DIGITAL SWITCHOVER IN CENTRAL AND EASTERN EUROPE: PREMATURE OR BADLY NEEDED?

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Abstract

Preparation for the digital switchover in Central and Eastern Europe adds to the complexity of post-Communist transformation in broadcasting. The following problems are apparent: (1) lack of sufficient understanding of the issues involved in the digital switch-over, especially as regards the broadcasting, programming and market issues involved; (2) turf wars between broadcasting and telecommunications regulatory authorities; (3) the impact of politics on the process of preparation and execution of digital switchover strategies; and (4) in some cases, launching the process prematurely, for inappropriate reasons. Depending on one's point of view, this is either a "premature" digital switchover in countries not yet ready for it, or a case of countries needing a wake-up call to face technological and market realities that they are not responding properly to. Poland is in the process of changing its switchover strategy. The process is to start in 2010 with the roll-out of one digital multiplex, covering the whole country, and carrying the existing analogue terrestrial television channels. Plans for further moves are hazy. Meanwhile, many market players are launching alternative projects to take advantage of digital technology, e.g. by means of satellite technology.

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21 javnost–the public Vol.14 (2007), No. 1, pp. 21 - 38

Preparing for the Digital Switchover in the Context of Post-Communist Transformation

In the media field, as elsewhere, post-Communist transformation has meant that Central and Eastern European countries are faced with a major policy overload. In this particular instance, they have the unenviable job of telescoping four centuries of law- and policy-making in the media into a couple of decades - from the 17th-century issue of freedom of speech all the way to the 21st-century issues of the Information Society. This cannot easily be done, either on a policy level, or – and primarily – on a practical level, when a country is expected to leap over several stages in the development of its media industry in order to meet mostly economic and telecommunications policy goals formulated – as is the case with the digital switchover – in response to a different set of circumstances than the ones they are grappling with. Equally difficult is the job of catching up on decades of media market development. All this has taken its toll when it came to preparing for the digital switchover.

Throughout Central and Eastern Europe, broadcasting legislation was written after 1989 primarily to answer two questions: "who owns and who controls?" (Jakubowicz 2007), i.e. to resolve political issues related to broadcasting, with almost total disregard in many cases for technical, market and financial aspects of the sector. This has left many issues unregulated. Subsequently, political appointment of many people in leading positions, their frequent replacement, and continuing "media wars" have kept attention concentrated on political aspects of broadcasting and have prevented the accumulation of expertise and understanding of other aspects of the issue. Moreover, the extreme politicisation of broadcasting and the knowledge that any matters of importance require political decisions at the top, have led the state administration to shy away from involvement in broadcasting policy and regulation. Hence the inability in many cases to resolve broadcasting issues and, among other things, to substantially modernise and update broadcasting legislation. If it were not for EU accession, any important changes in broadcasting legislation would not be possible as long as the level of political compromise achieved in the existing statutes satisfied the interested political parties and authorities.

This, in addition to the relative strength and high level of expertise on the part of the telecommunications administration, has often led to some broadcasting issues being framed as telecommunications ones. Sometimes this is done to avoid political pitfalls by couching issues in non-political technical terms. More often, however, because telecommunications authorities are capable of framing such issues as belonging to the sphere of telecommunications, rather than broadcasting.

As far as the digital switchover is concerned, we can identify the following problems in Central and Eastern European countries:

1. lack of sufficient understanding of the issues involved in the digital switchover, especially as regards the broadcasting, programming and market issues involved;
2. turf wars between broadcasting and telecommunications regulatory authorities;
3. the impact of politics on the process of preparation and execution of digital switchover strategies;
4. in some cases, launching the process prematurely, for inappropriate reasons.

The Czech case provides a particular accumulation of these features. In 2004, three major television broadcasters, including Czech Television, complained publicly that official digital switch-over plans showed inadequate understanding of the process (i.e. because licensing criteria were unclear, there was no specific timetable for migration to digital and too few multiplexes were being planned) and so could not serve as a road-map to the switchover (cf. item 1on the list above). Also in 2004, the Czech Parliament requested that the broadcasting regulator refrain at that time from issuing digital licences (item 2) – due in part to its conflict with a telecommunications regulator (item 3).

Then, in 2006, a Prague court cancelled the award of digital television broadcasting licences to six channels, following a protest by one of the applicants. The court found that the broadcasting regulator had acted illegally in changing the criteria for the award of licences and had failed to provide applicants with sufficient reasoning for its decisions (denying licences to the main commercial television broadcasters in the country).

As for turf-wars, Central and Eastern Europe is no exception to the almost universal situation of conflicts between broadcasting and telecommunications regulatory authorities. Given the weakness of the former in many post-Communist states, telecommunications administrations and regulatory authorities have usually succeeded in framing the digital switchover as a telecommunications, rather than broadcasting issue. According to a document *Digital Television Switchover Plans in Hungary*, prepared by the Ministry of Informatics and Communications (Ministry of Informatics and Communications, n.d., 2), "Priority political objectives of the transition are: effective management of the frequencies as a limited source; expansion of the service infrastructure related to the information society by a broadband transmission tool generally used in the country apart from geographical and social situation." No mention here of any programming issues, costs and benefits for the viewing public, or broadcasters.

This approach has been reflected in the process of planning the digital switchover. Judging by the available evidence (e.g. national switchover plans available from the European Commission website), few post-Communist countries have yet been able to develop a comprehensive switchover strategy, covering all aspects of the issue (though Slovenia has developed a fairly comprehensive document; see Republic of Slovenia n.d.). As in the case of the 300-page Hungarian draft switchover strategy (Prime Minister's Office 2006a), most such documents deal chiefly with frequency planning and technical matters (to be fair, however, the Hungarian strategy does also mention "the strengthening of media plurality" as one of its chief goals – see Prime Minister's Office 2006b, 4).

As for the impact of politics, let us mention just two examples. In autumn 2005, the Polish broadcasting regulatory authority, the National Broadcasting Council, was on the point of launching the first tender for digital multiplexes. However, just at that time a centre-right party was returned to power in a general election and the new government was not pleased that the National Broadcasting Council, with a majority of members appointed by left-wing parties, would be launching this process. This was therefore stopped, as we will explain in detail later in this article.

Another case in point has been Albania, where digital terrestrial television was launched as early as in 2004 by the private company DigitAlb. The company

was acting in a legal void, as DTT was completely unregulated. Soon, however, a group of MPs submitted a draft law (originating from Digit-Alb itself) regulating pay digital TV, which would have created a very favourable legal regime for the company, giving it virtual monopoly in the field. To counter this, the broadcasting regulatory authority, the National Council of Radio and Television of Albania (NCRT), developed a different draft law, as well as a *Draft Strategy on Developing Digital Terrestrial Television Broadcasts in the Republic of Albania* (2004). However, the Albanian Parliament failed to regulate the matter and as of October 2006 the legal issues remained unresolved, but digital television was still being offered. One can only guess that DigitAlb had been able to make powerful political friends.

As for item 4 on the list above, one case in point is the already-mentioned NCRT's *Draft Strategy in Albania* (NCRT 2004). This was presented as a solution to the many difficulties experienced by both NCRT and broadcasters, due to what is described in the document as a relatively chaotic and unmanageable broadcasting scene. As an example, Section 4.1.5 stated in part: "Albania is a developing country, with a sector of radio television broadcasting realised mainly with old equipment of analogue technology and supplied by a poor advertisement market. In Albania it is not completed and/or implemented a real plan of distribution for analogue radio television frequencies. In order to improve the situation (regarding the broadcasting quality, and minimizing interferences and coverage), the sector seeks serious investments. … Important investments to set up analogue networks, while many countries, (including the neighbouring ones), have intensified their investments into the digital technique, might result not efficient in a mid-term run. In such conditions, it is emergent to plan the introduction of digital television broadcasting." Other long-term objectives specified in the document included: access to television services with affordable prices; diversity of television programs; promotion of national language and culture; disappearance of piracy phenomena and respecting the rights of intellectual ownership; independence of public service broadcasting from political parties and achievement of a real and non-discriminative pluralism.

Clearly, then, digital switchover was expected in Albania to help eliminate problems which had little directly to do with digitalisation as such, but everything to do with the problems of a broadcasting sector in transition, at an early stage of development.

Digital Switchover in Central and Eastern Europe: A Brief Overview

Wherever one looks in the region, there is evidence of awareness in post-Communist countries that a digital tsunami is getting under way. In Azerbaijan, it has been announced "converting to digital will be compulsory for TV broadcasters" and that the process has to finish by 2015 (Medianetwork 2006a). In Russia, the Information Technology and Communications Ministry has said the country "has to transfer to digital by 2015," because if it does not, it "will have big problems." According to preliminary ideas, all digital channels should be free-to-air, and all viewers should receive set-top-boxes free of charge (Medianetwork 2006).

Ukraine appears more advanced, with digital terrestrial television (DTT) trial services already available in the capital Kiev and a commercial launch expected

to take place in 2007. The extension of DTT services beyond Kiev is expected in 2008-2009 with full population coverage anticipated in 2011.

Belarus is another country where digital broadcasting is reported to have been launched in 2004 by National State Teleradio for Minsk and the Minsk region. The broadcaster launched a pilot project of four digital TV channels and a radio channel. At the second stage of the project, digital terrestrial broadcasting is to be launched in five regional centres. At the third stage, the project will expand to ten further regional centres (Doroshevich 2005). The process is to be completed by 2012.

Also China has announced it will promote the growth of the digital television industry which is tipped to have a huge market potential in the next five years. The development of high-definition digital TV has been listed as one of the 13 key information industry projects in China's development plan for the coming 15 years. A number of Chinese cities have launched digital television on a trial basis over the past five years (APBU 2006).

According to the European Platform of Regulatory Authorities (EPRA 2004), in 2003 there were three groups of countries in terms of transition to DTT, as shown in Table 1.

Table 1: Status of Transition to DTT in EPRA Countries

Leaders	Intermediate	Followers
Finland	Austria	Bosnia-Herzegovina
Germany	Czech Rep.	Israel
Italy	Denmark	Latvia
Netherlands	Hungary	Malta
Spain	Ireland	Montenegro
Sweden	Lithuania	Poland
Switzerland	Norway	Portugal
United Kingdom	Slovakia	Macedonia
		Romania
		Slovenia

The first group was composed of countries where DTT had already been launched and where the regulation and policies for the DTT start up and the switchover process had already been developed. The intermediate group was composed of countries that were getting ready to launch and where the regulatory framework was at a very advanced stage. The group of "followers" consisted of countries that had not yet established a regulatory framework for the launch of DTT.

At that time, then, Czech Republic, Hungary, Lithuania, Slovakia could be classified as belonging to the "intermediate" group in terms of the advancement of digital switchover, but most other Central and Eastern European countries were in the "followers" group.

By June 2005, digitalisation was beginning to happen in some post-Communist countries, as shown in Table 2, covering the new EU member states.

Table 2: The Situation of Digital Television in New EU Member States at the End of June 2005

	Digital TV					
	Subscribers (000)					penetration %
	Cable	Satellite	Terrestrial	DSL	Total	
Czech Rep.	0	90	0	0	90	2,2%
Estonia	0	8	1	0	9	1,5%
Hungary	0	150	4	0	154	3,9%
Latvia	10	8	0	0	18	2,0%
Lithuania	0	8	0	0	8	0,6%
Poland	45	1230	0	0	1275	9,3%
Slovakia	0	15	0	0	15	0,8%
Slovenia	2	0	0	5	7	1,0%
TOTAL EU 25	7826	24116	11477	982	44497	23,7%

Source: European Commission 2006a.

As can be seen, satellite television has been leading the way, with DTT lagging far behind. At that time DSL/IPTV systems were barely present, but since then they have started appearing in most of the countries. Cable television is also undergoing digitalisation, though at different speeds in different countries.

By 2006, plans for DTT roll-out in new EU member, accession and candidate states were summed up as in Table 3.

In most of these countries, switchover strategies are either in preparation, or are being updated and supplemented.

Based on recent information (see Screen Digest Ltd, CMS Hasche Sigle, Goldmedia Gmbh, Rightscom Ltd 2006; Terzis, forthcoming[1]) we may review the situation in some of these countries in more detail.

In Bulgaria, plans call for terrestrial TV to be fully digitalised by 2015 at the latest. As far as cable TV is concerned, digitalisation is to be completed by 2012.

In Croatia, the Croatian Telecommunications Agency has been developing plans for digital switchover and 90 percent coverage in 2007. Broadcasting experimentally, nine transmitters had 65 percent coverage in 2006. The multiplex signal included all four national television broadcasters – HTV 1 and 2, Nova TV and RTL. Considering an overwhelming number of terrestrial receivers, initially the Agency plans to air only DVB-T signal for terrestrial reception of television programmes.

In the Czech Republic, DTT was launched on regular basis only by the public broadcaster Czech Television in October 2005. The other digital terrestrial TV broadcasts are supposed to be launched in 2007, after the already-mentioned controversies regarding digital licensing had been resolved. Experiments with digital radio broadcasting DAB has been halted in 2005. Let us also mention that two digital satellite services operate in the Czech Republic – UPC Direct and Digi TV. UPC Direct, launched in September 2000 offers to its clients more than thirty TV channels in Czech language, apart from dozens of foreign channel not localised in Czech. Number of subscribers in 2006: 120,000 households. New digital satellite service Digi TV, based in Romania with services in Hungary and Slovakia, entered the Czech market in autumn 2006. The service supplies a smaller number of channels, but the subscription fee is considerably lower, too.

Table 3: Roll Out of Digital Terrestrial TV in Central and Eastern European Countries

Country	Launch date	Other details	Switch-off date
Bulgaria	Digital TV broadcasting started on 26.05.2003 in Sofia – one multiplex, maximum 6 programmes		According to the Revised Telecommunications Sector Policy (promulgated in State Gazette issue 104 of 26.11.2004) the transition from analogue to digital TV has to be completed by the end of 2015.
Czech Republic	DTTV start October 2005	Started (21st October 2005) in Prague and Brno and their near surrounding areas	2012
Croatia	2007		2012
Estonia	Regular DTTV broadcasts in Tallinn since 2004		Not yet decided
Hungary	From 2007	Starting with "islands" and subsequent extension of network coverage	31 Dec. 2012 Gradual switch off of the analogue transmitters
Lithuania	30 June 2006	Start in Vilnius, by end 2007 in the five biggest cities, by beginning of 2009 one network should cover 95% of the territory	Beginning in 2012
Latvia	DTT not launched yet		Not yet decided
Poland	From 2006	Exact date to be adjusted according to the market situation. Start in the regions of Warsaw and Poznan.	
Romania	Not yet started		
Slovenia	Roll out 2006-2012	Introduction of digital terrestrial TV	2012 (intended)
Slovakia	Start in 2006 expected	By islands, step by step	end 2012

Source: European Commission 2006b (except for Croatia).

Returning to DTT, test transmissions had been in operation locally in Prague since 2000. In July 2004, the Czech Telecommunication Office granted permits for operation of three DVB-T networks/multiplexes "A," "B," "C" to the Czech Radiocommunications (CRa), the Czech Digital Group (CDG) and to the Cesky Telecom (today's Telefónica O2). Regular DVB-T started in October 2005 on the multiplex "A" in Prague only. The multiplex "A" was assigned to public service channels (CT1, CT2, CT24, CT4 Sport), whose licenses are based on the Czech Television Act. The initial broadcasting in Prague was extended to other towns Brno and Ostrava in February 2006.

The other multiplexes are operated still on an experimental temporary basis, due to the unclear situation as to their licensed programming services.

The Council for Radio and Television Broadcasting (RRTV) allocated six new digital licenses to commercial broadcasters in April 2006. Because courts allowed

the appeals of failed license applicants, among them TV Nova, the licensing process has to start from the very beginning again. It is not clear when the new digital channels will go on the air.

Nowadays the main issue is the lack of co-ordination between legislators and two regulators: the Council for Radio and Television Broadcasting, and the Czech Telecommunication Office (CTU).

Legally, responsibility for transition has been assigned to the CTU, which is proceeding on the basis of a binding document *Technical Plan for Transition from Analogue to Digital Terrestrial Television Broadcasting* (TPP). The conflicts between incumbent private terrestrial broadcasters (TV Nova, TV Prima) and newly licensed channels have paralyzed the transition for this time being. The incumbents' interest is to maintain their audiences as big as possible for as long as possible, therefore there are trying to block the early switch-off date by way of court actions against the licensing body RRTV. However, the CTU is still determined to end analogue broadcasting by 2010.

Frequencies for four multiplex networks, numbered 1-4 are to be available from July 2007. Maximum coverage is to be given to the multiplex No. 1, reserved for the public service Czech Television. The current multiplexes "A," "B," "C" are to be transformed into networks No. 2-4, but there is still no decision about programming services to be allocated there.

In Estonia, DTT is at the stage of testing. The government has set the deadline for final transition from analogue to digital for December 2012. In radio – the digital standard has not been implemented. Policies for digital television have been envisaged in *Concepts* adopted by the government. According to the document, Digital Video Broadcasting Terrestrial (DVB-T) and Handheld (DVB-H) are considered the most promising standards. Digital satellite broadcasting (DVB-S) has been defined as a standard without much of a future, given the small size of the country. Still, Viasat does rebroadcast the terrestrial programmes of TV 3 and ETV also via satellite. The government has also adopted a *Concept* for broadband standards. Both *Concepts* fail to cover the issue of financing of the switchover and so have had little impact on actual developments in the field of digitalisation.

The transmission company Levira, which is backed by Télédiffusion de France (TDF), has meanwhile played a leading role in efforts to introduce digital terrestrial broadcasting into Estonia. Although the development of a trial service it launched in May 2004 was put on hold 18 months later, Levira was awarded frequencies for three national multiplexes at the beginning of 2006. According to plans, a full DTT service employing MPEG-4 compression was to make its debut in November 2006.

In Hungary, too, digital television is in an experimental phase. A 2005 government decree outlines broadly the frame of digital switchover, but making the necessary changes in the media law has been hindered by political disagreement. DTT is available on one multiplex to customers in Budapest. It is planned to be launched in densely populated areas of Hungary in 2007, and switchover is to be completed by 2012. One of the obstacles of the diffusion of digital television is the lack of clear regulation. The 1996 Media Law does not include provisions for digital terrestrial services, and the lack of adequate regulation hinders the process, even though the government accepted the digital switchover strategy in 2005. The terrestrial commercial television channels (TV2 and RTL Klub) are also dragging their feet in this field. As current market leaders, it would not be in their best interest to switch to

digital where smaller channels can better compete with them for viewers. In 2005, they successfully lobbied the government and the media regulatory authorities for a 5-year renewal of their terrestrial licence a year before it expired. In spring 2006, TV2 sued DigiTV, a Transylvanian-based small satellite broadcasting service provider because the company failed to get the channel's consent before including it in the low-priced subscription packages they offer. The director of TV2 said that the market success of DigiTV's cut-price service would speed up the diffusion of multi-channel digital platforms, which would be against the channel's interests.

The national transmission company Antenna Hungária is overseeing an experimental DTT service launched in late 2004 that covers the capital and Kabhegy near Lake Balaton. DAB-test transmissions are taking place. Most radio stations stream their programmes via the Internet.

In Latvia, the transition to digital TV is planned to be finished by 2011. The government of Latvia has made the first steps to introduce digital TV, but as the contract with the foreign investor about financing the project was announced invalid, it was postponed. In 2004 the National Radio and Television Council developed a new strategic plan for digitalisation. Since 2002 the signal of digital TV has been receivable 50 km around Riga. Several TV and radio channels are aired in the test regime.

Only plans for DAB have been laid down, but without fixed dates. Most radio stations stream over the Internet.

In Lithuania, a 2004 government resolution approved the *Model of Introduction of Digital Television in Lithuania*. This resolution also established that by the second quarter of 2008, a plan of measures for encouraging the use of digital terrestrial television should be devised. In 2005, the Communications Regulatory Authority of Lithuania issued authorisations to use radio frequencies (channels) in digital terrestrial television networks to two private companies: AB Teo LT and AB Lietuvos radijo ir televizijos centras. Telecoms operator Teo LT plans to invest about LTL 20 mln into the Internet digital television services. Teo provides these services under the name of GALA, offering more than 50 different channels to the clients. In March 2006, the Lithuanian Radio and Television Commission granted licences for 11 free-to-air (FTA) DTT channels. The companies Batijos TV, Laisvas, Tele-3, TV1 each received two and Spaudos Televizija one, with two more reserved for the public broadcaster LRT. Re-broadcasting licences were also issued to Mikrovisata (24 channels) and Tele-3 (five channels).

1 July 2006 saw the launch of rebroadcasts of digital terrestrial television (DVB-T) shows in Vilnius. Viewers cannot yet watch digital television, as MPEG-4 set-top-boxes are not available.

DAB reaches about 20 per cent of the population and is situated in Vilnius. Five channels are broadcast, two public and three commercial ones. An additional multiplex is planned. Fifteen radio stations are streaming via the web as well.

Slovakia launched the first experimental digital broadcasts in 1999. There have been some pilot projects for radio and television digital broadcasting in major cities. This pilot digital broadcasting will most likely be operating till the end of 2007. Basic policy rules of digital broadcasting were issued by the Ministry of Culture in early 2006.

The incumbent telco T-Com, which is backed by Deutsche Telekom, is rapidly emerging as a key player in the country's TV industry. Its subsidiary Rádiokomu-

nikácie, which is currently on the market, has been undertaking DTT trials in the capital, Bratislava, and Banská Bystrica-Zvolen. The company Telecom Corp. has meanwhile been undertaking trials in Kosice-Presov and is also expected to launch a full DTT operation in due course.

Slovenia is another country where there are no digital services as yet. According to the proposed Strategy on RTV Slovenia 2004-2010 (May 2004), RTV Slovenia should provide additional specialised digital television and radio channels of informative, parliamentary, educational, sports and archival character, and also trans-border television for minority programmes using satellite broadcasting. However, there are few plans for switching from analogue to digital signal and almost no public debate on the digitalisation of broadcasting. The digitalisation of radio (DALET) started in 1998, and the gradual digitalisation of television began in 1999, however there are no digital platforms available in Slovenia and there are no plans for such platforms in the near future. Digitalisation is mostly present as digitalisation of transmissions by the public broadcaster and other changes in production, while there are few digital television sets or digital decoders in use.

While there is no official start-up date for the launch of DTT services, the public broadcaster RTV Slovenia has been allocated one national multiplex and was expected to start simulcasting its four channels at the end of 2006. The national commercial stations Pop TV and Kanal A, both of which are owned by the US investment company CME, will probably be allocated a second national multiplex.

Poland: On-Again and Off-Again

Poland's preparation for the digital switchover has taken a number of tracks, practical and conceptual. To begin with the practical side, experimental DAB transmissions launched in 1998 and experimental DVB-T transmissions began in 2001. However, things got off to a much quicker start in satellite broadcasting, with three digital satellite platforms launching in 1998 –Wizja TV (operated by an American company @Entertainment), Cyfra + (operated by Canal +) and Polsat Cyfrowy (operated by the major terrestrial commercial television station Polsat. In 2002, Cyfra + and Wizja TV merged into CANAL+ Cyfrowy and so Poland was left for a time with two digital satellite platforms which have a total of approximately 2 million subscribers. In October 2006, they were joined by yet another digital satellite platform "N," launched by the ITI Group, owner of a successful terrestrial television channel TVN and a growing bouquet of thematic satellite channels. In February 2007 it was estimated to have some 40 000 subscribers. It is a sophisticated platform offering HDTV and distributing Personal Video Recorders.

As could be expected, also some cable operators have also joined the digitisation race, offering Triple Play. This is shown in Table 4.

Since then, the leading Polish regional cable operators Telewizja Kablowa Poznan, PUT Koma, RTK Elsat and ICP have jointly launched a triple play package known as Inea Pak.

The Polish telecom incumbent, i.e. Telekomunikacja Polska, is into Quadruple Play: in addition to fixed telephony lines it is offering mobile telephony, broadband access to the Internet ("Infostrada") and an IPTV ADSL service ("Videostrada"), combining linear TV services and VOD.

Table 4: Triple Play in Polish Cable TV Systems (as of February 2006)

Operator	No. of subscribers (est.) – 000s			
	TV	Internet	Telephone	Digital TV
UPC Polska	1.000.000	120.000	15.000	under construction
VECTRA	625.000	68.000	5.000	tests under way
Multimedia Polska	450.000	105.000	120.000	tests under way
Grupa ASTER	365.000	92.000	20.000	39.000
TOYA	150.000	21.000	1.000	under construction
TK Poznań	100.000	30.000	under construction	8.000
MTK S.Tar	60.000	5.000	1.000	0
Stream Communications	40.000	15.000	0	0
Promax	28.500	5.500	tests under way	tests under way
Sat Film	25.000	7.500	0	0

Source: National Broadcasting Council.

To forestall a bitter fight for multiplexes, the two major (and otherwise very competitive) commercial broadcasters – Polsat and TVN – decided to establish a joint company, the Polish Television Operator (POT) which would bid for the digital multiplexes. They invited Polish Television, the PSB broadcaster, to join the company – probably in the hope that if that happened, the company might be awarded both the initial multiplexes and have the field to itself for a few years. However, TVP declined the offer and instead requested that in the interest of retaining its position on the market (its share is around 50%), it should receive half of all the multiplexes to be created in the country.

While all this has been going on, in the years 1998-2003 the two regulatory authorities – National Broadcasting Council (NBC) and the Office of Telecommunications and Post Regulation (URTiP) issued a number of reports on DTT, its progress around Europe, and ideas on how to launch the switchover in the country. In 2001, the government e-Poland Action Plan included a chapter on digital broadcasting, indicating official awareness of the issue. In 2002, another government document, Strategy for Electronics Industry in Poland, called for action to introduce digital broadcasting – in the hope of stimulating production and sales of the necessary electronic equipment.

Things finally got moving in earnest in 2004, when the government appointed an inter-departmental committee to plan for the digital switchover. As in many other post-Communist countries, the matter was defined as primarily a telecommunications issue, aided by the fact that the 2000 Telecommunications Law had given the job of allocating frequencies for the digital transmission of radio and television signals to URTiP, acting in cooperation with the NBC. In other words, the telecommunications regulator was to have been the lead agency in this regard. Moreover, the NBC as an independent non-governmental body, could not – formally speaking – be included among the members of the inter-departmental committee. A way to include it was devised by giving the committee's chairman the power to "invite" the NBC Chairperson to attend the meetings as a "guest."

In the meantime, the Telecommunications Law had been amended in 2004 to align it with the EU electronic communications directives of 2003. In the process, the NBC was able – with the help of its allies in the left-wing governing party – to win the power to allocate frequencies to multiplex operators. Thus, while the Ministry of Infrastructure had overall responsibility for government policy in the area of digitalisation of broadcasting, the NBC was to allocate frequencies for multiplex operators (by „beauty contest"); assign programme services to multiplexes, licence broadcasters, and register and regulate conditional access systems and Electronic programme guides. URTiP, the telecommunications regulator was, of course, to be responsible for frequency management.

By May 2005, the government adopted a strategy developed by the committee (Interdepartmental Team 2005). It dealt with strictly technical issues, with those related to programming and broadcasting issues barely touched upon.

The main points of the government strategy were:

- Launch of DTT with 2 multiplexes in the first two "islands" by the end of 2005, but 8 multiplexes were to be possible in long term (using both SFN and MSN networks), to be rolled out when possible, but without a specified time-table;
- ETSI TR 101 200 standard to be used for DVB-T;
- MPEG-2 standard;
- Accelerated switchover („island method") with 6-12 months of simulcasting in each „island," following which analogue broadcasting was to be switched-off in each island;
- Analogue switch-off criteria: DTT coverage of 95% of households; 90% DTT households;
- Multiplex 1 and 2 were to be given over to existing terrestrial television channels, free to air;
- HDTV to be introduced after analogue switch-off; T-DAB – no clear indication;
- No mandatory standards for STB, API (to be decided by market players)

There was acknowledgment that STBs would have to be subsidised for some families, but no real assessment of needs in this regard, nor any estimates of the level of funds that would have to be committed to this (let alone any real plans to do so).

Switch-off was planned for 2014. That immediately put Poland on a collision course with the European Commission which had long advocated 2012 as the final deadline. After a long battle, Poland finally won acceptance of its analogue switch-off date. The EU Telecommunications Council meeting on 14 November 2005 "invited the Member States as far as is possible, to complete switchover by 2012" – meaning that, at a pinch, the deadline could extend beyond 2012.

The broadcasting regulator NBC was aware that the government strategy was a bare-bones outline dealing in a basic manner with the launch of switchover, but by no means setting out the entire, comprehensive programme of work in this area, and leaving all the programming matters completely aside. With the general election scheduled for September 2005, it was clear that the current left-wing government would have no time to develop its strategy. Therefore, in September 2005, the NBC published its own report, *The Contribution of the NBC to the Introduction of Digital Terrestrial Television in Poland*, dealing with issues missing from the government report, such as the procedures for the beauty contest to select multiplex operators; programming issues (and the role of multiplex operators in determining the programme offer on their own multiplexes); the place of public service broadcasters

in the process; added services, CSA and EPGs, etc. The document also pointed out deficiencies in legislation, rendering the switchover process difficult to manage and leaving many issues unregulated.

On this basis, the NBC prepared in the autumn of 2005 to launch the first beauty contests for the first two multiplexes. At the same time, general and presidential elections were being held. In both cases, the centre-right won. And that was when politics once again got in the way of digitalisation, primarily for reasons to do with political control over public service broadcasting.

To explain why, we need to provide some background information. The National Broadcasting Council had come into being in 1993, after the adoption of the Broadcasting Act in December 1992. Pursuant to that law, its members were appointed by the two houses of Parliament and the President of the country. The NBC has the competence to appoint members of the Supervisory Councils of PSB broadcasters (except for 1 appointed by the Minister of the State Treasury), and it is the Supervisory Councils which appoint the Boards of Management of PSB broadcasters.

Staggered terms of office for NBC members meant that before 2006 there was no automatic "political parallelism" between Parliament and the NBC and consequently PSB organisations. There have been periods of "cohabitation" between governments of one political persuasion and NBC memberships appointed by previous parliaments and/or presidents, as well as between parliaments and governments representing one political orientation, and leaderships of PSB organisations dominated by representatives of other political orientations. The whole idea was that the composition of the NBC should be politically pluralistic and detached from the ruling majority of the day.

However, given the method of appointing NBC members, its composition depended primarily on the results of general and presidential elections. As it happened, in the period between the creation of the NBC in 1993 and the general election of September 2005, left-wing parties or candidates won 4 out of 5 parliamentary or presidential elections held during that time: two parliamentary elections (1993 and 2001) and two presidential elections (1995 and 2000). Centre-right parties were returned to power only once during that period, in 1997. As a result, the evolution of the composition of the NBC led over time to the domination of one political orientation, as shown in Table 5.

Table 5: Political Affiliations of NBC Members

Year	Right	Centre	Left
1993	4	4	1[2]
2005 (December)	1	3	5

Accordingly, by the time of the change of government after the parliamentary and presidential elections in autumn of 2005 (both won by the centre-right), the left had a comfortable majority in the NBC, capable of adopting any decision. That meant that another period of "cohabitation" was about to begin. Moreover, the terms of office of supervisory councils and boards of management of PSB organisations were scheduled to end in the first half of 2006. That meant that the left-dominated NBC would have the power to appoint the governing bodies of PSB organisations, while a centre-right government and President were in power.

To prevent this, the new parliamentary majority amended the Broadcasting Act and the Telecommunications Law in December 2005. The number of NBC members was reduced from 9 to 5 (2 appointed by the Diet, 1 by the Senate, 2 by the President) and the term of office of the current NBC was terminated. That led to the appointment of new NBC members (3 representing the senior coalition partner, the Law and Justice Party, and 1 each representing the junior coalition partners – Self-Defence and the League of Polish Families). Staggered terms for NBC members were eliminated, introducing strict political parallelism.

As a way of "punishing" the NBC, it was also deprived of a lead role in the digital switchover. The set of amendments adopted in December 2005 returned control of digital switchover to the telecommunications regulator, now the newly-constituted Office of Electronic Communications (UKE), which replaced the old URTiP. Its President is appointed directly by the Prime Minister, so here the new government was certain it could bring influence to bear on any decisions relating to the digital switchover.

Following the election, a new inter-departamental committee for the digital switchover was appointed. The process initiated by the NBC and leading to the launch the switchover process was thus brought to an abrupt halt. The new inter-departamental committee decided, and rightly so, to amend the Broadcasting Switchover Strategy for Terrestrial Television.

At the time of writing in February 2007, that has not yet happened, formally speaking, but preliminary indications suggest an abrupt change of strategy. A working group composed of representatives of the government and the broadcasting and telecommunications regulators has recommended a plan including the following elements:

- Launch of digital switchover – 2009;
- One multiplex operating on a nation-wide network to begin with
- 6-8 multiplexes in all; future multiplexes to be rolled out at unspecified dates;
- Compression standard – MPG-4;
- All incumbent terrestrial television channels to be allocated places on the one multiplex;
- Broadcasters to cover their own costs incurred due to digital transition (simulcasting, etc.); government may perhaps lower their fees for using digital frequencies;
- Some 7 million homes receive television off-air, so they must convert to digital by buying set-top-boxes;
- Purchase of set-top-boxes to be subsidised by the government, according to principles yet to be worked out;
- Analogue switch-off – 2012.

This recommendation was to be considered by the full inter-departmental committee and submitted to the government in March 2007.

Thus, all of a sudden, the digital switchover which was originally planned for 9 years (2005-2014) is now to be completed in 3-4 years (2009-2012). As can be seen, many elements of the plan are yet unconfirmed. The first multiplex is to provide mostly existing channels, available so far in analogue, thus offering viewers no real incentive to switch to digital, if no new channels will thus become available. Worst of all is the fact that there appears to be no specific plan for the remaining

multiplexes. Once the first one comes on stream, the process may stagnate, as people are unconvinced about the advantages of digital TV and receive no incentive in the form of new programme services available from new multiplexes. And if the saturation criteria are not reached, analogue switch-off will be impossible.

This plan, if confirmed, looks like a desperate attempt to get the ball rolling, in the hope that once that happens, everything else will eventually fall into place. The lessons of other countries (e.g. Spain) where similar mistakes caused the switch-over process to end in crisis, needing special government intervention to get it moving again, seem to have gone unnoticed.

Some market operators are getting impatient and are launching alternative projects to take advantage of digital technology, given that they cannot do so by means of DTT. This is why, as already mentioned, the ITI Group in 2006 launched a digital satellite platform "N" which is initially to offer 55 channels, including nine completely new to the Polish market, in seven thematic packages. HD services will be accessible with set-top boxes; other, more advanced (and expensive) STBs will enable reception of VoD services. There is also a plan to distribute ITI proprietary channels via the Internet and mobile alongside the "N" platform.

TVP, Poland's public service television, has indicated it, too, might launch its own digital satellite platform, offering all its terrestrial and current and planned satellite channels. Meanwhile, it has set up multiplexes and started distributing STBs in a few outlying localities outside the reach of its transmitters, thus launching DTT on a very small scale.

Accordingly, Poland is at a very interesting crossroads. On the one hand, it is not yet at the stage where the impact of digitalisation on the media industry and the consumer-citizen can fully be examined. On the other hand, we can already see moves to go beyond DTT and explore other, perhaps more promising avenues. What digitalisation has happened is promoting the development of a multi-channel television landscape, offering more variety to viewers and forcing public and commercial broadcasters into an expensive race to set up more and more thematic channels in order to maintain their competitive position on a growing market.

Let us note that DAB covers about eight per cent of the capital of Warsaw. One transmitter broadcasts five programmes of PSB radio (Polskie Radio) permanently. Most stations offer streaming over the Internet.

Conclusion

Writing on the Lithuanian media landscape in *European Media Governance* (in Terzis, forthcoming), Audronė Nugaraitė makes the following points: "It must be pointed out that digitalisation of the Lithuanian TV market is still not due to changes of the TV market proper and any internal need, but due to the active government policy … Lithuanian TV market with a conditionally low multi-channel TV penetration has quite a good potential for digital terrestrial TV penetration. However it must be pointed out that the lowest multi-channel TV penetration is in rural areas and small towns where relatively poorer citizens reside. So the digital terrestrial TV penetration will greatly depend on what policy is pursued in this field, how much set-top boxes will cost and whether they will be subsidized by the state."

This general overview of the situation in Central and Eastern European countries seems to support Nugaraitė's conclusions. Practically everywhere, digital

switchover is a top-down operation, imposed by government policy (where there is one), responding to decisions being taken by the International Telecommunications Union, or the European Union.

To be fair, this has also been the case in many Western European countries, especially the smaller ones.

We may be sure of one thing: in Central and Eastern Europe, digital switchover will not be an easy or smooth and trouble-free operation. Many countries have left detailed planning until very late. All the countries, including EU members, will have problems with meeting the 2012 or even the 2015 deadline, after which analogue transmissions are no longer to be protected by the ITU.

It is also possible to look at the entire thing in a different way: post-Communist countries are so preoccupied with 20th-century problems ("who owns and who controls" broadcasting) that they needed an outside push to come to grips with 21st-century ones of technological change and its manifold ramifications as concerns the operation of the media and the media market.

Depending on the way one looks at the issue, we could be dealing with:

1. either a "premature" digital switchover in countries not yet ready for it, or
2. countries needing a wake-up call to face technological and market realities that they are not responding properly to and which are going to affect their media systems anyway.

We will know the answer a few years from now, when the digital switchover is meant to be finished. If it has been successfully completed, then we will know that the second answer is correct. If it drags on or stagnates without a conclusion in the foreseeable future, then the first answer will be proved to be correct.

Notes:

1. When the first NBC was appointed in the first half of 1993, left-wing parties did not have enough MPs or senators in Parliament to elect anyone to the NBC. In the interest of pluralism, parliamentary parties agreed, however, to back the election of one person representing the left.

2. This book consists of country reports on the media landscape written by media experts from the particular countries. I am indebted to Dr. Georgios Terzis for letting me draw on the information contained in those country reports in the present article.

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