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Switching-off Analogue Terrestrial Television Signals: a Plea for User-Oriented Strategies

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Abstract

This paper is a reflection of the research that has been carried out in preparation for the analogue switch-off in Flanders (Belgium). The European Commission has urged all Member States to switchover from analogue to digital terrestrial television by 2012. The Flemish Government has decided to start the migration process before this date. In this article we pay attention to the switch-off plans and strategies in Europe and we assess the implications of the digital switchover. Although there is only a minority of antenna viewers in the Benelux, the experience of the switch-off in The Netherlands shows that a well-developed information campaign should be an essential part of the analogue switch-off strategy. In order to prepare this strategy, the Flemish Government was eager to gain a thorough insight into the present users of analogue terrestrial television. This article reports on the research that has been conducted into the needs and expectations of current antenna viewers, in preparation for the analogue switch-off strategy that will be set up by the government.

Introduction

When talking about the digital age, the digitisation process of the television landscape catches the eye. Dependent on the specific characteristics (geography, existing infrastructure and business models behind that infrastructure) of each Member State, the transformation from analogue to digital television in Europe has been initiated from one of the traditional transmission channels (terrestrial, satellite or cable). Digitisation has now reached a crucial phase, i.e. the replacement of the analogue terrestrial system by its digital equivalent. European countries are being prompted to switchover from analogue to digital terrestrial television by 2012. This analogue switch-off has far-reaching consequences for both users and providers of television, particularly for the public broadcasters.

Commercial players in the television landscape could profit from the rise of digital television by providing the public with a more diversified range of content and services, specified for the target groups who are of greatest interest to them (i.e. for advertising purposes, etc.). Public broadcasters cannot simply follow the same strategy. Because of their mission statement and the fact that they are funded with public resources,

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one of their primary goals is to reach everyone in society ('universal access'). The process of digital switchover puts this principle under pressure. People who only watch television via analogue terrestrial television risk being excluded if no specific strategies or measures have been taken.

Some of the European Member States will not wait until the 2012 deadline to switch off analogue terrestrial television. Countries such as Luxembourg, Sweden, Finland, or Andorra already switched off their analogue antenna signals as well as The Netherlands – a country that very much resembles the Belgian landscape when it comes to the penetration of transmission infrastructure – did on December 10th 2006. In Flanders (the northern part of Belgium) the analogue switch-off is planned to take place before the end of 2008 (November 3rd 2008). The experience of the switch-off in The Netherlands, but also in EU member states as Sweden or Finland show that a well-developed information campaign must be an essential part of a successful digital switchover strategy.

The main focus of this article is the discussion of research that has been carried out by order of the Flemish government to obtain extensive insights into the profiles of current users of analogue terrestrial television, in preparation for the switch-off campaign and strategy in Flanders. Before elaborating on this research, however, some light is shed on the role of government and the public service broadcaster (PSB) in the digital context, and a more generic view on the process of the analogue switch-off, plans and strategies in Europe. These two issues need some further clarification for a good understanding of this 'switch-off process' from a policy point-of-view. In combination with the review of the results and methodology in the Flemish case, the paper aspires to be a valuable source of inspiration for other countries or regions in their development of strategies for achieving a successful analogue switch-off.

Television in the digital era: PSB and universal access

The migration of 'traditional television' towards DTV (interactive digital television) offers new possibilities in terms of interactivity and additional services, but entails some potential pitfalls as well (d'Haenens & Bink, 2001). Several questions arise: Is every citizen able or willing to make the switch to a complete digital television landscape? What is the role and responsibility of the public broadcaster in this digital era, to ensure that certain citizens are not excluded? Which values have to be taken into account?

From TV to DTV

European television viewers are confronted with an increased offer of platforms of (pay) television in the last few decades. The traditional television landscape in many countries came under pressure from the combination of increasing competition, new distribution channels and the digitization process (Dahlgren, 2000), making them evolve from often monopolistic structured television markets to highly competitive television markets. For example, in southern European countries terrestrial or satellite pay television harvested on their 'first mover advantage' (which was a clear advantage of course since cable roll-out would have been very extensive in these countries) for a long time. In other countries, for example in the Benelux, cable transmission was always very dominant and, as a consequence, the local cable company had a monopoly on both viewers and content providers (Adda & Ottaviani, 2005). The introduction of satellite television and terrestrial television has thus turned the market upside-down in the Benelux. People nowadays have the opportunity to choose between different delivery platforms, which leads to growing competition.

When talking about delivery platforms, three different broadcast technologies for television signal transmission are traditionally distinguished: terrestrial, cable and satellite (Pagani, 2003; De Grooff, 1999: 7). Terrestrial is the oldest and most commonly used transmission technology. The signal can be captured by means of a simple roof or in-house antenna, but due to spectrum restrictions, only a limited number of channels can be made available. To subscribe to cable television, a connection to a dedicated cable network is necessary. Due to the high capacity and the low level of noise and electromagnetic interference, this technology allows for the distribution of different kinds of information. In the late '80s improvements in satellite technology led to the rise of commercial satellite operators that provide uplink connections to broadcast satellites at a cost that was affordable for a medium-sized television company. For the viewer, subscription to satellite television services requires the investment in a satellite dish and a dedicated receiver, which could create both an economic and a practical problem (Tadayoni, 2006: 106-109).

To migrate form the 'old television medium' to the digital era, digital equivalents were required for each of these 'traditional transmission platforms': digital terrestrial television (DTT/DVB-T), digital cable (DVB-C) and digital satellite (DVB-S) (De Grooff, 1999: 7) were accepted as European transmission standards for the different platforms. In addition to these more 'classical' technologies, television is nowadays also offered by means of a broadband Digital Subscriber Line (DSL) which allows for the (IPTV-)transmission of a digital video signal over a standard telephone line. The current penetration of this technology is still quite

low, and only moderate growth is anticipated in the near future (Gawlinski, 2003: 56-67; Adda & Ottaviani, 2005; OBS, 2007).

Television transmission has clearly entered the digital era, entailing both new opportunities, challenges as well as pitfalls (d'Haenens, 2001: 116) for all players involved in this highly competitive environment. Not in the least for public broadcasters.

The role of PSB in the digital era

For the time being, the analogue terrestrial television viewer still receives a basic programme range by means of the analogue terrestrial signal. The migration process from analogue terrestrial to digital terrestrial – which leads the way to a diverse set of opportunities and demands strategic choices (Colombo, 2006: 33) – will confront public (service) broadcasters and government with a huge challenge, keeping in mind the important principle of universal access.

Just as commercial players, and with the BBC leading the bunch with new initiatives such as the iPlayer, channels on YouTube or MySpace or a 'watching-when-and-where-you-want' idea as Kangoroo.com, PSB's are intensively exploring the extension of their 'portfolio' with new digital content, services and platforms. Public service broadcasters have – in contrary to their commercial 'colleagues' – to deal with the obligation of keeping their programmes available for different kinds of viewers, including the analogue terrestrial television viewers (van Cuilenburg, 2000: 119; Brants & De Bens, 2000).

Public service broadcasters in most European countries have specific tasks to fulfil, defined in their mission statement. The concept of public service broadcasting (PSB) refers to a broadcaster with high quality requirements and a strong sense of responsibility towards the public and the government (Bardoel et al, 2000: 80; Bardoel & d'Haenens, 2004). The roots of this PSB concept are situated in the beginning of the twentieth century, more specifically in the United Kingdom in the twenties. At that time, the BBC – again –, then a private broadcaster, was transformed into a public institution managed by a board of directors and financed by the public (Tracey, 1998: 33; Syvertsen, 1999).

The BBC model stimulated other countries to do the same, each with their own typical accents, but based on the same basic principles: (Tracey, 1998: 26; Coppens, 2005: 8-9; Hargreaves, 2005: 116; Hastings, 2004: 301): (1) a kind of anti-commercialism in which information and cultural needs prevail over

profitability, (2) monopoly, (3) quality, and (4) universality. However, at the end of the twentieth century – in a climate of neoliberalism – more and more countries installed a dual broadcasting system: the combination of public and commercial broadcasters (Coppens, 2005: 9; d'Haenens & Bink, 2001: 127) toned down the principles of monopoly and anti-commercialism.

Also in the evolution towards today's digital television era, quality and universality have remained very important for PSB's, in combination with values such as diversity and innovativeness in the current digital era. After all, a public broadcaster receives its legitimacy by focussing on the shortcomings of commercial broadcasters (Coppens, 2005: 9-10).

Especially the principle of universal access is very relevant in the context of the analogue switch-off. The main idea of universal access is obvious: a public service broadcaster must be accessible to every citizen under the same conditions (Tracey, 1998: 26; Murdoch, 2000: 54). 'Universal access' is in this respect essential to guarantee coverage of most of the audience. No individual may be impeded by financial or geographical obstacles (Tracey, 1998: 26; McQuail, 2000: 157,169; Harrison & Woods, 2001: 48; Coppens & Saeys, 2006: 262). In the course of time, the concept of universality has been broadened towards universality of programmes and public (Coppens, 2005: 9-11).

In many countries, analogue terrestrial television transmission has until now always been the cheapest way of watching television (financial obstacles are rather limited) and covering the most of the territory. Of course, the analogue switch-off endangers this in some way, both geographically and financially, since the migration from analogue to digital terrestrial television implies (some) intervention for those who want to continue watching television. Geographically, analogue terrestrial viewers in remote regions (where cable subscription is not possible, although this is rather an exception in Flanders) risk being excluded from television, or they are confronted with a financial barrier or 'switching cost' (d'Haenens & Bink, 2001) by investing in a digital terrestrial receiver or a satellite dish. Even for people who live in less remote regions, with possible access to cable subscription, the switch-off implies a financial barrier, since they are forced to chose between the purchase in cable or a DTT receiver. In both cases, it seems that the analogue switch-off has implications on the principle of 'universal access without geographical or financial constraints', that cannot be neglected by PSB's or by policy makers. Or as Harrison & Woods (2001: 482) state: we need a watchdog to ensure that every citizen still has access to the channels of the public broadcaster in the digital era.

Flemish policy makers are aware of this situation, and in preparation for (the communication strategy of) the analogue switch-off, a study on the profiles of the 'Flemish antenna viewer' has been set up. Before elaborating on that study, the paper first requires some further clarification of the concepts 'analogue switch-off' versus 'digital switchover'.

The analogue switch-off: the migration process from analogue to digital terrestrial television

Analogue switch-off: concept and implications

The concepts 'analogue switch-off' and 'digital switchover' are currently high on the agenda of European policy makers because of the 2012 deadline that sets the termination of analogue terrestrial television. Some clarification about the difference between the two concepts is necessary. The European Commission defines 'switch-off' as "*terminating the terrestrial transmission of analogue television*", and 'switchover' as "*the transition from analogue to digital broadcasting of all types of broadcasting*" (EC, 2005a: 3; Iosifidis, 2006: 250).

The digital switchover is a broader process than the analogue switch-off, but there are strong links between the two concepts as the latter is a prerequisite for the first. Why is this digital switchover so important? It is seen as a logic consequence of the technological evolution, generating several advantages for broadcast organizations as well as the viewers. As the public broadcaster is also using terrestrial television signals[1], policy makers are involved in this migration process. The switchover entails lower distribution costs and the possibility of transmitting more channels or services at the same cost. This increased efficiency in spectrum use is the most evident implication for the broadcasting sector, urging them to explore new business opportunities and forcing policy makers to adjust the legislative framework of the 'digitized' television landscape. The latter is also connected with the policy purpose to realize a new digital landscape (with according benefits) for the citizens (d'Haenens & Bink, 2001: 125; Iosifidis, 2007: 7).

Viewers should benefit from the switchover as it may imply more choice and quality and the ability to offer new services, for instance the ability to send data that allow interactivity, personalization, etc. (d'Haenens & Bink, 2001: 125; Iosifidis, 2007: 7). In spite of these promising social and economic advantages, however, the digital switchover seems not welcomed by every citizen. Klein et al (2004: 8) demonstrate that a substantial fraction of the citizens show a rather negative attitude towards the digital revolution, depending

[1] It is important to mention that for the moment the public broadcaster VRT is the only provider of terrestrial television in Flanders. In preparation of the analogue switch-off, the transmitter conglomerate of VRT will be subject of a privatization process.

upon different aspects: first, many people believe that analogue television will be taken away from them and they fear a fierce increase of the cost of watching television. Second, citizens do not seem to understand why the switchover is on the political agenda and they have no faith in the arguments of government. Finally, some citizens really do have a problem with the extra financial investment that will be necessary.

In addition, Iosifidis (2005: 59) and Murdoch (2000: 54) even point out the danger of social exclusion if certain parts of the population are not reached by digital television. Therefore, criteria of availability and affordability have to be taken into account very carefully. So, it should be clear that the government has a specific role to play in this digital scenario, not only when it comes to communication and support. Evidently, the government will need accurate insights into the 'analogue viewing audience' in order to ensure the efficiency of communication and support regarding the switchover.

Analogue switch-off: plans and strategies in Europe

The eEurope 2005 action plan (followed by i2010) stresses the role of digital television in the information society (EC, 2000; EC, 2005b). Therefore, the national and European regulators have put this issue high on the agenda. Member States were urged to reveal their national plans concerning the analogue switch-off (date, strategy, commissions, etc.) (Iosifidis, 2007, p. 8). The Member States can choose their strategy freely, but Europe aims for the end of analogue terrestrial television by 2012.

The plans and timing vary greatly. In some countries (Luxembourg: September 1st, 2006; The Netherlands: December 11th, 2006; Finland: August 31st, 2007; Andorra: September 25th, 2007 and Sweden: October 15th, 2007 – DigiTAG, 2008) the analogue switch-off has already been accomplished, other countries have fixed a date in the near future (UK: 2008-2012; France: 2011; Germany: 2008; Italy: 2012; Spain: April 2010; Flanders: November 2008), while others have not yet decided (Ireland, Portugal). The switch-off dates vary from one country to another depending on the particular characteristics of each national television landscape (Iosifidis, 2007: 8), which condition very much the current penetration of DTV and therefore the capability of each market to reach the deadline of 2012.

We roughly distinguish three types of countries in Europe (Blumler, 1992: 25; d'Haenens & Bink: 135; BIPE, 2002): First, *'cable countries'*: where more than 90% of households watch cable television (Belgium, The Netherlands, Luxemburg); Second, *'terrestrial countries'*: terrestrial transmission is the dominant delivery

platform (UK, France, Italy, Spain, Portugal); And finally *'hybrid countries'*: cable and satellite together serve more than half the households (Germany, Ireland, Sweden, Finland, Denmark).

The degree of DTT penetration is extremely varied, often dependent on different factors such as the role of the state and the PSB in the implementation and further evolution, the country's orography, the relevance of DTT among other platforms, etc. (Storsul & Schanke Sundet, 2006: 248-249; Shulzycki, 2007 in: Iosifidis, 2007: 10).

Analogue switch-off in the Low Countries

The analysis deals with the analogue switch-off in Flanders[2], the northern part of Belgium. Being typical 'cable countries', the television landscapes of Flanders and The Netherlands have several similarities. Both regions adopted a dual broadcasting system approximately in the same period (Flanders in 1989 and The Netherlands in 1991) (Bardoel et al, 2000: 88; Otten, 2005: 41). Research also shows that the mean viewing time in both regions is comparable. They also have equally dominant cable penetration (>95%) (Beleidsbrief Omschakeling Ethertelevisie, 2006), implying that the analogue switch-off only has practical implications for a minority of television viewers.

The Netherlands

In 2002, The Netherlands installed a 'Switch-off Commission', to investigate how the transition from analogue to digital terrestrial television might take place. The commission concluded that the transition would be relatively easy compared to other countries given the limited number of households dependent on analogue terrestrial transmission. The research bureau GfK Intomart was consulted to map out the number of households that still make use of analogue terrestrial television. The study revealed that in 2006 88,6% of the households was watching television via cable, 6,7% via satellite, 4,1% (already) via digital terrestrial and 0,3% via IPTV. It was estimated in the GfK study that 1% of the households was watching (only) via analogue terrestrial transmission (GfK, 2006). In comparison, in Belgium (2006) 90% of the households is watching television via cable, 9% via satellite, and 3% via IPTV (OBS, 2007)[3].

[2] Media, and consequently also the switch-off, comes under Flemish Community authority. For more detailed information about the Belgian and Flemish media landscape, see Coppens (2003: 148-152).
[3] The percentages in this paragraph do not result in 100% because some of the households combine different transmission channels.

The actual transition from analogue to digital terrestrial television happened in the night of December 10 to December 11 2006. The date of analogue switch-off had been postponed for a few weeks because the Dutch Government wanted to organise a large-scale information campaign, and a parliamentary discussion arose about the choice of free-to-air channels. Different ads, articles, radio commercials and a centralised website (www.signaalopdigitaal.nl) informed the Dutch citizen about the upcoming changes. The public broadcaster also sent out 'ticker tapes'[4].

Despite the limited number of citizens 'affected' by this transition, the analogue switch-off caused more commotion than expected. Due to the short preparation period preceding the analogue switch-off, some of the antenna viewers felt they had been taken by surprise and left out in the cold. The analogue switch-off in The Netherlands happened quite abruptly, without extensive transitional measures.

Flanders

Like in The Netherlands, the Flemish government wants to make the analogue switch-off before the 2012 deadline. This will actually take place in the night of November 3rd 2008 (Bourgeois, 2008). The Flemish government recognizes that this transition demands a certain degree of 'strategic' guidance, and wanted to take measures starting from the beginning of 2008. These measures mainly consist of a well elaborated communication campaign which is targeted to the total population in order to inform the Flemish citizens about the upcoming migration process.

Unfortunately, there is not much in-depth knowledge of the typical profiles of the Flemish terrestrial viewer (the main target of the information campaign) that could be used as a starting point for this guidance. This group of viewers is something like an 'ignored' minority on which not much information has been collected.

[4] Ticker tapes are a kind of banner that can be sent out via the analogue television signal. This strategy made it possible to convey the government's message only to that group of viewers that was watching terrestrial broadcasts.

Case study: analogue terrestrial television viewers in Flanders

Research questions

Having the Dutch experience at the back of its mind (fast transition, not enough information about the analogue terrestrial television viewer) and given that the planned switch-off in Flanders is approaching fast, the Flemish government and the public broadcaster VRT both wanted to gain a greater insight into the profile of the analogue terrestrial television viewer.

With a cable penetration of 97% (Coppens, 2003), this analogue terrestrial television viewer is a tiny minority: because they are not registered anywhere, there are no reliable figures available to distinguish between non-viewers and antenna viewers[5]. Several questions arise: what is their profile, what are their reasons for watching analogue terrestrial television, what is their attitude towards television, what do they think about possible alternatives, etc? This information is crucial for the development of adequate communication and implementation strategies that could help the social acceptance of the analogue switch-off. It would make it easier to develop information, action and awareness campaigns for this small, but very specific target group. It would be useful in working out possible transitional measures (for example, financial and practical support to switch from analogue antenna viewing to an alternative signal source), and it would provide useful information on the most suitable timing and strategy for the analogue switch-off.

In consultation with the Flemish government, three main research questions were dealt with:

1. Who are the 'analogue terrestrial television viewers'?
2. Which knowledge and questions do they have about the analogue switch-off?
3. What are their television-viewing expectations after the analogue switch-off?

[5] About 99% of Flemish households are considered to be 'television households'. As cable subscription accounts for nearly 96% of all households, the difference between 'non-viewers' and 'antenna viewers' becomes very difficult to calculate.

Methodology

Recruitment and approach

The Flemish government only has estimates of the number of households watching analogue terrestrial television in Flanders, but there was a lack of more information that would be valuable in detecting and targeting them. The available studies state that about 60,000 families (about 2.5% of Flemish households, Bourgeois, 2006) are exclusively analogue terrestrial television viewers, a very small group in comparison with the cable subscribers. In addition to this, between 80,000 and 180,000 households are assumed to combine multiple distribution platforms: watching via antenna gives them the opportunity to watch television in a second location at home, in a holiday home, or in a second residence (students, foreign workers) (Bourgeois, 2006). More detailed information about the geographical location or profiles of these groups of television viewers was not available however, which hampered their recruitment.

In preparation of the research, we first of all consulted the CIM PMPA-studies, which are considered the most reliable and extensive analysis of media possession and media use in Flanders/Belgium (CIM, 2007). Based on a sample of 10,451 respondents (from all over Belgium) and after filtering the respondents for Flanders (N=5,971), we were able to select 84 analogue terrestrial television viewers. A first analysis and profiling of these 84 respondents has been done, but this was not enough to provide a solid and reliable basis to answer the research questions or for strategic decision-making. We were forced to look out for more 'creative' ways of detecting analogue terrestrial television viewers and to recruit them for a more thorough study.

Commercial recruitment bureaus were of no help, since none of them was able to recruit on such a variable as 'antenna viewing'. We finally combined different recruitment techniques to obtain a sample of analogue antenna viewers as large as possible: an announcement in two Flemish newspapers (De Standaard and Gazet van Antwerpen[6]), an interview on the switch-off issue on a national radio programme, snowball sampling among family and friends starting from the identified analogue terrestrial viewers, etc. Each of the detected viewers who was willing to participate in the research was invited to fill in their profile on a website which was created especially for this research (www.antennekijkers.be). Respondents who did not have an internet connection were contacted by telephone or face-to-face. The goal was to collect as many 'antenna viewers' as possible.

[6] De Standaard is regarded as a quality newspaper, while Gazet van Antwerpen is regarded as more popular.

Integration of quantitative and qualitative research

First of all, a quantitative survey addressed to the antenna viewers was conducted. The main objective was to observe their attitudes towards television, switch-off and watching analogue terrestrial television, to examine their knowledge of the switch-off and to gain an insight into how they look at the future of television by asking their opinion about the possible alternatives for watching television after the analogue switch-off. In total, 521 respondents participated in the survey.

Considering the limitations of quantitative research for in-depth investigation, this survey was combined with qualitative research (focus group interviews). This type of research allows us to get more precise answers to 'why-questions'. The respondents for the focus group interviews were selected on the basis of their answers in the quantitative survey, which enabled us to reveal different segments of antenna viewers, each with their own particular reasons. The focus group interviews focused on 25 individuals who are divided over the different profiles of antenna viewers (primary versus secondary antenna viewers, see below). We set up four focus group with respectively 7, 5, 8 and 5 respondents. The same topic list was used in each group session.

Main results

Profiling the antenna viewers

Different segments of antenna viewers

The quantitative survey resulted in 521 antenna viewers, not all the same in nature. Some of them use the terrestrial broadcast as the sole signal source in their main residence, while others limit the use of the antenna signal to watching television in a caravan or in a holiday home. For this reason, we have split up the antenna viewers into four segments. After all, there might be a difference in attitude or behaviour between them.

We detected four different groups:

a) Group 1: the primary antenna viewer (respondents having no cable or satellite at home, which obliges them to watch television by means of antenna. They have no other options available at home);
b) Group 2: The secondary antenna viewer at home (these respondents do possess cable or satellite at home, but they also watch television via the antenna/for example: in the bedroom, in the attic, etc.);
c) Group 3: The secondary antenna viewer in a holiday home/second residence (these respondents watch analogue terrestrial television exclusively outside of their home);
d) Group 4: The digital antenna viewer.

Table 1 segmentation of antenna viewers

GROUP	***Number***	***N***	***Percentage***
Primary antenna viewer	1	370	71.0
Secondary antenna viewer at home	2	36	6.9
Secondary antenna viewer in a holiday home/second residence	3	28	5.4
Digital antenna viewer	4	87	16.7
Total		*521*	*100*

Socio-demographic description of antenna viewers

An enumeration of the socio-demographic characteristics (type of household, education, age, profession) of these four groups of antenna viewers allows an initial distinction between them.

The respondents from the households in group 1 (primary antenna viewer) are typically aged between 25 and 49. In comparison with the other three groups, this segment contains a few more one-person households, with a higher than average education level. Related to this is the fact that they have a higher income.

Group 2 (secondary antenna viewer at home) contains fewer one-person households and the average age of the respondents is substantially higher than in group 1.

Group 3 (secondary antenna viewer in a holiday home/second residence) is a quite dualistic group. We discover some older respondents who no longer have children at home and in most cases are retired. These respondents received a lower level of education than those in the other segments, but do have an income well above average. On the other hand, this segment also includes students who watch analogue terrestrial television in their student accommodation.

Group 4 (digital antenna viewer) is mainly aged between 30 and 45. These are families with children at home, highly educated (almost 80% higher education or university) and are situated in the upper level of the income scale.

Since the purpose of the research was to serve as a basis for a communication strategy towards analogue antenna viewers, only the first three groups remained of interest in further analysis. Therefore, the following results are only applicable to the first three groups or a sample of 434 respondents.

Television-viewing behaviour

How much time (on average) do these antenna viewers spend watching television? A distinction has been made between watching via the antenna or not, and watching on weekdays or in the weekend. Obviously, the primary antenna viewer only watches television by means of antenna, and does this between one and two hours a day. The secondary antenna viewers (groups 2 and 3) spend, in comparison with the respondents of group 1, more of their time in front of the television set. They reserve their analogue terrestrial television viewing for shorter periods, while cable or satellite television is preferred for longer periods.

The channel preferences of the primary antenna viewer are obvious, since they can only receive a limited selection of terrestrial channels, transmitted by the Flemish public broadcaster. They rarely watch other channels, only when they are staying with friends or family. The secondary antenna viewers (group 2 and 3) have a broader channel choice, but surprisingly they also have a strong preference for watching the public broadcasting channels.

Furthermore, we have studied the groups' preferences regarding television programmes. Among the analogue antenna audiences, news and current affair programmes are clearly in the first position, followed by human interest programmes and serials. Soaps and reality television are not very popular, although the secondary antenna viewers like these programmes more than the primary antenna viewers. The latter do not actually have any interest at all in these programmes. Watching movies on television differs greatly between primary antenna viewers and secondary antenna viewers: the last group does so more often. As revealed by the qualitative focus group interviews, the primary antenna viewer 'compensates' for this by watching movies on DVD.

The antenna viewer as an all-round media user

Antenna viewers like listening to radio. The primary antenna viewer listens very frequently (25% listens more than 5 hours a day, both on weekdays and in the weekend). The group of secondary antenna viewers shows more variety: it has been detected as a group that listens extensively, but also a group that shows less interest in radio. The antenna viewers have a clear preference for radio channels provided by the public broadcaster. Most of the antenna viewers read a newspaper on a regular basis, both on paper and online. The primary antenna viewers clearly prefer quality newspapers. An analysis of internet use (frequency and intensity) shows that antenna viewers have access to internet and use it on a regular basis, however, they are not really 'heavy surfers'.

Attitudes towards television

To map out their attitude towards television, the viewers had to express their opinion about a list of statements. Table 2 shows the mean scores on each statement, measured on a five-point scale, divided by group.

Table 2 mean scores on attitude statements towards television

	Group 1	***Group 2***	***Group 3***
Watching television is expensive for what it has to offer	3.37 (+)	3.11	3.29 (+)
I find it important to be able to receive foreign channels	2.90	3.94 (+)	3.32 (+)

I find that there are not many interesting television programmes	3.70 (+)	3.14	3.14
Television has a bad influence	2.76 (-)	2.53 (-)	2.54 (-)
The government must provide a free basic range of television	4.15 (++)	4.31 (++)	4.18 (++)
Watching television is a waste of time	2.78 (-)	2.28 (-)	2.29 (-)
Television has a bad influence on social behaviour	3.07	2.89	2.89
Watching too much television is not good for children	3.62 (+)	3.58 (+)	3.39 (+)
Digital television, regardless of the provider, seems interesting	2.86	3.47 (+)	2.93
Television keeps me informed of current affairs	3.57 (+)	4.08 (++)	3.93 (+)
Watching television is relaxing	3.88 (+)	3.94 (+)	4.00 (+)
Television is a manipulative medium	3.76 (+)	3.78 (+)	3.57 (+)
I discuss what is on television with others	3.09	3.25 (+)	3.39 (+)
Television is necessary to be part of social life	2.34 (-)	2.56 (-)	2.79 (-)
I do not like watching television	2.35 (-)	1.97 (--)	2.14 (-)

1 – 2	2 – 2.8	2.8 – 3.2	3.2 - 4	4 – 5
(--)	(-)		(+)	(++)
I do not agree at all	I do not agree	Neutral	I agree	I fully agree

The three groups of antenna viewers stress the fact that government must provide a free basic range of television. They all like watching television. It is quite relaxing for them, but it is considered in the first place as an 'information medium' (especially group 2).

Despite this overall positive attitude, most antenna viewers do have their reservations regarding television as a medium. Most are quite anxious about the manipulative nature of the medium and its negative influence on children. The group of primary antenna viewers in particular seems to have a rather critical attitude towards television. They also complain about the lack of interesting programmes, and they certainly do not perceive television as a necessity for their engagement in social life.

To summarize, we may say that the Flemish antenna viewer is only moderately enthusiastic about television. They all value it as a news medium, but at the same time are quite reserved, for different reasons. The most critical group is the group of primary antenna viewers. Striking among the secondary antenna viewers (group 2 + 3) is that they also see television as a source of information for discussion with others and as a broader window on the world (e.g. foreign TV-channels). Finally, for the first and the third group watching television via antenna also seems to be determined in some cases by a resource allocation decision: for them, watching cable television is too expensive for what it has to offer.

Watching television via the antenna

Respondents were asked specific questions about watching television by means of the antenna. Their satisfaction with reception via antenna and their satisfaction with the programme range is measured on a scale ranging from 0 to 10.

Table 3 satisfaction with watching television via antenna

	Group 1	**Group 2**	**Group 3**
Satisfaction with reception via antenna	6.34 (+)	6.58 (+)	6.25 (+)
Satisfaction with channel/programme range via antenna	5.67 (+)	4.42	4.61

0 – 2	2 – 4.5	4.5 – 5.5	5.5 – 8	8 – 10
(--)	(-)		(+)	(++)
Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied

The Flemish antenna viewer does not seem to be a 'demanding viewer'. Despite reception being more susceptible to weather conditions and a more limited range of programmes, they do not have outspoken complaints. In general, we see that all the antenna viewers are quite satisfied with the quality of reception. The primary antenna viewer shows a higher degree of satisfaction than the other two groups, when it comes to the programme range.

When asked to sum up the (dis)advantages of watching analogue terrestrial television, the advantage most often mentioned is the 'conscious viewing pattern'. The primary antenna viewers in particular stress that they want to protect themselves and their children from the oversupply of television channels and television programmes, and the waste of time which could result. The main disadvantage is temporary reception problems. For example, snow and fog can easily disturb reception. Some primary antenna viewers note that conditions are sometimes so bad that they were unable to receive a programme they intended to watch, but at the same time they do not seem to mind too much. A second disadvantage is the limited choice of programmes available, but – again – most respondents put this in perspective.

Considering the high cable penetration in Flanders, it was necessary to find out why people stick to analogue terrestrial television viewing. The majority of the antenna viewers have the opportunity to connect to cable transmission, but they are simply not interested. Only a minority of the antenna viewers claimed to stick to analogue terrestrial television due to location constraints: their house is located too far away from the main street, which would lead to extra costs for cable connection.

4.3.2) Awareness of and attitude towards the analogue switch-off

Awareness of the analogue switch-off

The most important finding is that antenna viewers have a low and/or non precise knowledge about the switch-off process. They are aware that they have to search for an alternative after the switch-off but they believe that they will have to pay more to watch television. Via open end questions, we wanted to detect what people think the analogue switch-off is about. Some antenna viewers take the view that this process has something to do with technological progress (better image quality, digital reception), but the majority of them still have questions about 'what' and 'how' and 'why'. This uncertainty has its consequences: the antenna viewers believe they are being forced into a technological revolution they actually do not want. And there are other false assumptions, for example some antenna viewers are convinced that everyone will be obliged to subscribe to cable television, or they even believe that cable subscribers will have to change to satellite. They already complain about a lack of information although the government has not officially started to communicate about the reasons for this transition yet. In addition, the public broadcast service considers that digital terrestrial transmission is still in a preliminary stage. Obviously, being confronted with the subject without proper information will cause a straightforward negative attitude towards the analogue switch-off among analogue terrestrial viewers.

Attitudes towards the analogue switch-off

Uncertainty and the lack of information about what will happen lead to a rather negative attitude. To examine this attitude in greater depth, the respondents were confronted with seven statements about this topic. Table 4 shows the average scores per statement (measured on a five-point satisfaction scale), divided over the three subgroups.

Table 4 attitudes towards the analogue switch-off

	Group 1	***Group 2***	***Group 3***
The government must provide – even after the analogue switch-off – a free basic range of programmes	4.61 (++)	4.47 (++)	4.37 (++)
It is unfair that I will no longer be able to watch television by means of the analogue antenna	4.10 (++)	4.14 (++)	3.74 (+)
All the other alternatives are impossible for me for financial reasons	2.34 (-)	2.31 (-)	3.04
I do not wish to invest any money in the other alternatives	3.76 (+)	3.17	3.44 (+)
The analogue switch-off is no problem for me, I will just switch to another way of watching television	2.48 (-)	2.75 (-)	2.41 (-)
If I cannot watch anymore via the antenna, I will just stop watching television	2.72 (-)	2.36 (-)	2.85
Analogue terrestrial television is outdated	2.17 (-)	2.31 (-)	2.19 (-)

1 – 2	2 – 2.8	2.8 – 3.2	3.2 - 4	4 – 5
(--)	(-)		(+)	(++)
I do not agree at all	I do not agree	Neutral	I agree	I fully agree

The opinion of the three groups of antenna viewers is clear-cut when it comes to the government's role in this evolution: they fully agree that the government must provide a free basic range of programmes. They also feel unfairly treated, since they will no longer be able to watch analogue terrestrial television without adding a decoder to the equipment they currently use. The secondary antenna viewers in a holiday

home/second residence are not that harsh in their judgment. The average scores indicate that all antenna viewers are able to buy an alternative (except the more neutral attitude of the students in group 3), but at the same time, they are not really willing to do so. Finally, the antenna viewers agree with the fact that the analogue switch-off is a problem for them, because they still want to keep on watching television. They count on the government and the public service broadcaster for more information and guidance.

Which kind of information do they need?

The antenna viewers expect the government and the public service broadcaster to inform them. But what kind of information do they need? The majority of antenna viewers wishes to receive more information about the alternatives, their possibilities and the cost implications. They also wonder whether they will be able to receive the digital signal via antenna and whether the reception quality will be good enough.

In general, the antenna viewer needs to know more about 'why', 'how' and 'when'. As mentioned earlier, this uncertainty causes a negative attitude towards the analogue switch-off. However, during the qualitative research it was found that the respondents have the opinion that financial incentives are not necessary, except for socially weaker groups in society.

4.3.3) What are the expectations after the analogue switch-off?

What about the future? Which alternative, if they are forced to choose one, is the most attractive according to the antenna viewers?

Knowledge of the possible alternatives

In addition to the lack of knowledge about the switch-off, the research immediately revealed a lack of knowledge about the advantages or disadvantages of the possible 'post-switch' alternatives as well. The antenna viewers do not seem to be adequately informed about typical aspects of the different alternatives when it comes to buying equipment, installation procedures, the terms and formulas of subscription and the programme and channel range.

Evaluating different scenarios

In the last step of the study, the antenna viewers were given a full explanation of the possible alternatives for watching television after the analogue switch-off, and the implications in terms of equipment, installation procedures, types of subscription and programme and channel range. After this, the respondents were asked to rate their interest in each of the alternatives, with a score between 0 and 10.

Table 5 evaluation of possible scenarios – after the analogue switch-off

	Group 1	***Group 2***	***Group 3***
Scenario 1: Digital terrestrial television	8.22 (++)	6.67 (+)	7.44 (+)
Scenario 2: Analogue cable	1.92 (--)	1.86 (--)	3.07 (-)
Scenario 3: Digital cable	1.33 (--)	1.31 (--)	2.41 (-)
Scenario 4: Digital satellite	2.37 (-)	3.94 (-)	4.15 (-)
Scenario 5: IP-TV	2.03 (-)	1.89 (--)	1.11 (--)
Scenario 6: I stop watching television	3.14 (-)	2.94 (-)	3.52 (-)

0 – 2	2 – 4.5	4.5 – 5.5	5.5 – 8	8 – 10
(--)	(-)		(+)	(++)
No interest at all	Not interested	Neutral	Interested	Very interested

The results are very explicit: the three groups of antenna viewers all prefer digital terrestrial television. The other alternatives (analogue cable, digital cable, digital satellite, IP-TV, and stop watching television) are alternatives in which the antenna viewers are not interested. Some small differences, however, can be noticed: in general digital satellite gets the highest score and the secondary antenna viewers in a holiday home/second residence have a slightly higher figure than the other groups when it comes to certain scenarios.

Conclusion & policy recommendations

The European Commission urged the Member States to finish the analogue terrestrial television transmission by the end of 2012. There are wide variations among countries regarding the switch-off date but some are clearly trendsetters. The Netherlands and Flanders are two of them: The Netherlands finished their switch-off in December 2006, while Flanders plans to do so in November 2008. The reason for this early switch-off is quite logical: both regions have a very high cable penetration implying the limited number of people who watch television via terrestrial transmission (in The Netherlands: 1%; in Flanders around 2,5% of the households).

The passage of the analogue switch-off in The Netherlands clearly demonstrated the need for a thorough understanding of citizens' attitudes towards switching from analogue to digital terrestrial television. It is also of crucial importance to detect what the distinctive profiles are of the antenna viewers. A generic communication campaign (if necessary combined with other support measures) risks not to reach the target group for whom clear and correct information about the upcoming migration is indispensable, i.e. people who watch television via analogue terrestrial transmission. As government lacks any knowledge about the profiles of the current analogue terrestrial viewers, the research presented in this article provides vital information for setting up the analogue switch-off strategy.

Therefore, a multi-method study (necessary to detect the antenna viewers) has been set up in cooperation with the Flemish Minister of Media. On the basis of quantitative and qualitative research, it can be concluded that there is no such a thing as 'the' antenna viewer. Regarding to communication and/or support measures, the research results clearly demonstrate that there are three distinctive types of analogue antenna viewers: the primary antenna viewer, the secondary antenna viewer at home and the secondary antenna viewer in a holiday home/second residence. These distinctive profiles have different attitudes towards television, they have specific motivations for using terrestrial television signals and therefore they have specific questions regarding the analogue switch-off. The migration strategy should take this fully into account.

The research shows that antenna viewers are not yet adequately informed about the upcoming analogue switch-off and the possible alternatives, which could lead to a negative attitude towards this evolution. Responding to this, there is a need for an information campaign addressed to the (different profiles of the) antenna viewers that properly explains what the switch-off is and what reasons and motivations are linked

to this evolution process. In addition, financial and technical aspects of the different alternatives available after the analogue switch-off should be detailed. The results of the research reveal, however, that a majority of the antenna viewers (especially the primary antenna viewers) is only interested in the digital terrestrial platform.

Especially for the specific case of analogue terrestrial television, the government has to bear some details in mind: First, a substantial majority of the present primary antenna viewers are technically and financially able to subscribe to cable television, but have preferred not to do so; Second, the analogue antenna viewer wishes to continue watching television at the present location and expects to have the same free programme choice after the analogue switch-off; Third, some of the secondary viewers do not (yet) identify themselves with the community that will be affected by the analogue switch-off, so they might be taken by surprise when the transition takes place; Finally, less affluent and less technically skilled viewers might expect financial and/or practical support as part of the switchover process.

Policy makers should learn from the research conducted that not every citizen is willing to join the 'hurray digital television' credo. Although the analogue switch-off can offer advantages both for the viewers (better quality, more choice, new services) as well as for the broadcast sector and policy makers (more efficient use of spectrum frequencies), a substantial part of the citizens is not willing to migrate from analogue to digital television of their own. As there is no continuation after the analogue switch-off, a purposeful information campaign should tackle misunderstandings concerning this transition process and clearly respond questions about 'what and why'. Even if the group of analogue antenna viewers is rather small in countries such as The Netherlands and Flanders, their choices for the digital future could be of strategic importance: they are forced to choose one of the DTV alternatives while other viewers, such as analogue cable viewers, can postpone adoption indefinitely. So, the conclusions of the research presented can have broader impact than the analogue switch-off as such. Policy makers but also DTV suppliers should be aware of the real added value that is necessary to convince people to choose for the 'new' television services. If people do not see benefits of better quality or more choice they will not be prepared to migrate.

This article presents research that was carried out to guide the Flemish government and the public service broadcaster in the transition to the analogue switch-off to help them to develop a well-balanced communication plan and strategy. The results provided a PR bureau with strategic knowledge in order to inform the different profiles of the antenna viewers about the upcoming transition from analogue to digital terrestrial television. A multimedia campaign has started from the beginning of 2008, for instance a website

has been set up (http://www.wegmetsneeuwopjetv.be). Although it is clear that switch-off strategies can differ greatly among countries, some of the results (or methodology and/or approach in order to detect the profiles of the current antenna viewers) can be helpful for other countries when preparing their own strategy.

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