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Development of Digital TV in Europe

2000 Report

Luxembourg

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1. Digital TV market overview

1.1. Roll-out of digital services

The emergence of a digital television offer specific to Luxembourg seemed until recently highly improbable. The small size of the Luxembourg market, the high number of free-to-air programmes transmitted by cable or satellite, and the problems linked to the acquisition of broadcasting rights, constitute many barriers to the development of a real offer of digital television, which still today remains practically non-existent for Luxembourg viewers.

> Comprising some 150,000 households, the Luxembourg market is characterized above all by its small size, thus preventing the economically viable development of a digital television project on a national scale. The national offer of digital television is presently limited to the broadcast of national programmes produced by the CLT-UFA (RTL Télé Lëtzebuerg) and broadcast via the ASTRA satellite for four hours daily.
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> A second characteristic is the high rate of cable penetration, 90% of Luxembourg households having access to television by cable. This particularly high penetration rate is the result of a government decision dating from the end of the 1960s, aimed at encouraging a completely liberalized framework for the development of cable television without intervention by the public authorities.
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> Nevertheless, satellite reception of TV programmes is catching on among Luxembourg viewers. In fact some 20,000 households are equipped with satellite antennae, the present market penetration being around 15%. This relative success can be explained by the significant presence of foreigners in the population who wish to access programmes from their countries of origin which are not broadcast on cable.
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> Finally, the broadcast by foreign operators of pay- or thematic-channels in the Luxembourg market necessitates the acquisition of broadcasting rights, further complicating the marketing of a possible offer in Luxembourg. Today, CANAL + BELGIQUE, having acquired rights for the Luxembourg and Belgian markets, is the only pay-YV operator present in Luxembourg. Its analogue offer is relayed by the principal cable operators, with the exception of CODITEL.

However, the stability of the digital television market observed over recent years could be upset by the arrival of a digital television offer specific to Luxembourg, SELECT TV. Produced by AURORA, the launch of the bouquet is expected during autumn 2000.

1.1.1. Satellite Digital Services

Presently, the development of a digital television offer specific to Luxembourg is limited to the programmes produced by the CLT-UFA (RTL Télé Lëtzebuerg). These programmes are broadcast via the ASTRA satellite, 4 hours daily, and can be received free-of-charge, not only in Luxembourg but also by all households in other European countries which are equipped with satellite antennae and MPEG-2 decoders.

1.1.2. Cable Digital Services

In February 1999, AURORA INVESTMENTS created a new entity, AURORA MEDIA SERVICES, which was behind the first offer of digital television services by cable in Luxembourg. AURORA recently resorted to a venture-capital company, 3-I.

AURORA's digital bouquet, Select TV, which was to be launched 27 November 2000, is intend to be relayed by two of the four principal cable-operators, SIEMENS and ELTRONA. The latter is making available to AURORA 70 Mhz, which has the capacity of carrying up to seventy digital channels. The offer should comprise in a first time one bouquet of 60 television channels in various languages (French, German, Italian, English), and 50 radio channels ; a pay-per-view offer will also be proposed to viewers. The ambition of the AURORA project is to complete its digital television offer with interactive services via Internet.

1.2. Details of services

Given that AURORA's digital bouquet has not yet been officially unveiled in the Luxembourg market, little commercial information is presently available. According to AURORA representatives, the offer will consist of a single bouquet formula, the subscription price of which will be around LUX 1,400, excluding pay-per-view. The decoder will be included in the subscription price.

Where regulation is concerned, the proposed revision of the 1991 Law on electronic media, presented to the Chamber of Deputies, is still in project. This law will transpose the European Directive 'TV without Borders' in the Luxembourg law. Furthermore, we should mention that in its last governmental declaration, in August 1999, the government showed its intention of revising the substance of this Law.

1.3. Operators and market structure

The development context of the digital television offer via cable has proved particularly difficult for AURORA. An offer comprising television programmes broadcast via cable, problems of rights, and a small-sized market, constitute the three elements which only allowed the late emergence of a digital television offer compared with the offer in neighbouring countries (Benelux, Germany, France).

> Above all else, the development of a digital television offer necessitated the reaching of partnership agreements with the various cable-operators which provide a 90% coverage of Luxembourg households, whereas the cable sector in Luxembourg is a very fragmented market. While the four principal cable-operators - CODITEL, ELTRONA, SIEMENS and SOGEL - together provide coverage of more than half of connected households, there are nevertheless more than 150 local independent networks with little or no common technical specifications, and which are managed by as many separate entities. Contrary to other European countries, no modification of the structure of the cable sector has been observed during recent years. The only significant movement has been the transfer of the shares of CLT-UFA in ELTRONA, to the P&T Luxembourg.

In this context, AURORA only managed to reach agreement with two of the principal cable-operators, ELTRONA and SIEMENS, which respectively manage 42% and 16% of the market, more than half of connected households. The type of agreement covers rental by AURORA of part of the network capacity of the two cable-operators. The initial analogue offer was maintained by both cable-operators, the recent infrastructure allowing them to provide for the broadcast of both types of programme on their networks.

A second constraint to the emergence of a digital offer is the confusing situation in Luxembourg regarding broadcasting rights. The modalities of acquiring rights, generally on the basis of territory or language zone, not being clearly defined in Luxembourg, digital bouquet operators have progressively avoided the Luxembourg market, thus depriving the viewers of an offer of digital television services. However, if these problems of authors' rights constitute an obstacle for any operator wishing to develop a specific digital television offer, they are also an interesting gateway into the Luxembourg market for any operator which could succeed in managing these rights.

Finally, the small size of the market inevitably poses a series of economic problems in developing a digital offer. In fact, managing a digital bouquet generates important fixed costs which appear to be difficult to cover in a market of restricted size.

Beyond the AURORA initiative, a series of participants in Luxembourg are particularly active in the audiovisual and multimedia sectors, particularly the SOCIETE EUROPENNE DES SATELLITES (SES) which has long been developing an international activity in satellite transmission via its ASTRA network. ASTRA is the first satellite operator in the European market for direct reception. Regarding television programme broadcasting, SES covers 80% of the Europen market, managing the broadcast of analogue and digital bouquets such as CANAL SATELLITE DIGITAL, DF1, PREMIER DIGITAL, CANAL+, etc.

SES has also developed a parallel project, ASTRA-NET, dedicated to interactive services. This is a multimedia platform launched during 1998, aimed at the business world and offering broadband services (Internet access, etc.) via the ASTRA network. In 1999, SES launched the Astra Return Channel System which enables the development of interactive applications from Astra-Net (interactive digital television, data transfer, tele-education, etc.).

Finally, of note is the fact that several thematic multi-language channels transmit from Luxembourg for European audiences.

1.4. Perspectives

While up to now three scenarios were envisaged for the development of a digital television offer in Luxembourg - that is the development of the digital bouquet of CANAL + BELGIQUE broadcast via Luxembourg cable-operators, the setting-up of a digital bouquet specific to Luxembourg, and the development of a pan-European offer - the announcement of the imminent launching of the AURORA digital bouquet opens a new perspective, the outcome of which still remains uncertain.

The AURORA project must directly cope with a limited Luxembourg market, thus posing the question of its economic viability. Just as the analogue pay offer of CANAL + BELGIQUE has some 4,000 subscribers, SELECT TV doesn't seem able to attract a larger market, though its offer is only broadcast by two cable-operators. In these conditions, the costs generated by the development and management of the digital bouquet are difficult to cover, unless AURORA’s offer is extended to neighbouring countries (Benelux, Germany).

As we have already mentioned, AURORA’s digital offer is only presently relayed by two cable-operators, ELTRONA and SIEMENS. Several reasons explain the non-participation of the other cable-operators in the country. For the principal cable-operators, such a participation may not necessarily fit into the strategy of the group.

As far as the “small” cable-operators are concerned, an infrastructure problem generally arises, since in fact they don’t have sufficient capacity to relay a digital offer. However, it’s mainly an attitude of prudence observed by most of the cable participants with regard to a digital offer, the profitability of which is uncertain, which has held up and is still holding up the AURORA project.

Finally, the problems of rights still remain. AURORA, to launch its digital offer, must necessarily clarify the confused situation regarding broadcasting rights.

1.5. Conclusion

Much more so than for the other European countries, the distinction must be made between the demand and the offer of digital television in Luxembourg.

On the demand side, customers do not yet have access to a digital offer specific to the national market. The small size of the market and the richness of the cable offer appear to meet the present demand situation, only offering very few perspectives of change in the short and medium terms.

On the supply side, Luxembourg presents a market welcoming pan-European participants and projects very active in the audiovisual and multimedia sector, notably the SOCIÉTÉ EUROPÉENNE DES SATELLITES (SES), which broadcasts analogue and digital bouquets throughout Europe. The stability of the offer, observed in recent years, could however be upset by the arrival of a new participant, AURORA, which in autumn 2000 should launch the first national offer of digital television.

2. Key figures for the Luxembourg market

2.1. Country fundamentals

Country fundamentals

	1993	1994	1995	1996	1997	1998	1999
Population (millions)		0.404	0.408	0.413	0.418	0.424	0.429
Households (millions)		0.151	0.151	0.152	0.153	0.158	0.159
GDP (Euros, in billions)		12.295	13.261	13.501	14.166	14.861	15.661

Source: OECD

2.2. Equipment

Equipment

As at 31 December	1993	1994	1995	1996	1997	1998	1999
TV Households (millions)		0.143	0.145	0.147	0.148	0.154	0.157
TV Households (% of total Households)		94.7%	96.0%	96.7%	96.7%	97.5%	98.7%
TV Households with 2 TV sets or more (millions)		0.054	0.063	0.066	0.069	0.073	0.074
TV Households with 2 TV sets or more (% of TV Households)		37.8%	43.4%	44.9%	46.6%	47.4%	47.1%
TV Households with 16:9 Television sets (millions)		0.000	0.000	0.003	0.005	0.008	0.013
TV Households with 16:9 Television sets (% of TV Households)		0.0%	0.0%	1.9%	3.3%	5.4%	8.0%
VCR Households (millions)		0.081	0.084	0.090	0.095	0.105	0.108
VCR Households (% of TV Households)		56.6%	57.9%	61.2%	64.2%	68.2%	68.9%
Digital STB Households (millions)		0.000	0.000	0.000	0.000	0.000	0.000
Digital STB Households (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IDTV Households (millions)		0.000	0.000	0.000	0.000	0.000	0.000
IDTV Households (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Digital Households (millions)		0.000	0.000	0.000	0.000	0.000	0.000
Digital Households (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: E.A.O./L.E.N.T.I.C. estimation

2.3. Television market estimates

Television market estimates

Euros (Millions)	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Analogue TV Market							
Public funding		0.000	0.000	0.000	0.000	0.000	0.000
Advertising		3.000	3.000	6.000	6.500	6.900	7.200
Subscriptions		0.000	1.000	1.000	1.000	1.100	1.200
Total analogue TV		3.000	4.000	7.000	7.500	8.000	8.300
Digital TV Market							
Public funding		0.000	0.000	0.000	0.000	0.000	0.000
Advertising		0.000	0.000	0.000	0.000	0.000	0.000
Subscriptions		0.000	0.000	0.000	0.000	0.000	0.000
Total digital TV		0.000	0.000	0.000	0.000	0.000	0.000
TV Market							
Public funding		0.000	0.000	0.000	0.000	0.000	0.000
Advertising		3.000	3.000	6.000	6.500	6.900	7.200
Subscriptions		0.000	1.000	1.000	1.000	1.100	1.200
Total TV market		3.000	4.000	7.000	7.500	8.000	8.300

Source: E.A.O./Trends/L.E.N.T.I.C. estimation

2.4. Details of the subscription-TV market

Access to digital TV via Cable

	1993	1994	1995	1996	1997	1998	1999
Homes passed (millions)		0.143	0.145	0.147	0.148	0.154	0.157
of which digital (millions)		0.000	0.000	0.000	0.000	0.000	0.000
Home passed (% of TV Households)		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
of which digital (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Analogue Basic Subscribers (millions)		0.129	0.131	0.132	0.133	0.138	0.141
Digital package subscribers (millions)		0.000	0.000	0.000	0.000	0.000	0.000
Analogue Basic Subscribers (% of TV Households)		90.5%	90.3%	90.0%	89.8%	89.5%	89.8%
Digital package subscribers (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: E.A.O./L.E.N.T.I.C. estimation

Table 4 : Access to digital TV via Satellite

	1993	1994	1995	1996	1997	1998	1999
Satellite Households (millions)		0.016	0.017	0.018	0.020	0.021	0.022
Satellite Households (% of TV Households)		11.2%	11.7%	12.2%	13.5%	13.6%	14.0%
Satellite subscribers (millions)		0.000	0.000	0.000	0.000	0.000	0.000
Satellite subscribers (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
of which digital (millions)		0.000	0.000	0.000	0.000	0.000	0.000
of which digital (% of TV Households)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: E.A.O./L.E.N.T.I.C. estimation