digital television in favour of increasing quantity of channels and promoting interactivity as part of an enhanced viewing experience. Two models of interactivity are emerging, the "walled garden" concept and the "enhanced programming" model. Each includes e-mail, EPG, limited Internet browsing and the ability to interact with programmes in real-time by choosing alternative camera angles in sports programmes and voting on programme content (Big Brother as a prototype). Sky customers in Ireland will soon go online via a set-top box connected to a fixed line home phone which will route transactions — banking, betting, financial services, home shopping — via a network operated by Nevada Telecom using Eircom switching, and share revenues with private firms.

What share of the total television market will want these interactive services? Will Early Adopters be followed quickly by an Early Majority, then a Late Majority (to use the jargon of new product research), leaving the Laggards to be pushed into digital television when governments switch off the analogue signal? Crucially, will a small economy like Ireland — with 24 times fewer television households than the UK — be able to offer information and entertainment on television in the future that has anything recognisably Irish in it? Will the new forces of globalisation unleashed by digital technology enhance or destroy the capacity for content creation in this country that has steadily developed since the foundation of RTE in 1961 (Corcoran 1999)? In the evolution of all cultural industries to date, audience taste for information and entertainment has been notoriously fickle and difficult to predict. There is no reason to think it will be different in digital television. Already Video on Demand is no longer being touted as the "killer application" with

the same level of confidence as four years ago. "Churn rates" (the proportion of subscribers cancelling subscriptions) are already high in European premium digital television services, as audiences sample, grow bored and opt out. The big question for digital television companies is whether new services made possible by digital technology will be attractive enough to generate sufficient revenues, particularly in a situation where audiences want more local and national content from a digital regime that runs increasingly on globalised content. We may yet need more affordable, locally controlled DTT systems.

What is incontrovertible is that in Ireland, DTT received the most detailed attention from planners since 1996 and yet the Government's digital policy is now in disarray. Unlike the UK, where Government tenacity in pursuing two high-level objectives — efficiency in radio spectrum management and promotion of on-line connectivity — has led it back to a decision to place the BBC at the centre of its digital television policy after the recent collapse of ITV Digital (see Collins, this issue), Government inertia in Ireland has allowed DTT to recede as a real option for the majority of Irish viewers who continue to want free-to-air television. This is a worrying development for the future of the biggest revolution in broadcasting since the introduction of colour television, but it is positively alarming if it also means the further weakening of a public service presence in broadcasting and the rise to prominence in every part of Europe of global corporations who find no place on their agenda for investment in indigenous television production and probably for diversity in programming either.

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