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DIGITAL TELEVISION AND PUBLIC SERVICE  
BROADCASTING

A comparative study between Finland and Spain

Master's Thesis  
Department of Journalism and Mass Communication  
International School of Social Sciences  
June 2008

University of Tampere

Department of Journalism and Mass Communication

International School of Social Sciences

ALONSO, EDUARDO: Digital Television and Public Service Broadcasting. A comparative study between Finland and Spain.

Master's Thesis: 73 pages

June 2008

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This Master's Thesis analyses the effects of the switchover to digital television on Public Service Broadcasting (PSB) with the comparative study of the public broadcasters in Finland (YLE) and in Spain (RTVE). The text explains the long tradition of PSB in Western Europe and analyses its mission and main characteristics. With the arrival of digital television, PSB faces the biggest challenge since commercial television. Because of the technical advantages of digital television, including a better use of the electromagnetic spectrum, the transition to digital broadcasting is inevitable. Focusing on RTVE and YLE, this study interprets how PSB is facing this challenge. These two broadcasters operate in very different situations. While YLE is based on a traditional license fee funding, RTVE's funding comes mainly from advertising. In spite of the financial difficulties, this paper shows the necessity of the public broadcasters to lead the switchover process.

At the same time, public broadcasters need a deep transformation to respond to a competitive market that requires new demand-oriented approaches. The broadcasters also need to broaden their focus to be able to offer cross-media and cross-genre content that goes beyond the traditional broadcasting and, thus, become public service media.

Despite the difficulties, PSB in Western Europe still enjoys a healthy popularity, audience share and its news services are highly regarded. This is the reason why, in spite of the controversy and the pressure from the commercial broadcasters, there has always been a clear willingness to maintain Public Service Broadcasting with an important role in the new digital television landscape.

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# 1. What is Public Service Broadcasting?

## 1.1. Introduction

The concept of Public Service Broadcasting (PSB) is historically tied to the European vision of the state as a protector of the people's interest. The state is the guide, as once kings and nobility protected the lower classes. To the contrary, the United States grew around the basis of an independent way of living, especially when it comes to trade and business. It was of little surprise when commercial television became the model established there and PSB was left in a very reduced and fragmented role.

Hujanen (2004), looking at their mission statements, compiles a list of factors common to all European public broadcasters:

- A universal service to all on equal terms;
- A broad range of programming ranges;
- Diversity in programming;
- A striving for quality, with a particular emphasis on reliable and accurate information;
- Provision of education;
- Promotion of the national and regional cultures;
- Support for democratic debate and decision-making.

The protective role of PSB was already very clear in the fifties, when the BBC (the mother of PSB channels) defined this principle. Ian Jacob, Director-General of the BBC from 1952 to 1959, described Public Service Broadcasting in an internal document, entitled *Basic Propositions*, as:

“a compound of a system of control, an attitude of mind, and an aim, which if successfully achieved results in a service which cannot be given by any other means. The system of control is full independence, or the maximum degree of independence that Parliament will accord. The attitude in mind is an intelligent one capable of attracting to the service the highest quality of character and intellect. The aim is to give the best and the most comprehensive service of broadcasting to the public that is possible. The motive that underlines the whole operation is a vital factor; it must not be vitiated by political or commercial consideration” (on Tracey, 1998, p. 20).

This idea has its beginning in the 19th century principle that humanities could elevate the human condition. Broadcasting instead of literature is the idea behind the BBC and PSB. The logic is of social enrichment, that in however indefinable a manner this society is better for having programmes produced from within the framework of these social arrangements termed Public Service Broadcasting, compared to those programmes produced within an environment in which commerce of politics prevail (Tracey, 1998).

Public broadcasting assumed a cultural role, which clearly differentiates from other public service enterprises. A good public service system should at least occasionally present audience members with material that would stretch their minds and horizons (Blumler 1992). In addition, the constitutions of many European Public Service Broadcasters explicitly charged broadcasters with a cultural mission, while those Public Service Broadcasters not explicitly charged customarily have long traditions of discharging high cultural responsibilities (Collins, 1998).

Karol Jakubowicz (2007a) identifies three main motives behind the creation of Public Service Broadcasting:

- Paternalistic – as in the UK, where PSB was originally born in 1926 in the form of the BBC, an independent public corporation with a public-service remit, understood in part as playing a clearly normative role in the country’s cultural, moral and political life, and as promoting the development of the majority in ways thought desirable by the minority;

- Democratizing – as in some other Western European countries (e.g. France or Italy), where erstwhile state broadcasting organizations began to be transformed into Public Service Broadcasters in the 1960s and 1970s, a time when State (government) control of the then monopoly broadcasters was no longer tenable and a way was sought to associate them more closely with the civil society and turn them into autonomous PSB organizations;
- Systemic – as in West Germany after World War II, Spain, Portugal and Greece in the 1970s, and in Central and Eastern Europe after 1989, when change of the broadcasting system was endemic to broader political change, typically transition to democracy after an authoritarian or totalitarian system.

On the origins of PSB in Western Europe, Jakubowicz (op. cit.) highlights some fundamental features. First, PSB originally emerged at a time of “an economy of scarcity” in broadcasting. Secondly, PSB appear to be the very epitome of the Modern Project, with its roots in the Age of Enlightenment, which saw the intellectual maturation of the humanist belief in reason as the supreme guiding principle in the affairs of humankind. The belief was that the revealed truth could be applied in political and social spheres to correct problems and improve the political and social condition of humankind, and thus create a new and better society. Thirdly, PSB was a product of what might be called collectivistic, social-democratic social arrangements (the Welfare State), assigning an important role to the State in providing the satisfaction of the needs of the individual. Finally, it was a system based on unequal and asymmetrical relation between broadcasters and the audience. In this system or representative communicative democracy, power accrued to the representatives, not those whom they represent.

The *Enlightenment* idea can be set as one of the core principles of PSB when considering its content and the information and programmes public broadcasting transmits. However, when it comes to technology there is another important concept to be taken into account. That is the scarcity of the wave spectrum, which is a limited

resource. Broadcasting was invented on the basis of the frequency spectrum. No cable and no satellite was available at the time, so in order to assure the good use of this limited resource and make that cultural role possible states, mainly in Europe, took control over broadcasting and regulated it to ensure it would not fall into the market rules.

In Great Britain, the Pilkington Committee Report said in 1962: “Since the frequency space available to broadcasting is limited, it is essential that what is available should be used to the best advantage”, and according to this principle, it stated that “the duty of providing a service of broadcasting, and the responsibility for what is broadcast, are vested in public corporations - the BBC and the ITA - since the purposes and effects of broadcasting are such that the duty and responsibility should not be left to the ordinary processes of commercial enterprise, and because there are compelling objections to their being undertaken by the State” (Tracey, 1998, p. 21).

Very few of the original circumstances that Jakubowicz (op. cit.) explained above remain. Still, the main principles of PSB have continued over the years. In the legal definition of PSB in the British Broadcasting Act of 1981: “Commercial broadcasting should be conducted as a public service by a public authority set up for the purpose of disseminating programmes of information, education, and entertainment, of a high technical standard with a proper balance and range in their subject matter. Programmes must maintain a high general standard in all respects, and in particular in respect of their content and quality” (Tracey, 1998, p. 20).

Within the same political sphere in 1994, the Ministers of the forty countries of the Council of Europe reunited at the *Fourth Council of Europe Ministerial Conference on Mass Media Policy* and they formulated a nine-point mission statement based on Article 10 of the European Convention on Human Rights: the right of every European citizen to share and receive information. Concisely, these ten points are:

- Providing a reference point for all audience members as a factor for social cohesion;
- Providing a forum for public discussion;



- Broadcasting impartial and independent information;
- Developing pluralistic, innovative, and varied high-quality programming;
- Developing programmes for both broad audiences and minority groups;
- Reflecting different ideas and beliefs, aimed at mutual understanding;
- Contributing to a greater appreciation of the national and European cultural heritage;
- Scheduling a significant proportion of original productions, especially fiction;
- Offering a programme range, which is complementary to that of commercial broadcasters.

Jo Bardoel, Leen D’Haenns and Allerd Peeters explain in their essay *Defining Distinctiveness. In Search of Public Broadcasting Performance and Quality Criteria* that “this resolution deals with four essential aspects of public broadcasting: (1) the responsibility to provide information; (2) political independence and a correlated sense of public accountability; (3) funding provision; and (4) access to new technology (Bardoel, D’Haenns and Peeters, 2005, pp. 57-79).

The main points of interest, therefore, are impartiality and pluralism in the editorial policy of public broadcasting, a reflection of the cultural heritage, a mirroring of the multi-ethnic society, and technological innovation. However, the concrete ways in which this principle agreement should be implemented fall to the authority of respective countries.

## 1.2. Characteristics of PSB

As above mentioned, Europe is the heartland of public broadcasting. Its characteristics can be quickly summarized as a combination of three elements: publicly-owned not-for-profit organization, a monopoly of service provision and strongly normative programming policy emphasizing national and high cultural themes (Collins, 1998).

On a wider note, most scholars identify the following characteristics:

- a. *Universality* of availability. Every citizen must be able, at least technically, to receive the signal from public broadcasting, and also in economic terms, since this broadcasting must be done at a moderate cost. However, with terrestrial broadcasting, universal service would not have been supplied by profit-maximizing commercial broadcasting, financial returns accrued from an extension of service to remote and thinly populated areas being exceeded by the cost of providing services (Collins, op. cit.).
- b. Very close to the concept of universality is *diversity*. This is a key value of public broadcasting. Those must assure pluralism and the representation of all minorities. European public service television has been conceived in pluralist terms at several levels: in the multiplicity of audience types served and audience images catered for; in respect of programme making, striving to match it to the heterogeneity of the viewing public and ensuring that each programme form has sufficient resources to be good of its kind; and in respect of responsiveness to society, implying that all significant sectors of the community, divided by interests, values and identities, are entitled to have their main concerns reflected in a tolerably authentic way in programme output (Blumler, 1992). Therefore, the principle of serving the diverse interests of the public is the basis for the presence in the schedule of programmes which serve the young as well as the elderly, those interested in local affairs as well as the national political canvas, members of

diverse subcultures as well as those in the mainstream (Tracey, 1998). This means that despite broadcasting being a medium to reach enormous numbers of people, PSB must also give access to minorities, to those with different colour, language groups or religious preferences. Public Service Broadcasting must provide them with the opportunity to speak to one another and to voice the issues as they see them, and on the other to provide coverage of their histories, interests and concerns.

- c. A third characteristic is *impartiality*. Public Service Broadcasting is expected to have impartial news coverage, not attached to any political or economical interest. Along with the impartiality there must exist an independence of programme sources from commercial influences. The viewer's interests as a consumer of programmes in not being the target of a veritable bombardment of distracting commercials has been safeguarded by a host of rules, setting maximum limits on advertising minutes per hour or day, and regulating the placement of commercials (whether in blocks or spots and if the latter how frequently) (Blumler, 1992). This is the reason why traditionally in PSB there was a predominance of original production.
- d. Finally, PSB is a *socializing agent*. As briefly mentioned before, public broadcasting helps by creating a common ground. It has a value as a creator of social capital. This characteristic is a consequence of the paternalistic model developed in Europe. It will be seen below that Lowe & Jauert insist in this characteristic in the introduction of Cultural Dilemmas in Public Service Broadcasting. PSB has an historic and still valid mission to nurture national cultures, something of keenest relevance in view of globalization (Lowe & Jauert, 2005).

Related to these characteristics, Michael Tracey identifies other core functions of PSB:

- Serving the public sphere. It is an increasingly vital principle of the work of public broadcasting that it recognizes a special relationship between a sense of national identity and broad community.
- Broadcasting should be so structured as to encourage competition in good programming rather than competition for numbers.
- The rules of broadcasting should liberate rather than restrict the programme maker.
- A commitment to the education of the public. Public broadcasting knows that political and social literacy, as well as of course literal literacy, is an essential prerequisite to the healthy working of the democratic order.

### **1.3. Rethinking PSB**

Nevertheless, the traditional concept of Public Service Broadcasting is attached to a specific moment in time. It is no surprise that the original conceived model became old in a short period of time. Paternalism was the dominating attitude of the institution towards its audiences until the era of deregulation in the 1980s. Obviously the historic social context in which the PSB cultural mission was initially defined is fundamentally different compared with contemporary trends, conditions and preferences. This is the era of media market consolidation and audience market segmentation. Simply getting audience attention is a stern challenge; keeping it on some relatively consistent basis is a tougher job by far. Certainly nothing in the era of broadcast monopoly could have prepared PSB for the radical context shift (Lowe & Jauert, 2005). The 1980s and 1990s required a new model of broadcasting where public broadcasting could no longer be a monopoly. Commercial television was a blast and it claimed its own room.

Several reasons justified the appearance of an increasing number of channels on a commercial basis. The overcoming of the spectrum scarcity made regulation of broadcasting not as essential, just as it happened with publishing. In addition, increased competition was also justified by appeals to principles of economic and political liberalism and pluralism and diversity that might be achieved more freely in an ‘external’ form across the promised multitude of channels, instead of through managerial feats of balanced scheduling, channel by channel, in its historic ‘internal’ form (Blumler, 1992).

There is a clear intention to keep supporting the PSB, at least on paper. The European Broadcasting Union (EBU) launched an initiative to guide national public broadcasters engaged in the process of reformulating their PSB remits. Based on the report by the EBU’s *Digital Strategy Group, Media with a Purpose* (2002), Lowe & Jauert (op. cit.) mention three obligations for PSB institutions:

- Be forums for national and international debate on policy issues, help develop and be part of an international / global public sphere.
- Formulate response to the commercial driven market forces that encourage universal inclusion into a hybrid global culture. Instead PSB should continue to be dedicated to supporting national culture, producing national programme content, supporting national languages, art and music.
- Reflect the increasingly multi-ethnic and multicultural societies, but not by accentuating differences or ‘ghettoising’ different social and ethnic groups by locking them into “walled gardens” of programme services dedicated solely to them.

With these obligations, PSB would serve social, political and cultural citizenship. Where wholly private media companies work primarily in the interests of their owners, the shareholders, Public Service Broadcasters are obliged to serve the whole society by enhancing, developing and serving social, political and cultural citizenship. In doing so they provide media content with the characteristics of:

- Universality of content and access;
- Editorial Independence;
- High quality of services and of output;
- Accountability;

The report also acknowledges the general trend of transition from a ‘mass society’ to a more ‘fragmented society’; in which people seek more personalized services and products, tailored to their needs. “The demand for programme and other services to be delivered to audiences where and when they want must be met”.

Thus, public broadcasters face a very complex social life where individualization and the multi-cultural sphere must be accommodated. “In implementation and de facto programme production, PSB institutions face problems in defining the cultural commons of national culture given the specificities of a diversified multi-ethnic cultural sphere that must simultaneously cater to the personal preferences of individualized audience members, although the latter aspect is more related to distribution than to content (Lowe & Jauert, op. cit.).

With these mandates in mind, Lowe & Jauert (op. cit.) argue that the cultural role of PSB today is about building social capital, which they discuss in the sense of ‘bridging’ and ‘bonding’. Public service media play a crucial role by maintaining the ties that bind in national terms, and chronicling the clarification of distinctive views (bonding). Bridging is crucial for diversity and plurality. Public service media are crucial for building this kind of social capital as well by ensuring intercultural understandings.

Lowe & Jauert (op. cit.) propose four continuing functions that make Public Service Broadcasting still relevant:

1. Public Service Broadcasting should be a beneficial socializing agent. PSB must help increasing social capital. It should accomplish a function that helps children and adults socializing with others, and being associated in shared ways of life. In a social context where everything is increasingly individualistic, investment

in shared communication infrastructure is an essential drive. The authors argue that those societies that have entrusted commercial media to handle this function, one finds a correlated weakening of participation in community and public affairs. Therefore, one dimension of a renewed cultural mission for Public Service Broadcasting is to function as an alternative, even mitigating, agent that facilitates beneficial socializing effects for media's role in those processes.

2. Public Service Broadcasting should be a robust discursive medium. Broadcasting is essential for the act of 'witnessing' and the process of 'working through' what it means and how it effects. In an era of media abundance and market fragmentation, where the dynamics of differentiation are in the driver's sea, PSB is essential to ensure cross-levelling (unity and cohesion) as well as levelling across (diversity and pluralism). PSB today must defend its obligation to organize and to operate as a full-scale portfolio of on-going, as well as developmental, content services. In a renewed PSB, this will mean that Public Service Broadcasting has the mission of providing the locally situated forum that is essential for witnessing and working through in ways that reflect domestic interests and connect with domestic life.
3. Public Service Broadcasting should be an essential civil society organization. This third mission remains in a similar sphere as the previous ones. In the current society organization there must be an agent that balances the main sectors - market and government. Civil society is the forum for reproducing culture in all its forms and where people build social capital and refine norms. In this sense, Public Service Broadcasting has an irreplaceable role as a civil society organization, whose success is not measured in economic terms (not for the profit), but by the degree to which it fills a vacuum that would otherwise exist between markets and

governments. Thus, a third dimension of a renewed public service cultural mission is to act as civil society organizations providing an essential forum for reproducing culture and facilitating growth in social capital.

4. Public Service Broadcasting should be about democratic mediation for intercultural communication. This fourth function is based on the assumption that there is no society that can endure without some principle around which unity is achieved. For the authors, inter-cultural communication is the basis for sharing, enriching and developing cultural democracy. Therefore PSB must emancipate inter-cultural communication as both lubricant and glue in pursuit of multicultural pluralism.

Public Service Broadcasting is widely-recognized, at least in Europe, for its universality, high quality, plurality and independence. It also stimulates social cohesion and the maintenance of a national identity. In our contemporary Information society, the relevance of Public Service Broadcasting is still valid and the political and academic circles are willing to guarantee the continuity of PSB.

However, PSB must face very big challenges. In a landscaped dominated by fragmented audiences and fierce competition from the commercial stations, PSB must find a way to reach an audience, which is increasingly disinterested. An increasing number of citizens are questioning why they should pay a licence fee as they have gained control of what and when they want to watch.



## 2. The digitization of television

### 2.1. What is digitization?

There are different ways to approach to the information society question. Perhaps one of the most popular is the technology argument, which means that technology development allowed and pushed society development. Thus it is the main cause of the so-called information society and the huge increase of information (not always knowledge) in present society. True... at least partly. It seems obvious that technology is the channel that allows the huge flow of information that we experience in everyday life.

One of the aspects of this technology boom is the digitization of content and information. But, what is digitization? In a few words it is the process by which electrical signals in the analogue domain are converted to the digital domain. This process of digitization is accomplished by sampling the analogue signal rapidly as time progresses and converting each sampled value into a number, and representing the number in binary form, thereby transforming a simple analogue signal into a mass of binary numbers.

This mass of numbers, or digital signal, has the beneficial property of being amplified, transmitted, modulated, stored, retrieved and reconverted without any change in any of the numbers and hence preserving the purity of the signal from the time it is created to the time it is used (regardless of how long it has been stored or how far it has travelled). A very good example of this process is sound, one of the first mediums to move into the digital world. In the early eighties, the revolutionary Compact Disc, based on zeros and ones, fit 74-minutes of music. Today, the compression of that same mass of numbers in the form of mp3 files allows the same Compact Disc to hold around 500-minutes of digital music.

Benkler (1998) provides a clear summary of how this technical process is accomplished when says, “Digital technology is a potential vehicle for achieving a broad distribution or

access to, and participation in, the social processes of knowledge production”. It is possible to say that with digitization information is larger, wider and faster.

In quantitative terms, it is clear that digitization is a big step forward, but it is not so clear that it is a good advantage in qualitative terms. Nevertheless, there is optimism towards digitization based on “larger, wider, faster” information, but there is little care about the quality of that information.

We can follow the example of mp3 music by analyzing the iPod Classic, manufactured by Apple, which is one of the most popular gadgets today. The iPod Classic is a 60cm<sup>3</sup> handheld device, which can store up to 160GB - the equivalent of 15,000 songs in mp3 format<sup>1</sup>, which obviously uses far less room than thousands of vinyl LPs or CDs. One can see that figure is an overload for the common music fan, so is it that amount of information worthwhile? It is a technical fact that the sound quality of an mp3 file is much lower than a vinyl (analogue source), yet the vast majority of people do not buy vinyl records any more.

Along side audio, video and any kind of data is now available via the internet and it can all be easily carried on memory sticks, mobile phones, mp3 players and other devices. One of the major challenges in the near future for the information society will be the power consumption of the data centres.

This is only an example of how overwhelming digitally-stored and transmitted information can be and how speed and quantity are characteristics far more important than quality. However, it also shows the increased need of information, especially when it comes to entertainment. The digitization of home entertainment video due to DVD (“digital video disc” or “digital versatile disc”) is a good example of the demand of an added value.

A large percentage of movies are released with a wide variety of extra features, which include documentaries, audio commentaries, interviews and span limited editions, collector’s edition and hours of extra material. This added value is not only meant to encourage consumers to buy the re-release of old movies, but it is also a way of satisfying the demand of consumers. Home video consumers are not happy with only the feature movie; they demand extra material.

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<sup>1</sup> iPod technical specifications. <http://www.apple.com/ipodclassic/> (accessed 2-06-2008).

A similar process can also be seen with photography. Digital cameras have already made the film negative obsolete, with more digital cameras being sold than conventional cameras in 2003.<sup>2</sup> One of the consequences of this swift change has been more photographs are taken and more pictures are traded (over the Internet mainly). However, is the photograph on the screen better than the printed copy on paper?

In this context of digital products, television broadcasting seems to be meant to close the door on analogue society. The transition from analogue to digital television will end in the so-called 'switch-off'; the date analogue broadcasting will end.

Digital TV (DTV) is the transmission of television stations on digital signals, or as the Federal Communications Commission (FCC) in the United States says: “Digital Television is a new type of broadcasting technology that will transform television. Because DTV is delivered digitally, it allows for the delivery of a signal virtually free of interference. DTV broadcasters will be able to offer television with movie-quality pictures and Dolby digital surround, along with a variety of other enhancements”.<sup>3</sup>

A less enthusiastic definition, but purely technical, is given by Margherita Pagani, who says Digital Television is based on the transmission of a digitised signal which is transformed into a binary numerical sequence; that is a succession of 0 and 1 (Pagani, 2003). This transmission can be sent in different forms: digital satellite transmission systems, digital cable transmission, digital terrestrial television, ADSL and others.

One key fact about digital television is compression. Stylianos Papathanassopoulos explains in a very simple way: “Digital television is based on the compression of signals. By using compression technology, such as Moving Picture Experts Group (MPEG), digitization maximizes the use of bandwidth (Papathanassopoulos, 2002). Therefore, more channels are available and the wave spectrum is freed (or at least rationalized). This spectrum freedom is what has made governments so eager to adopt digital television in a very short time.

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<sup>2</sup> In January 2004, the photographic company Kodak announced its decision to stop manufacturing conventional film roll cameras in America, Canada and Western Europe. However, the production of this type of camera would continue in medium economies, such as South America. (Kodak dejará de vender cámaras tradicionales, *El Mundo*, 14-January-2004, <http://www.elmundo.es/mundodinero/2004/01/13/Noti20040113190600.html>)

<sup>3</sup> FCC. *Consumer facts*, 2008,: <http://www.fcc.gov/cgb/consumerfacts/digitaltv.html>

Around 56 countries have already started the digital switchover, which will force every single household to change its television set within ten years in order to be able to receive any kind of broadcasting. The main reason for this change is found in a bettered quality of image and sound, with the ad hoc of interactivity and other services. Are those enough reasons to rush such a big change?

The answer seems pretty clear for the American FCC: “DTV is a more flexible and efficient technology than the current analogue system. On the same bandwidth a broadcaster provides one analogue programming channel, a broadcaster may provide a super sharp “high definition” (HDTV) program or a multiple “standard definition” DTV programs simultaneously. Providing several programme streams on one broadcast channel is called “multicasting”. The number of programmes a station can send on one digital channel depends on the level of picture detail, also known as “resolution”, desired in each programming stream. A broadcaster can also use DTV to provide interactivity and data services that were not possible with analogue technology”.<sup>4</sup>

## **2.1. Benefits of digital television**

Aside from the possible benefits of DTV when it comes to increased programming content and variety, there's also the advantage of the technology and a higher level of broadcasting. Clearly it is not lower quality, like when comparing it to mp3 audio compression technology.

There are two immediate benefits of digital television. First, the electromagnetic bandwidth is freed, as digital television requires less bandwidth. It is also a flexible bandwidth due to the quality of the broadcast. Digital compression methods such as MPEG-2 and MPEG-4 allow the bandwidth of a single analogue TV channel (6 MHz in the US) to carry up to five standard-definition channels or up to two high-definition digital TV channels instead.

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<sup>4</sup> FCC. *Consumer facts*, 2008,; [http:// www.fcc.gov/cgb/consumerfacts/digitaltv.html](http://www.fcc.gov/cgb/consumerfacts/digitaltv.html)

This allows the spectrum to be used for new wireless technologies and applications. For example, the British Office for Communications hints that some of these new applications could be used for the healthcare and transport sectors in "Tomorrow's Wireless World: Ofcom report on future communications technology". In less than ten years it would be possible to implement on-body monitors to check vital health indicators and intelligent transport systems that allow cars to communicate wirelessly and seamlessly with each other to automatically alert a vehicle of sudden braking to help avoid collisions.

Another important issue will be the auction of public spectrums that governments will be able to do, for example to mobile phone companies.

The second benefit of the transition to digital television is the improvement of the picture and sound quality, especially with high definition television broadcasts (HDTV). Digital television broadcasting offers a higher aspect ratio (16:9 instead of 4:3), higher resolution and better sound quality (more than two channels). HDTV has a higher resolution that goes up to 1920x1080 pixels and suits the requirements of the new LCD and plasma TV sets. In the future that resolution will be even higher.

The switchover to digital television does not mean the switch to HDTV. For the time being, every country allows broadcasting in HDTV and standard definition, as the share of HD ready television sets is not very large. However, it is a market that grows rapidly. Informa Telecoms & Media forecasts that by 2012 around 69% of the homes will be HDTV capable.

Table 1 – Global HDTV by region. (Source: *Converging Media*. Volume 7, Number 10, 2008).

Global HDTV homes by region, 2007-2012 (mill.)				
	2007	2008	2009	2012
Asia Pacific	18.7	26.1	36.7	84.6
Eastern Europe / Middle East	0.8	1.6	2.9	9.8
Western Europe	16.2	25.7	35.2	69
Latin America	0.3	0.7	1.5	4.9
North America	45.3	62.8	79.5	111.6
Global total	81.3	116.9	155.8	279.8

Finally, it is also worth highlighting the possibilities of developing interactive services. Apart from the higher quality, an interesting characteristic is that DTV can mean interactivity. Linked to cable or a telephone system, digital television offers viewers the chance to talk back to their set. This is being hailed as a genuinely revolutionary advance on the present one-way, top-down, structure of analogue broadcasting, one which transfers power decisively from producers to consumers (Murdock, 2002).

The only interactive service widely implemented on digital television broadcasting at the moment is the electronic programme guides (EPG), which is like a modern version of the traditional teletext, on which viewers can access the television schedules for programming on different channels.

**2.2. Introduction to the DVB project**

Digital television can be broadcast through five different methods: cable, satellite, terrestrial, mobile devices and internet. The technical standards for the broadcasting of digital television are defined by the DVB Project consortium, which was established in 1991.

According to its own definition, “the Digital Video Broadcasting (DVB) Project is an industry-led consortium of over 270 broadcasters, manufacturers, network operators, software developers, regulatory bodies and others in over 35 countries committed to designing open interoperable standards for the global delivery of digital media services. As DVB’s name suggests, these include broadcasting. Services using DVB standards are available on every continent with more than 180 million DVB receivers deployed”.<sup>5</sup>

Because of fewer technical problems and a simpler regulatory climate, the DVB project prioritized the development of standards for the cable and satellite markets. However, for public broadcasting, digital terrestrial television is the key because it has a wider coverage. The DVB-T technical standard has been widely adopted in the world, with more than 60 million receivers deployed in more than 35 countries. The DVB fact sheet explains this standard as a flexible system that allows networks to be designed for the delivery of a wide range of services, from HDTV to multichannel SDTV, fixed, portable, mobile, and even handheld reception (especially when used in conjunction with the standard DVB-H).

The consortium is working on a new more advanced standard for digital terrestrial television for those countries that complete the switchover. The DVB-T2, which will coexist in many markets with the DVB-T standard, introduces the latest modulation and coding techniques to enable highly efficient use of valuable terrestrial spectrum for the delivery of audio, video and data services to fixed, portable and mobile devices. “This could enable, for example, the roll out of new nationwide multiplexes offering multichannel HDTV services, or perhaps innovative new data-casting services. As with DVB-T, the new standard is certain to target not just roof-top and set-top antennas, but also PCs, laptops, in-car receivers, and a whole range of other innovative receiving devices.”<sup>6</sup>

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<sup>5</sup> *Introduction to the DVB Project* DVB Fact Sheet— June 2008, [http://www.dvb.org/technology/fact\\_sheets/DVB%20Project%20Fact%20Sheet.0408.pdf](http://www.dvb.org/technology/fact_sheets/DVB%20Project%20Fact%20Sheet.0408.pdf)

<sup>6</sup> *2nd Generation Terrestrial - DVB Fact Sheet – June 2008.*

## 3. Digital television in Finland

### 3.1. Overview

Digital television in Finland has been under discussion since the mid-1990s. In 1996, the digitalisation team of the Ministry of Transport and Communications published their report: *The Digitalisation of Broadcasting in Finland*, which was the first official document to address the challenges that changing technologies would provoke in broadcasting. Since that moment, it has taken a little more than a decade to implement the shift from analogue broadcasting to digital.

On 31 August 2007 the analogue switch-off began in Finland. According to a report by Analogue Switch-off Strategies in Western Europe, published by the European Broadcasting Union (EBU) and DigiTAG (Digital Terrestrial Action Group) in 2005, Finland is among the first group of countries to complete the analogue switch-off (ASO). The report also listed the expected ASO strategies for countries in Western Europe, with Germany, Sweden and the Netherlands all set to complete the change by the end of 2008. The following table shows how most of the Western European countries are expected to broadcast only in digital with the next seven years. It is remarkable the case of the United Kingdom. In spite of its long tradition of Public Service Broadcasting, it figures in the last tier of countries to adopt DTV.



Table 2 - Expected Analogue Switch-off Strategies in Western Europe. (Source: EBU, 2005)

	Expected ASO
<b>Fast track</b>	
Finland	2007-2008
Germany	
Sweden	
Netherlands	
<b>Middle term</b>	
Belgium	2009-2012
Norway	
Denmark	
Switzerland	
Austria	
Ireland	
<b>Last</b>	
Italy	2012-2015
UK	
France	
Spain	
Portugal	
Greece	

The above table shows an even pace among the Western Europe countries, although the European Union suggested 2012 as the latest deadline for the ASO. The Information Society and Media Commissioner Viviane Reding said at that time: “By recommending 2012 as the EU deadline for the digital switch-off, I would like to give a political signal to market participants and customers alike that digital TV will soon be a reality. The sooner we complete switchover, the sooner our citizens and businesses will benefit. Pan-European coordination of spectrum use will then give our citizens access to new services that combine mobile telephony and broadcasting, such as mobile ‘data-casting’ of videos, or multimedia content”.<sup>7</sup>

<sup>7</sup> European Commission press release 24 May 2005, <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/05/595&format=HTML&aged=0&language=EN&guiLanguage=en>

Decisions concerning the licences of digital television channels were made in June 1999 and Digital Terrestrial Television (DTTV) was launched in Finland on 27 August 2001 with the required 50% of national coverage. Therefore, for six years, analogue and digital coexisted and that was the time to prepare the switch-off. By 2004, the digital network covered 94% of the Finland's population and it reached virtually the whole population (99.9%) one year later.

By the first quarter of 2007, reports said that 70% of the 70% of terrestrial dependant households in Finland had already purchased a DTTV receiver, but only half of cable household had done so. In February 2007, just months before the ASO, there was real concern that a significant percent of the population wouldn't be ready by the end of August (date of the ASO). Nevertheless, a significant increase in the sales of receivers was expected at the very last moment.<sup>8</sup>

### **3.2. The network**

The chosen strategy in Finland for the development of expansion of DTTV is similar to the one adopted by most of the European countries. It is offered as a free-to-air platform with some pay elements. Experts have often cited this method as the most efficient way of introducing DTTV: It cannot be emphasised strongly enough that the fundamental reason for the success of DTTV in the UK and elsewhere is the availability of free-to-air multichannel television, and the removal of the majority of the content to a pay TV service would inevitably retard growth to a significant extent (Holden, 2004).

#### ***a) Channels***

Finland utilises multiple frequency networks (MFN) across 13 regions. By the time of the ASO, there are five multiplexes running in Finland into which the channels are organized.

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<sup>8</sup> Digital Video Broadcasting, [http://www.dvb.org/about\\_dvb/dvb\\_worldwide/finland/index.xml](http://www.dvb.org/about_dvb/dvb_worldwide/finland/index.xml)

The licenses for the first two groups (multiplex A and B) are granted to the traditional Finnish broadcaster. Multiplex A goes to Finnish National Broadcasting Company (YLE) and multiplex B was granted to the commercial broadcasters: MTV and Channel Four Finland (Nelonen) - both multiplexes reach 99.9% of Finland's population. Multiplex C is divided into different coverage areas. It covers 78-85.4 % of the population and the channels that can be seen vary in different areas. To summarize:

#### **Multiplex A**

YLE TV1, YLE TV2, YLE Extra, YLE Teema, YLE FST5

Radio channels: Ylen klassinen, YLE Radio Peili, YLE FSR+, YLE Mondo and YLE Radio Extrem

#### **Multiplex B**

MTV3, MTV MAX (Pay TV channel), Subtv, Subtv Juniori (Pay TV channel, 20:00 - 06:00 Subtv Leffa), Channel Four Finland (Nelonen), JIM

#### **Multiplex C**

CANAL+ FILM 1 (Pay TV channel), CANAL+ FILM 2, (Pay TV channel), CANAL+ SPORT 1 (Pay TV channel), CANAL+ SPORT 2 (Pay TV channel), Disney Channel\*, Sports Channel (Urheilukanava), Sports+ Channel (URHEILU +KANAVA, Pay TV channel, starting June 3rd), The Voice\*, Digiviihde, IskelmäTV Harju & Pöntinen\*, Turku TV (a regional channel in Turku) and radio channels The Voice and Iskelmä.

\* The Voice, Disney Channel and IskelmäTV Harju & Pöntinen are not broadcast in the coverage area of Turku.

### ***b) Licences***

YLE was automatically granted its own national multiplex (A); regional and national capacity would be made available on a further two multiplexes (B and C), either for existing broadcasters or newcomers. In June 1999, the minister confirmed the other licensees. Alma Media and SanomaWSOY's SWelcom were appointed as the managers of multiplexes B and C respectively.

In February 2001, the three administrators (YLE, MTV and SWelcom) formed a joint venture to oversee the management of the multiplexes; it is known as Platco Oy. The function

of the new company is to secure licences related to technical solutions of digital television and to also provide the present and future administrators of multiplexes with resources, applications and different systems for the use of multiplexes.

In addition, services will be provided to licence holders and cable television companies. Council of State Decisions on licences require that the services of digital terrestrial television broadcasting have uniform technical solutions and are easy to use and favourable to the consumer. On this basis, Platco Oy will be developed as a provider of information technological service platforms for digital television. The founder companies YLE, MTV3 and SWelcom own the shares and votes of the new company equally.<sup>9</sup>

The new company made an agreement on national user interfaces application with Sofia Digital Oy and ordered an encryption system with Conax as the supplier. This encryption system is a CA (Conditional Access) application which makes it possible that all the pay digital television services belonging to digital television multiplexes in Finland can be introduced with one card.

Before that, knowing that it would have digital capacity, YLE had established the subsidiary Digita Oy to operate its transmission network, including future digital terrestrial operations. The company was incorporated in September 1998 and began operations in January 1999. A few months later in December 2000, a 49% stake in the company was auctioned off with French transmission company TDF paying 141 million euros for the stake. According to a press release at the time, “YLE will devote the funds from the sale to investments in the digitalisation of radio and television. Over the next six years, approximately 110 million euros will be spent on technical investments on digitalisation. The digitalisation of YLE's production and broadcasting technology was started in 1996. The cost to YLE of the technical investments in the digitalisation process in 1996-2006 will be approximately 170 million euros.”<sup>10</sup> The same press released stated that TDF held the option to purchase the remaining shares in Digita's ownership in one or several instalments. In March 2005 that option came to into effect and Digita became 100% part of the TDF group.

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<sup>9</sup> *The administrators of digital multiplexes founded a common company*, <http://www.digitv.fi/sivu.asp?path=9;1241;1763>)

<sup>10</sup> Press release. 20 December 2000. YLE International Communications, [http://www.yle.fi/fbc/press\\_tdf.shtml](http://www.yle.fi/fbc/press_tdf.shtml)

In addition, the channel licence holders and Digita Oy grouped together as the DTTV League Finland.

According to Digita's website, the company's mission is to deliver content, "Digita transmits radio and television programmes to all people living in every corner of Finland every day of the year."<sup>11</sup> In November 2002, Digita Oy was granted licences for managing and selling the capacity of three digital multiplexes (A, B, C). This allows it to optimise the use of network capacity between the television channels and to offer capacity available for other uses and applications.

In May 2006, Digita was granted as well with the operating licence for the fourth and fifth multiplexes (D and E), while the fifth network was initialized by 1 September 2007 at the latest. At first the network will cover only central and southern Finland and will gradually extend to the rest of the country.

### ***c) The fourth multiplex: Mobile TV***

The fourth multiplex (multiplex D) is intended for the transmission of mobile television services. Nokia, the giant mobile phone manufacturer, has long harboured ambitions for this service. Initial tests were carried out in 2004 with devices like Nokia 7710.<sup>12</sup>

MTV3, YLE and Nelonen joined forces with mobile network operators Elisa and TeliaSonera and with Nokia to introduce digital TV via mobile handsets. It's based on the DVB-H (handheld) standard.

In a bid to accelerate growth, the Ministry of Transport and Communications re-advertised the licences previously held by the would-be pay TV operators in May 2002. Despite its failure to launch its original service on schedule, Canal+ was awarded licences to offer three pay TV services, namely Canal+, Canal Bla and Canal Gul. At the same time, Digita was confirmed as the sole licensee for the digital transmission networks. With the fourth multiplex reserved for mobile data-casting, plans are scheduled to introduce digital TV

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<sup>11</sup> [http://www.digita.fi/digita\\_dokumentti.asp?path=1841;2087;3856](http://www.digita.fi/digita_dokumentti.asp?path=1841;2087;3856)

<sup>12</sup> <http://www.nokia.fi/A4312093>

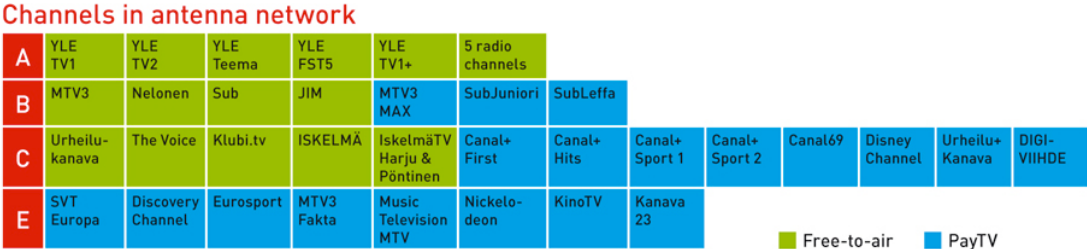
via mobile handsets. Digita, MTV3, YLE and Nelonen have joined forces with mobile network operators Radiolinja and TeliaSonera and manufacturer Nokia to pilot the Internet Protocol Datacast (IPDC) services based on the emerging DVB-H (handheld) standard. Under the agreement signed between the parties in December 2003, Digita will operate the IPDC service system and network, while MTV3, YLE and Nelonen will provide content and the two network operators would provide access to the end-users.

**3.3. Content**

*a) Broadcasters*

The current channel landscape reflects a diversity of content. The channels available in the antenna network are as follow:

Table 3 – Channels through DTTV in Finland (Source: Digita Oy)



A quick glimpse shows that the public broadcaster YLE has the responsibility of one-third of the free-to-air channels. The other players in this landscape are in hands in the traditional analogue broadcasters (Channel Four Finland and MTV3), with the addition of an important player like SBS Finland (part of the SBS Broadcasting Group), which owns the music channels Iskelmä and The Voice. On the Pay TV side, Canal+ is the biggest addition to the channel landscape.

### ***b) Programming***

The larger number of channels reinforces the trend in the current Information Society and delivers more specialized content aiming at smaller, yet specific, target groups. Sports, children, music and films constitute the biggest content groups.

- Films: SubLeffa, KinoTV
- Sports: Urheilukanava and Urheilu+Kanava, Canal + Sports 1, Canal + Sports 2, Eurosport
- Youth: SubJunior, Nickelodeon, Disney Channel
- Documentaries: Discovery Channel, MTV Fakta
- Music: The Voice, Iskelmä and Iskelmä Harju & Pöntinen, MTV
- Adult: Canal69, Digi-Vihde

Both MTV3 and Nelonen launched general programming channels (MTV3 Max and Jim, respectively). However these two programs haven't been able to come up with new original content. Most of their programming is based on imported content and re-runs. MTV3 Max also offers motor sports and, most importantly, it is the channel that shows the Formula 1 competition, which is one of the principal pay TV offerings because of the popularity of the sport in Finland.

### ***c) Cable and satellite***

On the cable network, the number of channels expands greatly and specializes even more. The Helsinki region enjoys the greatest variety of content through cable. MTV3 has made its way through cable and satellite, with three more channels not available on the antenna network: MTV Ava, MTV Sarja and MTV SciFi. These channels mean a deeper specialization in content. MTV Ava is targeted at women; MTV Sarja shows TV series and, as its name suggests, MTV SciFi offers programmes about science-fiction.

Each of these three channels broadcast around 14 to 15 hours a day, but again there is not much original content here. Most of the programmes are either imported or re-runs.

Although only implemented recently, cable television has widely extended into the metropolitan areas. The switch-off of cable happened on 1 March 2008, yet, as discussed in the previous section, YLE carries a large proportion of the free-to-air content. However, this model was soon seen as ineffective and the digital turnover turned to be a big threat to YLE.

### **3.4. Interactive services**

One of the biggest promises following the adoption of digital TV was the possibility it offered for the creation and development of interactive services. However, as exciting as it seemed, interactivity has been one of the greatest disappointments in the transition to digital TV.

For two years (2004-2005), the Ministry of Transport and Communications worked on the research programme ArviD. In the Ministry's own words, "ArviD was a Ministry research programme that aimed at promoting the use of digital television. This goal was pursued by supporting the development of a broad range of easy-to-use and innovative services from entertainment to business applications, by launching measures to enhance the basic conditions of service production and by creating a network of cluster-wide collaboration."

ArviD worked on different ideas and projects to bring some social services and benefits through digital TV. Saarijärvi (2005) mentions some examples:

- More information about health. An interactive service can offer viewers additional information and health tests related to the themes presented in *Akuutti*, a programme about health and well-being broadcasted by YLE.
- Communal learning experience through digital TV. This service would provide schoolchildren between 9 and 11 years of age with an environment for communal learning and entertainment for the



afternoon hours after school. It was based on YLE's programme *Tuu Juttuun*.

- City of Helsinki public information. Digital TV would become another medium to transmit public information about Helsinki, including topical news, events calendar and the city's main tourist attractions.
- Libraries. The web portal about the libraries network in Finland ([www.libraries.fi](http://www.libraries.fi)) would extend its services to digital TV and offer contact information, opening hours and news, search of library catalogues or "ask a librarian" service.
- Subtitles become speech. Through technology, the visually impaired could have the chance to follow foreign television programmes. Subtitles can be transformed into speech through voice synthesis.

However, four years later, when digital TV is already running, these projects have either been abandoned or are still in their very early stages. ArviD is just a memory and not even its website ([www.arvid.tv](http://www.arvid.tv)) is online. Sofia Digital ([www.sofiadigital.com](http://www.sofiadigital.com)) is another of the companies focusing more in developing interactive services.

### **3.5. YLE**

2007 was not an trouble-free year for the Finnish Broadcasting Company (YLE). The switchover and transition to digital was not easy and YLE had to face many financial problems, which even provoked the discontinuation of what was first seen as one of the major digital channels: YLE 24, an around-the-clock news channel. On 27 April 2007 the short-lived channel YLE Extra replaced YLE 24. YLE Extra was an entertainment channel that was also discontinued on 1 January 2008. Since then and until September 2008, YLE have broadcast YLE TV1+, a temporary channel that shows the same content as YLE TV1 but with fixed subtitles.

Following the paternalistic philosophy that is bound to public broadcasting, YLE was meant to lead the digital switchover. However, once again the licence model is questioned by the public opinion as more citizens decided not to upgrade their TV sets to receive the digital signal and therefore stopped paying the TV licence.

But let's see more details about the Public Service Broadcaster of Finland.

#### ***a) Mission***

The function and operations of the public broadcasting company YLE (the Finnish Broadcasting Company, Yleisradio Oy) are defined in the Act on Yleisradio IY (1380/1993), with the last amendments introduced by the Act on the Amendment of the Act on Yleisradio Oy (Act No. 635/2005 of 19 August 2005). These texts state the mission of YLE as follows:

The company shall be responsible for the provision of comprehensive television and radio programming with the related additional and extra services for all citizens on equal conditions. These and other content services relating to Public Service Broadcasting may be provided on all telecommunications networks.

The Act also specifies the requirements for public service programming:

- 1) support democracy and everyone's opportunity to participate by providing a wide variety of information, opinions and debates as well as opportunities to interact;
- 2) produce, create and develop Finnish culture, art and inspiration for entertainment;
- 3) take educational and equality aspects into consideration in programming, provide an opportunity to learn and study, give focus on programming for children, and offer religious programmes;
- 4) treat both its Finnish-speaking and Swedish-speaking citizens on equal grounds and produce services in the Sámi, Romany and sign languages, as well as, where applicable, in the languages of other language groups in the country;

- 5) support tolerance and multiculturalism and provide programming for minority and special groups;
- 6) promote cultural interaction and provide programming directed abroad;  
and
- 7) broadcast official announcements, for which further provision shall be issued by decree, and make provision for television and radio broadcasting in exceptional circumstances”.

Due to the requirements established by the European Union, YLE (and the other national television companies too) must include at least a 10% of European independent production; currently YLE broadcasts 15%.

YLE also serves the cultural diversity of Finland and, as established in requirement number four above, broadcasts in different languages. Obviously, YLE broadcasts in the two official languages, Swedish and Finnish. Before the switch-off, embedded in the normal programming there was YLE’s Swedish language TV section: YLE FST. In the digital era, FST has its own channel.

YLE also broadcasts TV news in Sámi language (49 hours in 2005), in sign language (five minutes daily) and in English with in-house produced bulletins (21 hours) and with EuroNews (63 hours). Subtitling in Swedish, Finnish and for the deaf is permanent on the digital channels.

#### ***b) Public services by YLE***

Traditionally, YLE has provided radio and television services. However, in the last five years YLE has increased its presence on the internet to the point that it has to be considered a very important sector.

As was seen before, YLE’s television operations consist of programming in one digital television multiplex covering the entire population and through this multiplex five television channels are broadcast.

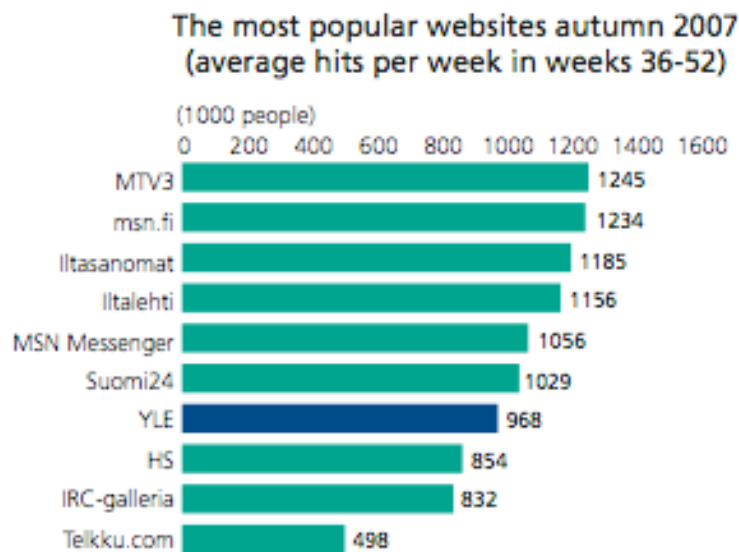
In addition, YLE offers four radio channels nationwide in Finnish and two in Swedish. Aside from those main channels, there are supplementary services: a regional network in Northern Finland for programming, 24-hour broadcasts in foreign languages, international broadcasts (via satellite and on the internet internationally in Finnish and Swedish) and a 24-hour service of classical music (digital only). The whole list of radio channels are as follows:

- YLE Radio 1 – Traditional programme channel for culture, art and factual talk, with a musical fare that extends from classical and religious to jazz, folk and the concerts by the Finnish Radio Symphony Orchestra.
- YleX – Fast-paced programming for popular culture, pop and rock.
- YLE Radio Suomi – National and regional information, news and currents affairs with a music selection that includes hit music, nostalgic pop and tuneful adult rock.
- YLE Radio Peili – A talk channel carrying news and current affairs programmes.
- YLE X3M – A Swedish-language channel for young audiences. It offers music, facts and entertainment.
- YLE Radio Vega – National and regional Swedish-language news and current affairs channel.
- Supplementary services
- YLE Classic
- Sámi Radio
- Radio Finland – International broadcasts
- YLE Mondo – Foreign programming and languages.

According to YLE, in 2006 the public service radio channels had a listening share of over 50%. The daily listening time of the population averages 3 hours 14 minutes.<sup>13</sup>

The services on the internet by YLE are diverse and make the public broadcaster's website one of the most popular in the whole country.

Table 4 Most popular websites. (Source: TNS Metrix / YLE)



On the internet YLE broadcasts current radio and TV programmes. In 2006, YLE also opened an archive service by which a whole range of radio and TV programmes can be accessed. The internet portal also offers the latest news in Finnish, Swedish and even in English.

### *c) Corporation*

Originally formed in 1926, YLE was established as private limited company. Eight years later, in 1934, it was reorganized and the State entered the picture and was to own at least 90% of the shares. The State has owned about 99.9% for decades, although according to Section 2 of

<sup>13</sup> <http://www.yle.fi/fbc/ylerradio.shtml>

the Act on Yleisradio Oy, 1993, the State minimum share of ownership was determined at 70%. Currently, the State owns 99.98% of the share, while the rest is owned by about 60 other shareholders, such as media companies, banks, the journalist trade union and associations.

YLE's administrative organs are the Administrative Council, which is the highest decision-making body, the Board and the Director General acting as a Managing Director. The 21 members of the board are elected by Parliament in its first session of the parliamentary term (terms in Finland normally last four years). The Council includes representatives from the fields of science, art, education, business and economics, as well as representatives from different social and language groups. In practice, it is determined in proportion to the parliamentary election results.

One of the main tasks of the Council is select the members of the Board. Until 1 January 2006, the Board consisted of members of YLE management, whereas nowadays, the Administrative Council annually elects YLE's Board, which consists of five to eight members, none of whom can be members of the Administrative Council or executive directors of the company.

The Act on Yleisradio Oy assigned certain duties for the Council, which in other companies would normally be handled by the Board. For example, YLE's Administrative Council decides upon issues concerning considerable restriction or expansion of the activities or significant changes in the organization of the company and on the economic and operational guidelines.

The task of the Board also includes:

- electing and dismissing the company's Director General who must not be a member of the Administrative Council or of the Board;
- electing the company's other executive directors;
- deciding the budget for the following year;
- summoning the Ordinary General Meeting and preparing the items of the agenda.

#### *d) Accountability*

The actions of the Finnish public broadcaster are controlled with two reports. Every year, the Board must submit a report of the company's operations to the Finnish Communications Regulatory Authority (FICORA). This is a general administrative authority for issues concerning electronic communications and information society services. FICORA is an independent regulatory authority subordinate to the Ministry of Transport and Communications. This Ministry prepares the legislation and duties of FICORA.

According to Section 12a of the Act on Yleisradio, the report must be submitted by the end of April every year and it "shall include the information needed for the supervision of television and radio broadcasting by the Communications Regulatory Authority. The Communications Regulatory Authority shall issue a statement to the Government about the report by the end of September".

The Ministry of Transport and Communications also supervise the diversity of the main television channels, according to the Act on Television and Radio Operations, which states that "when declaring licences open for application and granting them, the licensing authority, taking into consideration the television broadcasting and radio broadcasting of the area in question as a whole, shall aim at promoting freedom of speech as well safeguarding the diversity of the provision of programmes as well as the needs of special groups of the public". Thus, this report affects commercial and public broadcasters. The results usually show that the public service channels are significantly more diverse than their commercial counterparts.

On the other hand, the Administrative Council must report every other year, and after having heard the Sámi Parliament, a report on the implementation of Public Service Broadcasting in the previous two years. This report is discussed in Parliament and it is a qualitative evaluation of Public Service Broadcasting. It looks at programming, expenditures, audiences and activities.

### ***e) Financing***

Today the funding system is based on the Act on the State Television and Radio Fund, which came into effect on 1 January 1999 and regulates the collection of the television licence fees. A department of FICORA is in charged of collecting the fees. Television fee increases are proposed by the YLE Administrative Council and are decided by the Government. There is a VAT of 8% that applies to the television fee revenue transferred to YLE, after the deduction of the cost of supervision, collection fees and other minor items. YLE receives approximately 89% of the television fee.

Before the digital switch-off, YLE was also funded by the operating licence fees paid by the commercial television companies. As of 1 July 2002, this operating licence fee was cut by 50% in order to promote the transition to Digital Terrestrial Television. Thus, digital television operations were exempt from payment. The operation licence fee ceased to exist after the switchover to digital transmissions on 31 August 2007. To compensate for this cut in funding important increases to the television fee were applied in 2004 and 2005. As of 2007 the fee is between 208.15 and 215.40 euros (depending on the interval of payments).

The funding of YLE is in the willingness of households and business with television sets to pay their television licence fee. However, the number of evaders increased after the switch-off. A few days before the switchover at the end of September, Finland's main newspaper the *Helsingin Sanomat* reported that more than 13,000 homes would stop their TV licences.<sup>14</sup> Also, new technologies, such as watching television through a computer TV card, make it harder to catch evaders.

Under the Act on Yleisradio Oy, YLE is prohibited from broadcasting advertising in its television or radio programmes.

### ***f) Programming***

Following a general long term strategy plan (at the moment YLE Strategy 2010), the Board appoints the editors responsible for YLE's programmes and YLE's News Services, while the

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<sup>14</sup> Yli 13000 irtisanoi lupansa digi-tv:n takia. *Helsingin Sanomat* 28 August 2007.



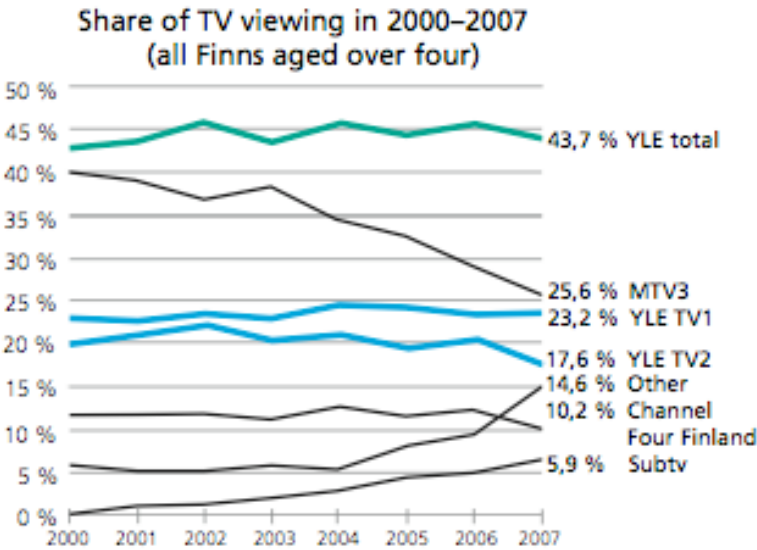
Director General appoints the heads of the programmes channels. The heads of the channels are commissioning editors who decide upon the content of their channels within the given financial and channel profile frameworks. In addition, responsible editors are appointed for the regional television news (transmitted in regional windows), the regional radio programmes (also transmitted in regional windows), religious programmes, Sámi language programmes, Internet and other services.

Programme Regulations have been defined and approved by YLE’s Administrative Council as a means of self-regulation. The latest edition was approved on 26 April 2005. These guidelines are followed in YLE’s editorial work which in itself protects against undue efforts of influencing and against undue reprimands by politicians and other decision-makers.

***g) Audiences***

Both public channels YLE 1 and YLE 2 enjoy a good market share. In 2007, both channels combined had more than 40% of the population watch YLE. 23.2% watch YLE 1 and 17.6% watch YLE 2.

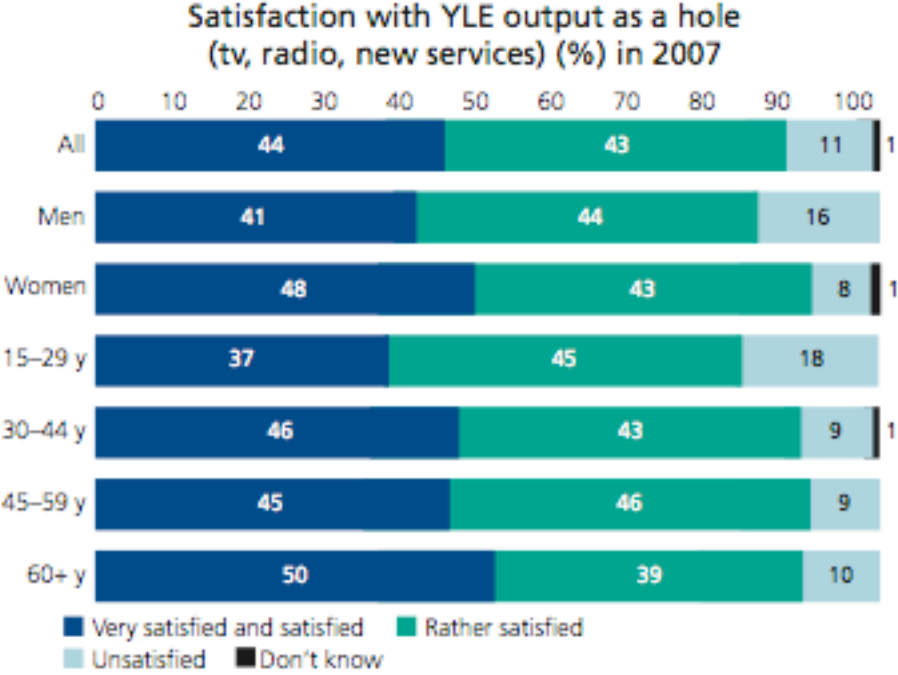
Table 5 – Share of TV viewing 2000-2007 (Source: Finnpanel Oy/ YLE)



As the graphic shows, YLE 2 has more problems maintaining a regular audience share. From 2006 to 2007 there was an important decrease which will be probably corrected in 2008 because of the broadcasting of the European Championship of Football and the Olympic Games in Beijing.

YLE also measures the satisfaction of its audience. Following research carried out by Taloustutkimos Oy for YLE in 2007, 44% of the population said they were very satisfied or satisfied and 43% said they are only rather satisfied. 11% answered that they were not satisfied with YLE services.

Table 6 - Satisfaction with YLE output as a whole in 2007 (Source: Taloustutkimus Oy / YLE)



## 4. Digital television in Spain

### 4.1. Overview

Spain was one of the first European countries to begin the process of transition to a full digital television landscape. Spain was the third country in the world to establish legislation regarding DTTV. Spanish television has gone “digital” since 1997 and there have been multiple experiences, which range from the bankruptcy of the first DTTV company (Quiero Television) to the success of pay digital satellite television with around two million subscribers today.

However, the full transition to digital television won't be completed until 2010 (not one of the first switch-offs in the EU), when the analogue switchover should be effective.<sup>15</sup>

Contrary to what it happened in the UK after the bankruptcy of ITV Digital (the BBC assumed the leadership of the introduction of DTTV in the UK), it is very difficult for RTVE to start such leadership. RTVE operates in a complicated financial situation, which seems to continually worsen. By the end of 2005, the accumulated debt of the company was over seven billion euros. Also, its audience share is decreasing. The clear consequence of this bad performance is that RTVE will lose income from its main source: advertising. This worrying forced the Socialist government to plan a deep restructuring of RTVE. The plan included the establishment of a new company, the decrease of the number of employees, and even the sell of the emblematic buildings that RTVE owned for its activities.

Therefore, since the bankruptcy of Quiero TV and the financial problems of RTVE there is no clear boost for the introduction of DTTV in Spain. Nevertheless, since 1998 the government has been in charge of implementing a national plan for the introduction of Digital Television in Spain. The programme, called *Plan Técnico Nacional de Televisión Digital* (National Plan for Digital Terrestrial Television), dates back from 9 October 1998 when

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<sup>15</sup> The switch-off date was advanced by two years (from 2012 to 2010) in December of 2004. *El Mundo*, 31-12-2004, <http://www.elmundo.es/elmundo/2004/12/30/comunicacion/1104414763.html>

Congress approved it. In 2005, the plan was modified in order to boost the implementation of DTTV in Spain.

#### **4.2. The implementation of DTTV in Spain**

Digital terrestrial television has been regulated in Spain since 1997, when a few administrative regulations were introduced in the Law 66/1997 of 30 December 1997. The main plan for the introduction of DTTV was approved nine months later. It was Plan Técnico Nacional de la Televisión Digital Terrestre, Real Decreto 2169/1998 (National Plan for Digital Terrestrial Television), approved in Congress on 9 October 1998.

This plan established the first technical specifications and coverage requirements for the switchover. It set the switch-off date for 2012. The spirit of the law follows the attempts of the telecommunications regulations in Spain, which among other targets, tries to harmonize the national law with the European Union legislation, and to finish the process of liberalization of the telecommunications (Cremades, 1999).

The law defines DTTV as a public service and this service can be provided and administered directly by the Public Service Broadcasting companies, (at a national level by RTVE or a regional level) or in an indirect way by particulars (that means that governments award the rights to administer this public service).

RTVE, as a provider of DTTV on a national level, must “actively promote the development of Information Society, participating in the technological innovation, using any new means of distribution and developing new services, including digital and online”.

One of the first decisions of the plan is the division of the spectrum. The frequencies reserved for DTTV range from 470 MHz to 862 MHz. Those frequencies are customized for a better use as follows:

- 470 to 758 MHz (channels 21 to 56). Multiple frequency network and local coverage networks with single transmitter.

- 758 to 830 (channels 57 to 65) Single frequency network regional coverage and local coverage networks with single transmitter.
- 830 to 862 MHz (channels 66 to 69). Single frequency network national coverage.

Some frequencies in the second group are reserved for national multiplex with the possibility of shifting regional coverage. There is also frequencies for regional networks with a multiplex of single frequency for each region.

The third group is reserved for the four national multiplexes of single frequency.

This complex division of the spectrum shows the importance in Spain of the regional and local networks. The use of single frequency networks also helps the creation of more channels.

Following this plan, the Government at the time granted a license to the company Onda Digital that started broadcasting in 2000 as pay TV, under the brand of Quiero Televisión. This pay TV service was supposed to boost the introduction of DTTV in Spain. It was a market-driven plan that did not offer special functions to the public service broadcaster. The frequencies were granted to the existing operators. It was a lost opportunity to democratize the television landscape, intensifying media concentration between digital operators or between digital and analogue networks. It did not permit the competition that a wider array of platforms that DTV allowed. (Bustamante, 2002)

The plan was a huge failure and in 2002 Quiero Televisión stopped broadcasting. A new strategy was needed.

### **4.3. New development plan**

This date marks the re-launch of DTTV broadcasting in Spain. The offer is pretty wide regarding the number of channels available. This was done in accordance with the

modifications to the PTNTDT made by the new socialist government elected in 2004. The Law 10/2005, approved in June 2005, reassigned the frequencies that Quiero Televisión had abandoned after its bankruptcy and advanced the switch-off date to 3 April 2010. The plan also gave a more important role to RTVE as it granted a larger number of frequencies.

After the introduction of the new plan, all the analogue broadcasters (RTVE, Antena 3, Telecinco y Sogecable) began broadcasting in digital. The “only digital” channels Veo TV and Net TV continued as before.

Two new analogue and digital channels were also granted. LaSexta started broadcasting in 2006 as a brand new channel - LaSexta gained some 5% of the audience share in 2008. On the other hand, as a result of this plan the Spanish government agreed to a change in the licensing terms for the channel Canal+ from a mostly encrypted channel into a 24-hour free-to-air channel in both analogue and digital. The new channel is Cuatro and is owned by Sogecable, controlled by the media group Prisa. It started broadcasting in November 2005 and had some 8% of the audience share in 2008.

The major criticism for this plan has been that the future digital television landscape has already been distributed among the current operators. Therefore, there is little room for new players, but this distribution allows a quicker launch of DTTV as the operators just need to shift from analogue to digital and not to re-launch a whole new service.

#### **4.4. Technical specifications**

As mentioned above, the Spanish plan sets a clear preference for the single frequency networks (SFN). The main advantage of this choice is the reduced use of the spectrum.

The technical specifications of the plan are according to the European Telecommunications Standards Institution ETSI (EN 300 744). This norm uses DVB standard and two modes 2K and 8K. The Spanish plan chooses 8K as it is recommended for large SFN. Each channel uses an 8 MHz bandwidth.

If one looks at channels according to the multiplex distribution, one sees a complicated landscape with a large array of companies with licences. The multiplexes are distributed to the licence company. By 2010 each licensor must offer four digital channels in every multiplex.

Table 7 – TV and radio channels broadcasted in DTTV in Spain

Licensor	TV channels	Radio channels	Multiplex	Frequency
RTVE	La 1	Radio 1	MFN	
	La 2	Radio Clásica	MFN	
	Canal 24 Horas	Radio 3	MFN	
	Clan TVE		MFN	
	Teledeporte		SFN (66)	834 MHz
Antena 3	Antena 3	Onda Cero	SFN (69)	858 MHz
	Antena Neox	Onda Melodía	SFN (69)	858 MHz
	Antena Nova	Europa FM	SFN (69)	858 MHz
Sogecable	Cuatro	Cadena SER	SFN (67)	842 MHz
	CNN+	Los 40 Principales	SFN (67)	842 MHz
	40 Latino	Cadena dial	SFN (67)	842 MHz
Telecinco	Telecinco	Punto Radio	SFN (68)	850 MHz
	FDF Telecinco		SFN (68)	850 MHz
	Telecinco 2		SFN (68)	850 MHz
Vevo TV	Vevo TV	Radio Marca	SFN (66)	834 MHz
	SET en Vevo		SFN (68)	834 MHz
	Tienda en Vevo		SFN (68)	834 MHz
Net TV	Intereconomía TV	Radio Intereconomía	SFN (66)	834 MHz
	Disney Channel		SFN (68)	850 MHz
La Sexta	LaSexta		SFN (67)	842 MHz
	Hogar 10		SFN (69)	858 MHz

The operators currently working on analogue (RTVE, Antena 3, Telecinco, Cuatro and La Sexta) are simulcasting their main channel until the switch-off date in 2010. On digital they are required to offer more channels reaching at least a total of four by 2010. Vevo TV and Net TV are only broadcasting on digital.

All those digital channels offer a wide diversity of programs. There are some thematic channels, such as 40 Latino (music), FDF Telecinco (film and fiction). Teledeporte (sports), CNN + and Canal 24 Horas (news), Interconomía TV (economy), but several of them (Antena Neox, Antena Nova, Telecinco 2, Veo TV, SET en Veo) offer general programming, including news, contests, documentaries and films, for example.

The table above represents the landscape of free-to-air digital channels. On pay TV, the Sogecable owned platform Canal + (now Digital +) has been the driving force in the introduction of digital TV in Spain, reaching two million households before DTTV was introduced. However, since the arrival of the DTTV, Digital + has seen how the number of its customers has remained steady, just getting 21,000 new customers in 2007.<sup>16</sup> Prisa, the big media company behind Sogecable, is seeking to sell Digital +.<sup>17</sup>

#### **4.5. The regional and local channels**

The television landscape becomes complicated at regional and local levels, with more actors appearing on the scene. It has to do with the territorial division of Spain into 17 autonomous communities. Most of those communities are divided into provinces for a total of 50 provinces across the whole of Spanish territory. The communities have their own government and have large political competence.

Each autonomous community has its own multiplex and the responsibility to manage it. Four channels are designated to each of those multiplexes - that means 17 more multiplexes and 68 channels. If needed it is possible, due to the spectrum limitations, for one more multiplex to be awarded for each community. In most of the communities, one or two channels are public. Therefore, they have launched their own DTTV services and, in some cases, such as TV3 in Catalonia, they are more advanced as TV3 is already testing high definition programmes.

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<sup>16</sup> Digital Plus gana sólo 21.000 abonados en doce meses – *PR Noticias*, 5 February 2008, <http://www.prnoticias.es/content/view/10006475/>

<sup>17</sup> Telefónica, la gran candidata para quedarse con Digital Plus – *El Mundo*, 8 June 2008, <http://www.elmundo.es/elmundo/2008/06/08/comunicacion/1212919965.html>



The multiplexes reserved for the autonomous communities have the capacity to disconnect and offer local programming in each province.

On a national level, only the multiplex of RTVE has the possibility of disconnecting the national programming and offering specific programming for every autonomy.

Table 8 – Regional TV channels broadcasted in DTTV

Autonomous Community	TV channels / (*) not broadcasting yet
Andalucía	Canal Sur, Canal 2 Andalucía, Avista TV*, Comunicación Radiofónica *
Aragón	Aragón TV
Asturias	TPA, TPA 2 *, Localia TV *
Canarias	Televisión Canaria, !2j *
Castilla- La Mancha	Castilla-La Mancha TV, Castilla-La Mancha TV 2 *
Cataluña	TV3, 3/24, El 33, K3-300, TVC HD, 8tv, EDC 2 *, EDC 3 *, 105 TV
Ceuta	Televisión de Ceuta *, Popular TV Ceuta, Localia Ceuta, Ceuta TV (Punto TV)
Comunidad Valenciana	Canal 9 (Canal Nou), Punt 2, Popular TV, LPTeVa (Punto TV)
Extremadura	Canal Extremadura, Extremadura TV, Localia TV *, Kiss TV *
Galicia	TV/A Galega, Popular TV *, La Voz de Galicia *
Islas Baleares	IB3, IB3-2 *, El Mundo TV *, Localia TV *
La Rioja	TV Rioja (Punto TV), TV Rioja-2 *, Rioja 4 (Popular TV), Rioja 4-2 *
Madrid	Telemadrid, La Otra, Onda 6 (Punto TV)
Melilla	TV Melilla
Murcia	7 Región de Murcia, Popular TV, TVM, Thader Digital, Canal 6 (Punto TV)
Navarra	Localia TV, Canal 4 Navarra, Canal 6 Navarra, Canal 6 Navarra 2
País Vasco	ETB 1, ETB 2, ETB Sat, Canal Vasco

The table shows a complex channels landscape. There is a mix of public and commercial broadcasters. Even though these channels are regional, big media groups, like Punto TV (owned by Vocento) and Localia TV (owned by Prisa), control many of the channels.

#### **4.6. Mobile TV**

Following the standards, the plan of 2005 for digital television in Spain also refers to mobile TV. The implementation of mobile TV in Spain follows the standard DVB-H.

One multiplex will be reserved for this kind of service, but so far television and phone operators have only performed around 20 tests in different cities around Spain.

#### **4.7. Coverage**

The switch-off of analogue broadcasting in Spain will be 3 April 2010. By that date digital broadcasting must be available for 95% of the population for the commercial channels, and for 98% of the population for Public Service Broadcasting. Those dates were set by the Plan Técnico Nacional de la Television Terrestre on 29 July 2005.

Before that date, there are several milestones. The coverage of DTTV must reach:

- 80% of the population before 31 December 2005
- 85% of the population before 31 July 2007
- 88% of the population before 31 July 2008
- 90% of the population before 31 December 2008
- 95% of population for commercial broadcasting and 98% for public service before 3 April 2010

The first two milestones have been reached. By July 2007, digital broadcasting reached 85.38% of the population in Spain. In July 2008, it will reach the required milestone. According to recent studies, some 65% of the Spanish households have access to digital television. More than half of them do it through DTTV and the rest does it through cable or satellite. Also, 90% of the television sets that are currently sold are prepared to receive digital television.<sup>18</sup>

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<sup>18</sup> El 65% de los hogares accede a la programación de la TDT, *El País*, 24 June 2008.

#### **4.8. RTVE**

In spite of the experts' claim that RTVE should be the leader of the transition to digital broadcasting, the truth is that the organization cannot afford the switchover.

In 2006 RTVE celebrated its 50th anniversary as a public broadcaster of radio and television in Spain. Until 1990, RTVE was the only national television broadcaster in Spain; first with only one channel and on 15 November 1965 a second channel. Nowadays, these two channels are known as La 1 (primary channel) and La 2 (secondary channel).

With the start of commercial television in Spain in the nineties, RTVE also expanded with new channels broadcast via satellite. These extra channels specialize in topics such as sports (Teledporte), documentaries (Grandes Documentales) or news (Canal 24 Horas). These channels will be the core of the digital package launched more than a decade later.

Apart from the content broadcast nationally in Spain, RTVE has maintained an international channel since 1989 that is broadcast globally. Its programming is a redistribution of the content broadcast nationally in Spain.

According to TNS Sofres, by the end of 2007 RTVE was the third popular broadcaster - 17.1% of the audience watched the first public channel while only 4.7% watched the second channel. This data shows an annual decrease for both channels that has been continuous since the arrival of the commercial channels. La 1 was the third national channel after Telecinco and Antena 3.

##### ***a) Mission***

The law that reformed the status of RTVE in 2007 established a new mission and new functions for the public broadcaster. As a public service broadcaster, some of the most outstanding functions that RTVE must accomplish are:

- Guarantee objective, truthful and diverse information, done with political independence;
- Facilitate a democratic debate and freedom of speech;

- Promote democratic participation;
- Promote territorial cohesion and the linguistic and cultural diversity of Spain;
- Encourage the knowledge and information about the European Union and its Member States;
- Distribute internationally radio and television channels to promote the different languages and cultures in Spain, and also to support the Spanish citizens living in different countries;
- Offer diverse programming, genres and events target to every types of audiences;
- Promote and distribute Spanish cultural productions;
- Contribute to the social integration of minorities.

In the legal text, there is also a special mention to the promotion of the Information Society. In order to achieve it, Corporation RTVE will participate in innovations and different distribution technologies and will develop new interactive services.

### ***b) Corporation***

The legal status of the Corporation RTVE is that of a wholly state-owned public limited company. Nevertheless, RTVE is independent of direct control by the government .

Due to financial problems and an enormous deficit, RTVE underwent an important restructuring in 2007, assuming a new identity as a result of the Ley de la Radio y la Televisión Estatal (Ley 17/2006; Law of State Radio and Television) of 5 June 2006.

In accordance with this law, the previous RTVE Public Body and the companies TVE S.A. and RNE S.A. were dissolved. On 1 January 2007 the RTVE Corporation came into existence. This corporation carries its function through two subsidiary companies: Televisión Española (TV) and Radio Nacional de España (Radio) - RTVE Corporation totally owns these two companies.

RTVE is administered and governed by an Administrative Council formed by 12 people chosen by the Parliament: eight by the lower house (Congress) and four by the upper house (Senate). Among those 12 people, one President is elected in the Congress by a majority of two-thirds. The President and the members cannot be part of the Administrative Council for more than six years.

The Administrative Council has strategy and management functions and must accomplish the mission, goals and programming principles established by the Corporation.

In support of the Administrative Council, there are two organs:

- The Adviser Council is composed of 15 members, designated by different political and cultural organizations representing different social groups. This Council supervises that those social groups are properly represented in the public channel's programming. It also helps establishing the rules regarding the accepted advertising.
- The News Councils are formed by professionals working on the broadcaster's news services. Their function is to guarantee and promote the independence of these services. It also advises about the editorial line and the style guide.

### ***c) Funding***

The funding of RTVE is rather peculiar in the context of European Public Service Broadcasting. There is not a licence fee system and most of the funding comes from advertising. The amount of advertising in the public channels is as much as in any other commercial channel.

It is a model of double funding:

- a) Income by advertising
- b) Public funds

This particular model created a long-term debt, which by 2005 was over seven billion euros.

The income from the national state budget is also meagre. Only 4.13% of the income in 2005 came from the state. The budget that year was of 1.5 billion euros. In the eighties, before the commercial channels were launched, there were times of no subsidies because the income from advertising was sufficient.

This funding system makes RTVE a direct competitor of the commercial channels. Apart from the function of delivering the proper functions of Public Service Broadcasting, RTVE must appeal to a large audience to compete with commercial channels for the required share of advertising. Over time this has created several conflicts. In 2003, after several complaints by the commercial channels, the European Commission decided that the Spanish state could not be the guarantor of the debt generated by RTVE. This decision aggravated the financial situation of the public broadcaster.<sup>19</sup>

The amount of advertisements on the first public channel (La 1) is 11 minutes per hour as of 2008. By 2010, that amount must be reduced by two minutes - no more than nine minutes per hour will be allowed.<sup>20</sup>

#### ***d) Accountability***

The latest Law of State Radio and Television briefly mentions three different points of control of RTVE's activities.

First, the public broadcaster must annually report to the Parliament about its activities and how the public service function was realized. Secondly, the Spanish Court of Audit (Tribunal de Cuentas) controls the economic and financial activities of the Corporation.

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<sup>19</sup> Bruselas prohíbe al Gobierno avalar la deuda de RTVE, *Cinco Días*, 15 October 2003, [http://www.cincodias.com/articulo/empresas/Bruselas/prohibe/Gobierno/avalara/deuda/RTVE/cdsemp/20031015cdsdiemp\\_8/Tes/](http://www.cincodias.com/articulo/empresas/Bruselas/prohibe/Gobierno/avalara/deuda/RTVE/cdsemp/20031015cdsdiemp_8/Tes/)

<sup>20</sup> TVE tendrá que reducir su publicidad a nueve minutos por hora en 2010, *El Mundo*, 17 June 2008, <http://www.elmundo.es/elmundo/2008/06/17/comunicacion/1213695995.html>

Finally, the law also mentions the external control over the programming and the public service activities by an independent authority, similar to the Office of Communications in the United Kingdom or the Conseil Supérieur de l'Audiovisuel in France. However, and this is a unique case in the European Union, Spain still lacks such an authority at a national level.<sup>21</sup> Nevertheless, regions like Catalonia and Andalucía have already created their own regulatory agencies. The Catalan Audiovisual Council (CAC) is the independent authority that regulates audio-visual communication in Catalonia. Its objective is to make sure that the regulations applicable to suppliers of audiovisual services, both public and private, are complied with.

#### ***e) Digital services by RTVE***

The digital channels offered by RTVE are based on the previous satellite broadcasting system. Like the other operators, the public broadcaster started DTTV broadcasting on 30 November 2005. Until the analogue switch-off in 2010, the two general channels (La 1 and La 2) will broadcast in both analogue and digital formats. Apart from those, there are four new *only digital* channels: Canal 24 Horas, Teleduarte, and Clan TVE. In spite of the possibility of broadcasting more hours, there is very little new content, except for news and sports.

- Canal 24 Horas. The 24-hour news channel started broadcasting via satellite on 15 September 1997. With satellite, this channel can be watched in America, Europe and North Africa. The news bulletins produced by this channel are also broadcast to Asia and Australia through the international channel, Canal Internacional. Canal 24 Horas mainly uses the same resources as the analogue's first channel ("La Primera") for the production of its content. This content is news bulletins around the clock, broadcast in Spanish in 30-minute slots. There are also some other magazine-style programmes made, which are specialized in science, culture, history, news or information related to the European Union.

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<sup>21</sup> La Autoridad Audiovisual, *El País*, 13 December 2006, [http://www.elpais.com/articulo/opinion/autoridad/audiovisual/elpepiopi/20061213elpepiopi\\_14/Tes/](http://www.elpais.com/articulo/opinion/autoridad/audiovisual/elpepiopi/20061213elpepiopi_14/Tes/)

- Teledeporte. This sports channel has already developed a long history since its launch on 14 February 1994 to broadcast the Winter Olympic Games in Lillehammer (Norway). As the other thematic channels of RTVE, it was first broadcast via the Hispasat satellite. It was also the first channel on Spanish Television to broadcast in high definition 16:9 format. The content of Teledeporte is based on live sporting events, recently recorded events and archived programmes. With the start of DTTV, Teledeporte aims to broadcast 48% of its content live. Currently RTVE holds the rights for major sporting events, such as the European Athletics Championship, the Euroleague of Basketball, the World Swimming Championship, the Tour de France, and the Davis Cup, Australian Open and Roland Garros tennis tournaments, among others. Teledeporte also has the rights to broadcast the national leagues of basketball, handball and volleyball. However, Teledeporte cannot broadcast any of the top and most popular sports events. None of the major football championship can be seen, and neither can Formula 1 and most of the golfing tournaments - RTVE only broadcast some of these events due to a special law (ley de interés general). Champions League and Spanish football are only broadcast in those parts of Spain without a regional channel.
- Clan TVE. This channel is targeted at children up to the age of 13 years. It broadcasts from 7 am until 9 pm. The content of Clan TVE is mostly based in Spanish and European productions, and it has educational purposes. As described by RTVE, Clan TVE tries to “stress ethical and democratic values, friendship, partnership and environment preservation”. During the weekends, this channel broadcasts special content. This content is based on archived and previously broadcast programmes.

This brief description of the digital programming of RTVE shows that there is very little original content. There is little investment in production and most of the programming relies



upon the archive and the news department, which was already established for the analogue channel.

It is worth mentioning that apart from those channels, RTVE produces two more thematic channels that are not distributed through DTTV, but via satellite and are embedded in the channel portfolio of Digital+. These channels are DocuTV (documentaries) and Canal Clásico (classical music).

### *f) Radio*

Digital radio broadcasting suffers from the same lack of investment as television. No new channels have been implemented. The same radio stations available in the analogue world are available on the digital platform. Nevertheless, there is an obvious increase in sound quality.

### *g) Interactive services*

The lack of investment is even more evident when considering the launch of interactive services produced and delivered on the digital platform of RTVE. It could be said that these kinds of services are “on hold” until the number of digiboxes increases.

According to the Foro Técnico de la Televisión Digital, RTVE is willing to develop more interactive services based on MHP (Multimedia Home Platform), such as weather forecast or traffic information. Nevertheless, the success of these services does not appear possible in the near future. There are not many MHP compatible digiboxes being sold and the interactive services offered are few. As of 2008, the broadcasting of RTVE includes several interactive services:

- News
- Market information
- Weather forecast
- Teletext
- Electronic Program Guide

- Traffic and roads information
- Employment offers

However, the interactivity of those services is arguable as they are just information services, much like any other Internet portal. One of the most innovative services is electronic banking and gaming, but those services are only offered locally by other operators. RTVE does not include any of these services yet.

#### ***h) Internet***

The presence of the Spanish public broadcaster online has been long overdue. For years it only published a basic website with programming information. In May 2008, Corporation RTVE launched a new web portal that brings the broadcaster into the web 2.0 trends.

The site, still in beta phase, includes everything expected from this type of portal: news items, videos, audio clips, blogs, and visitor participation. It is also possible to watch selected programmes and news broadcast on the television channels. The Director of Interactive Media Rosalía Lloret explained that the role model for this project is the BBC website. Other scheduled works include the digitization of the archive to offer hundred of hours of video through the website.

Like with the television broadcasting, the source of income from the RTVE website will be advertising and public funds. At first sight the website will be like any other commercial website.

## 5. Public Service Broadcasting in transition

### 5.1. Introduction

On the eve of the Information Society, technological innovation challenges the role and position of Public Service Broadcasting, as it is understood in Western Europe. Once again it must reinforce its identity. In a media landscape with an abundance of digital channels, new services and personalised content, PSB is under constant pressure to legitimate its public funding and redefine its remit. The rationales for PSB have remained relatively unchanged: contributing to diversity and quality in broadcasting, providing universal access to independent information, offering a platform for debate, and contributing to national culture and identity (Leurdijk, 2007).

Now in the era of digitization, television cannot be put aside and PSB needs to readjust itself to the new situation. As explained in Chapter 2, the advantages of digital television are obvious. Since the 1990s, there has been an agenda for the switchover process in every state. Public authorities are taking an important role in the development of DTV and new digital interactive services, and the consequent need for public policy to remove obstacles to its development, promoting openness, interoperability and freedom of choice. The European Commission has emphasised the role of national governments in the DTV switchover process and has recommended that Member States create transparency as far as the conditions for the envisaged switchover are concerned (Marsden and Ariño, 2004). Public authorities could intervene with the objectives of:

- Ensuring universal coverage and affordability
- Guaranteeing the continuity of PSB
- Promoting digital content production

- Defining flexible and realistic roadmaps
- Setting a switch-off date within a clear spectrum policy

Therefore, in spite of the controversy and the pressure from the commercial broadcasters, there has always been a clear willingness to maintain Public Service Broadcasting with an important role in the new digital television landscape. It can be said that, yes, there is something left to defend: PSB – though weakened and suffering from an identity crisis – in most cases retains a powerful position on the broadcasting scene and enjoys strong audience support (Jakubowitz, 2007b).

## **5.2. Why DTTV?**

There are different platforms to distribute digital television: cable, satellite, Internet, but DTTV is the most logical and natural step for Public Service Broadcasters as it represents a continuation of free-to-air broadcast television. Without DTTV, Public Service Broadcasters would be totally dependent on cable and satellite operators for distribution of their services, or, as emerging future options, on internet and telephone operators (Hujanen, 2004).

There are no other alternatives: cable and satellite do not guarantee universal access. Internet is not yet an alternative without a better implementation of broadband (ADSL) and mobile television through 3G and 4G remains to be seen if it can be an alternative. DTTV is the most feasible way to reach people and it is the medium that requires a less dramatic change towards the digital world. Now and in the future, technology offers increased opportunities of delivery. Nevertheless, it seems that most European broadcasters, with the active support from their governments, have selected to invest in DTTV as their gateway to digital transfer. The argument is that television, as the most common user interface in homes, should be used to connect people with the new digital infrastructure of the Information Society. Making that transformation possible requires the conversion of the old terrestrial networks to digital (Hujanen, *op. cit.*). DTTV is an investment in continuity.

### 5.3. The digital challenge

Going digital and keeping the traditional free-to-air transmission infrastructure are major challenges that Public Service Broadcasters are facing. Papathanassopoulos (2007) mentions some of the funding problems and challenges PSB face:

- a. The introduction of digital television means more costs in the short and medium term as public broadcasters purchase new equipment, to make investments in infrastructure and continue to operate older equipment, due to their public service remit, until an eventual analogue switch-off. The numerous services launched by private companies, which do not have similar obligations, will erode further the position of public broadcasters, and hit their audiences share and commercial revenues.
- b. The growing cost of programmes, such as films and sports, is also adversely affecting the public broadcasters' financial position. This is due to the intense competition from private broadcasters. The result is a high increase in programme prices and has forced public broadcasters either to try to outbid them for the remaining programmes - directly affecting the financing and production of other programmes - or to lose these and see their viewing share and advertising revenue drop even lower.
- c. Public broadcasters need to allocate considerable amounts of money to convert to digital (infrastructure investment), where most of their spending in general goes into programming, with what are essentially stagnant revenues. Moreover, this leads the public broadcasters to establish new channels, which do not necessarily generate income.

The countries in Europe are facing these challenges in different ways. The difficulties associated with the switchover imply that digital television will evolve along different paths in different countries. Transition periods from analogue to digital broadcasting are expected to be quite long in many countries (Aslama & Syvertsen, 2007). By the end of 2007, digital

television reached over 80 million European households, but satellite remained the prominent digital platform, accounting for some 40% of the market.

Those numbers show the difficulties that some public broadcasters have going digital. Aslama and Syvertsen mentioned the cases of Greece and Hungary:

”The Greek broadcaster ERT holds a licence for a digital platform, but this platform exists on paper only, as there are insufficient resources to fund the switchover. In Hungary, digital satellite television is well under way, with more than 80 television programs, but national public service programs and the national commercial programs are not part of the offer.” (Aslama and Syvertsen, 2007, p. 172)

However, most countries are willing to face those challenges and are encouraging the switchover. Aslama and Syvertsen (2007) and Hujanen (2000) identify two main strategies for public broadcasters in the digital environment: the development of thematic (target) channels, and so-called enhanced television (additional interactive services). The point of departure for the digital transition to many public service television broadcasters, from the BBC to Germany's ARD, Sweden's SVT to Finland's YLE, seems to be the following: they simulcast existing analogue channels and add new thematic ones to their digital channel bouquet. Most of the new channels seem to avoid challenging commercial competitors head on, as they focus on informational and educational genres (Hujanen, *op. cit.*). However, those new channels see very little original content, if any at all. Sports, news, cultural and children's channels are the regular choices for programmers, but their content is usually based on archive or external productions.

Although the new digital channels are certainly extending the public service output, many worry that the development towards thematic channels may be detrimental to public broadcasting. Thus, Hujanen (*op. cit.*) claims that generalist channels should remain an essential feature of the public service digital supply and that this is necessary, if Public Service Broadcasters are to act as a factor of social cohesion.

The second main strategy is enhanced television, i.e. content coupled with additional services. These may include communicative features (chats), entertainment (voting or participation in games from home) and transactions such as TV shopping. Interactive

possibilities are more relevant for some public service programming: whereas news and weather, sportscasts, studio discussions, reality programmes, game shows and advertisements are ITV ready, dramatic content is much more difficult to enhance. This may lead to some forms of programming being prioritised at the cost of others.

However, this second strategy is still far from success. Not many interactive services are implemented and there are not many digiboxes with the capacity to receive these services (MHP compatible). Many of these services can be found on the internet, which is a far more appropriate platform than television. More original interactive services have been tried out. In Finland, YLE broadcast an interactive drama series for a month in 2000. It was an experiment to try out off-broadcasting-time possibilities, but these are just experiments far from having broad implementation.

#### **5.4. Towards Public Service Media**

In their paper, Aslama and Syvertsen (2007) explain that the European Broadcasting Union argues that the traditional idea of universality may need to be rethought in the new era – not just universality of the contents as manifested in the traditional generalist channels, but also universality across the full portfolio of services, some of them specialized or tailored for specific audiences. The EBU seems to want it all: it maintains that the elements of the public service content-strategy in a digital environment should include 1) full-scale and distinctively public service content and programming; 2) traditional generalist channels also in new multimedia environments; 3) new elements in existing concepts; and 4) new interactive services, as well as services for the on-demand environments.

Many analyses of digital television tend to end with the same conclusion, that the transition from analogue to digital amplifies rather than reduces the need for content regulation. Regulation in the form of quotas and general remits is not sufficient, and may even be counterproductive as it encourages media companies to spread the resources thinly instead of investing in original productions. Generally the boom in digital channels is turning content and talent into scarce and expensive goods and the problem in the future may be to fund the

regular services, and not just the new ones. EU regulations do not seem to rule out the possibility that public broadcasters may develop pay-TV-channels in order to obtain new revenue, but the exclusivity of the services could lead to claims that public service is failing in universality.

Jakubowicz (2007b) also recalls the conference on *The Key of Public Service Broadcasting in European Society in the 21st Century* organized by the Dutch Presidency in September 2004. Some noteworthy conclusions were adopted then.

- It is essential that Public Service Broadcasters are able to reach all sectors of society. To ensure universal access, a relevant mix of new and traditional media platforms is needed. The remit for Public Service Broadcasters should therefore be independent of the delivery method.
- The activities of Public Service Broadcasters are integral to the European Union's goal to become the most competitive and dynamic-based economy capable of sustainable growth with more and better jobs and greater social cohesion. Public Service Broadcasters should drive innovation. Developing a high-quality range of services will stimulate growth in knowledge-based economies, enabling related objectives such as life-long learning.
- Public Service Broadcasters play a crucial role in fostering cultural diversity across an enlarging European Union. They stimulate communities to discuss, thus creating greater social cohesion with deeper mutual understanding.
- Concentration of media ownership within the European Union is undesirable. Public Service Broadcasters enhance media pluralism, with a mix of quality, broad-based programmes, as well as specialised content.
- Secure funding for Public Service Broadcasting is essential. It should be written into law, at both the national and European level. This is vital to ensure that Public Service Broadcasters serve the democratic, social and cultural needs of all societies, in accordance with the Amsterdam Protocol.



- All Member States need to ensure that their Public Service Broadcasters are editorially independent of political influence. They must have the necessary resources to fulfil their public service obligations-
- Public Service Broadcasters have a duty to demonstrate their value to society within their respective states.

The switchover comes at a time when the ways of consuming media are rapidly changing. Audiences are shifting from being passive receivers to being active agents who select when, how and what television they consume - and the offer is wide to satisfy those demands.

The scholars, practitioners and policymakers that participated in the RIPE@2006 conference in the Netherlands went beyond the switchover and stated that the core challenge facing public broadcasting today is the transition to Public Service Media (PSM). In a book inspired by the conference, Jo Bardoel and Gregory Lowe underline the necessity of moving beyond the transmission model that has deeply conditioned professional thought in broadcasting. In the multimedia, digitized environment public service providers must mature a character of thought that privileges being effective public service communicators (Bardoel & Lowe, 2007).

Therefore, following this line of thinking means a need for focus on demand-oriented approaches to service and content provision rather than the supply-orientation characteristic of the past. Policy makers and programmers must develop strategy and tactics for cross-media and cross-genre content that is popular but still distinctive when compared with the commercial offer, and ensuring efficiency and effectiveness as the twin requirements for success.

Karol Jakubowicz (2007c) participates in this new approach and in his article *Public Service Broadcasting in the 21st Century* explains a series of new tasks PSB must focus on to embrace the PSM remit. To continue to adequately serve political citizenship and democracy, it must take on new tasks, including:

- Informing citizens of the work of international organizations
- Contributing to creating a public sphere and elements of a civil society at the regional, continental and global levels
- Serving as a watchdog of international and global organisations
- Developing social capital and a sense of community and co-responsibility for the nation-state at a time when cyberspace allows individuals to participate in virtual communities and become detached from their own societies and nations.

In the field of culture, new tasks stem from the process of globalization, migration, and the increasingly multicultural nature of many societies with the need to promote intercultural and inter-religious dialogue and understanding among peoples:

- Serving minorities and immigrant communities in a way that satisfies their cultural and linguistic needs, but does not prevent their integration with the rest of the population.
- Creating a sense of affinity and understanding with the people of other countries in the region, especially if the country is involved in some international integration scheme.
- Promoting intercultural and inter-religious dialogue at home and internationally.
- Promoting acceptance of, and respect for, cultural diversity, while at the same time introducing the audience to the cultures of other peoples around the world.

In relation to education, PSM must contribute to:

- Life-long learning systems
- e-learning
- Adjusting educational content to the requirements of the 21st century

Finally, PSM must counteract the undermining social cohesion that new technologies could create, especially the internet. PSM must promote e-inclusion and combat the digital divide. This mission involves:

- Playing a leading role in the digital switchover.
- Being available on all digital platforms, and thus attracting people to them.
- Supporting traditional broadcasting content with internet and interactive resources.
- Providing multimedia interactive services, independent and complimentary web services.
- Actively promoting digital media literacy and awareness of the tools of the information society, in particular the use of internet.
- Providing content in local and minority languages in order to encourage minorities to use the tools of the information society, as well as for groups neglected by commercial content providers.

This way Jakubowicz (2007c) sets a new array of tasks that goes beyond the traditional television broadcasting and that implies a deep transformation of the Public Service Broadcasters. From being just broadcasters they are gradually transitioning to be providers and aggregators of public value content for diverse and digital platforms (Leurdijk, 2007). National governments in Europe have allowed Public Service Broadcasters to expand into the digital domain, based on the mission that they need to bring their content to the public wherever that public goes and in whatever way it finds most suitable (Leurdijk, op. cit.)

Public Service Broadcasting will find its role and place in the Information Society. In the European countries there is the willingness for this to happen, but that will require an important transformation and embracing of new technologies to serve on a new remit where there is public service beyond television broadcasting. The key question will be if PSB will be able to reach an increasingly fragmented audience and a wider media market place.

## 6. Conclusions

The development and implementation of digital television broadcasting was a necessary and unavoidable step. The advantages of the digital transmission are too great to be ignored, in terms of image and sound quality, interactivity possibilities and better use of the electromagnetic spectrum.

For public broadcasting, digital television represented the major technological challenge it needed to face. Not only because of the important infrastructure investment, but also because digital television is changing the way audiences watch television. There is a new array of new media that allows the user take control over the ways media is consumed. Viewers take a more active role and demand what they want to watch, instead of being just receivers. Also, public broadcasting cannot be limited to simple television broadcasting. It must expand its functions to other types of media and welcome interactivity.

In a certain way, the switchover has arrived at the worst possible moment for public broadcasting. It does not only represent a technological innovation, but it also means an “identity crisis”. Public broadcasting needs to rethink its mission and update its functions.

The comparative study between the public broadcasters in Finland and in Spain supports this idea. Both public broadcasters have been and still are forced to rethink their models. The structure of RTVE was fully renovated, establishing a new corporation to ease the severe financial problem it is going through. For YLE, the switch-off in August 2007 resulted in several thousand people cancelling their television license.

RTVE and YLE operate in very different ways. YLE is based on the traditional license fee funding, while RTVE needs advertising as its main source of income. This is a great difference that makes YLE’s programming seem like a pure public service, rather than RTVE’s programming, which is seen closer to its commercial competitors.

One of the lessons we can learn from the RTVE switchover is that the process of digitization cannot be trusted to the market forces. That was the case of the first plan for the digital terrestrial television. Pay TV was trusted as the main force behind the introduction of DTTV. However, the chosen operator went bankrupt in less than two years. The renewed plan of 2005 gave more importance to RTVE. Nowadays the switchover is rolling in Spain at a good pace and it seems the switch-off date of 3 April 2010 is achievable.

Another of the lessons of the comparative study is that DTTV is the only choice for the digitization of the public broadcasters. Satellite and cable are unable to guarantee the service, while DTTV represents the less dramatic transition.

The television landscape in Spain is also much more complicated than in Finland. That has much to do with the political and social organization of both countries. In Spain there is a major emphasis on the regional and local governments. They have the ability to manage the frequencies allocated for regional television. This is provoking the creation of dozens of television channels. However, the ownership of those channels is much in hands of a few big media companies. In Finland, a much smaller country, regional and local television is almost non-existent.

The comparative study shows how YLE and RTVE are extending their boundaries beyond traditional television broadcasting. Recently, RTVE joined the internet with a renewed website, following the web 2.0 trends. In Finland, YLE's website is one of the most visited in the country. Both, YLE and RTVE, broadcast their programmes and archive on their websites.

The Finnish case demonstrates that a smooth switchover is possible, without dramatic changes for the citizens. Some viewers hesitate to accept the change and to acquire a digibox. However, viewers have easily understood the advantages of DTV and have been tempted by its new channel diversity.

On the contrary to the Spanish case, it is clear that in Finland, free-to-air broadcasting has been the major force pushing the switchover process. Perhaps this is in an indicator that Public Service Broadcasting enjoys better programming than in Spain. A heavy load of commercials and the loss of rights to major sports events and films have easily made Spanish viewers drift to pay TV.

After the switch-off, Public Service Broadcasting will still need to respond to many new challenges. There will be technological challenges like high definition broadcasting. Although not as big challenge as the transition to digital, the broadcasting in high definition will require more investment in infrastructure by the broadcasters. Not only then, also viewers will need new television sets. But it is likely that viewers will demand high definition content soon. High definition ready televisions sells are ongoing and increasing rapidly. Public broadcasters will need to keep up with this situation.

PSB will face not only technological challenges. There are new ways of consuming television. Video-on-demand over the internet is still at its early stages, but it is getting popular. Viewers are no longer waiting for their favourite program to be broadcasted, but they are downloading it (legally or not).

PSB needs to pay attention on the development of interactive services. These services should be available for everyone and promote social inclusion, regardless age, gender and educational differences. In this sense, these interactive services might prevent the digital divide. But also they might easily increase it, if they are not implemented properly. For example, a good question is what technological standards can be used so everyone has access to these services.

One more question will be if PSB can benefit in those cases where the governments that sell off the new availability of the spectrum. Will part of those benefits be reinvested on PSB?

There are still many open questions for PSB in the near future. It is still to be seen if PSB in a digital environment can help to the diversity of the television landscape or if PSB will be one more actor in a competitive commercial world. This last situation has already been hinted in Finland, where many voices have suggested in the press that only those who want to watch PSB should pay for PSB, as it would be any other commercial channel package.

In spite of all difficulties, public broadcasters are slowly reaching digitization and creating a new remit. Audiences still look at the public broadcaster with high respect. For example, news services are highly trusted. However, public broadcasters cannot survive by merely renovating themselves. In the Information Society, instead of the traditional paternalistic perspective, audience will have the power to decide if Public Service Broadcasting is needed.

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