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BELGIUM, A LABORATORY FOR EUROPE: THE FEDERAL MODEL AND THE INFORMATION SOCIETY

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Abstract — This paper presents the main political information superhighway (ISH) initiatives undertaken in Belgium, a small but centrally located European member state. Belgium is a federal state with regions and communities whose competences concerning multimedia and ISHs are not clearly defined. This paper shows that this fuzzy situation slows down ISHs' development in Belgium and reveals the weakness of a federal pattern for the definition and management of a coherent ISH strategy. Belgium has two main cultures which express themselves in the initiatives taken at the northern and southern parts of the country. These examples reveal that the use of ISHs to express national cultures and identities, and the cohesive effect of ISHs on European member states, underlined by the Bangemann report, may be contradictory. Copyright © 1996 Elsevier Science Ltd

INTRODUCTION

Belgium is a federal state composed of three regions and three communities. As a federal state, Belgium is often presented as a relevant pattern for political cooperation between the European Union (EU) member states. In the context of the Bangemann report (EC, 1994) promoting the political cohesion of Europe through information superhighways (ISHs), it sounds relevant to deeply analyse the Belgian initiatives and strategies. Indeed, to some extent, Belgium could be considered as a pertinent laboratory for testing the EU's capacity to launch and manage cohesive strategies while respecting regional identities. In this paper we will demonstrate that, in the specific field of ISHs, the Belgian federal pattern appears quite inappropriate for bringing a cohesive strategy to a successful conclusion. To some extent, one could say that the ISH project points out the weaknesses of the federal model.

Two main barriers, heavily interconnected, seem to prevent the shaping of a national strategy for a Belgian information society.

The first barrier is political, mainly due to deep regional disparities (linguistic, economic, cultural, etc.) and to the subsequent regionalist claims of some political leaders.

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In this context, the build-up of a cohesive strategy at a federal level appears hard to manage because of the difficulty of combining the shaping of a national strategy with the willingness to foster regional identities. As we will see later in this paper, in Belgium, the Bangemann report (EC, 1994) has given rise to a mosaic of highly fragmented and incoherent initiatives, partly supported by regionalist intentions and partly by the personal ambitions of some political leaders. This questions the economics of the innovation process in a federal state, and especially the general statement of the Bangemann report about the impact of ISHs on European cohesion. This statement appears marked by a strong technological determinism. The Belgian example shows that political issues and tensions shape the future of the ISHs and not the reverse. As pointed out by Francis Pavé (1990), a technological project can never solve political issues, since those issues need political solutions.

The second barrier is institutional. As a federal state, Belgium is characterized by a complex distribution of administrative competences between different political levels. This division of powers has been progressively shaped according to some well-established domains of political life (economy, culture, social, etc.) and is currently based on sensitive compromises between the political parties. The political issues occur when a project does not fit with these well-established categories. This is clearly the case for the ISH project since it concerns a multitude of administrative bodies and thus needs their cooperation. But, in Belgium, rather than stimulating this necessary cooperation, the ISH project tends to emphasize divisions. In fact, the ISHs idea has launched what could become a conflict of competences. Indeed, each level of authority, supported by various political interests and ambitions, is willing to protect and to extent its competence in order to get a foothold in the shaping of ISHs and to appear as an innovator on the Belgian political scene. This strategy can be explained by the political context which is mainly characterized by a strong recession and the total absence of political projects for the future of Belgian society. In this context, the Bangemann initiative is attractive since it fills a political gap with a “pseudo” project for a radically new society, the so-called “information society”. Rationally, many observers would like more cooperation and coordination of efforts between the concerned authorities. But what is rational from a pure economic and technical point of view appears to be politically unworkable in Belgium.

In this paper, we first sketch the Belgian context, focusing our attention on its major economic, cultural and political characteristics. Then, we question the current federal division of competences regarding the regulation of the ISH project and related new multimedia services. This analysis will point out the complexity of our federal organization and its incapacity to carry out a clear and cohesive strategy. The third section is devoted to the presentation of the main political initiatives at the federal and regional levels. This analysis shows that the ISH project does not reinforce the cohesion of the Belgian society but, on the contrary, intensifies regional and political divisions. Finally, we focus on the main debates launched by the Bangemann report in Belgium and on a general assessment of the major statements of this report regarding the Belgian experience.

THE BELGIAN CONTEXT

The political and Belgian context: towards a federal Belgium

Since 1993, the Belgian constitution states that “Belgium is a federal state composed of communities and regions”. Four legal reforms were implemented in 1970, 1980, 1988–89 and 1993 to reach this federal status. The federal state is responsible for the

general concerns of all Belgian citizens (finances, army, justice, social security, external affairs, development cooperation, monetary policy, responsibilities within the EU and NATO,...¹), while the division of competences between communities and regions is defined along two main axes.² The first axis concerns language and, more generally, culture. As Belgium has three official languages (French, Dutch and German), it also has three communities that are defined by the “people who compose them and the links that join these people”³, that is to say, language and culture. Therefore, Belgium is composed of the French-speaking community, the Dutch-speaking or Flemish community and the German-speaking community (the smallest one). The division into regions is based on economic autonomy and independence. Belgium has three regions: the Flemish Region, the Walloon Region and the Brussels-Capital Region. These regions are competent for economic matters. In some respects, they can be compared with the American states and to the German Länders.⁴

Each entity (region and community) has a council (legislative body) and a government (executive body), except the Flemish Region and community which have a common council and government.

The economic and cultural context

Belgium is a small country (30,500 km²), bounded on the North by The Netherlands, on the East by Germany and Luxemburg and, on the South, by France. It is situated at the heart of Europe, in a historically dynamic economic region. Trade is an important aspect of the Belgian economy⁵ because of the small interior market and the integration of Belgium in the Benelux in 1958 and later in the Common Market and the EU. Moreover, Belgium has always been and continues to be one of the most eager builders of Europe (Dehaene, 1995) and is often presented as the model of a federal state with relatively pacific coexistence of different cultures and languages (Dehaene, 1995; Lijphart, 1981). The continuous Belgian commitment towards a federal EU is due to a political and popular will. This move towards Europe has never been subject to a referendum in Belgium because it is almost never called into question by Belgian citizens. However, the increasing liberal move within the European economy and policies is moderated in Belgium, as in Germany, by a well-established social tradition of negotiation between trade unions, the employers' organization and the government, especially on employment questions.

As in many other European countries, the Belgian economy is mainly based on services,⁶ while most industrial sectors face an economic recession, especially in the Walloon Region. Economic differences between the northern and the southern parts of the country, strengthened by the present slump and the increasing unemployment rate⁷ worsen the long-lasting antagonism between Walloons and Flemish-speaking people.

¹<http://www.belgium.be/belgium>.

²<http://www.belgium.be/belgium>.

³<http://www.belgium.be/belgium>.

⁴<http://www.belgium.be/belgium>.

⁵Exports account for more than 70% of GDP (Dehaene, 1995) and Belgium is the 10th biggest world exporting country for products and the 8th for services (<http://www.belgium.be/belgium>).

⁶In 1986, services account for 64.8% of the Belgian GDP (Fédération des Entreprises de Belgique, 1988:145).

⁷13.2% of the active population (Institut des Comptes Nationaux—Bureau Fédéral du Plan, 1996:4).

Belgium is more and more a culturally divided society with two main regions, two main languages and two economies.

Belgium is characterized by a huge public debt⁸ that induces highly restricting economic measures and cuts in public expenses in order to satisfy the Maastricht convergence conditions⁹ and enter the Monetary Union. The importance of the interest charges reduces the latitude of the Belgian government in the definition of policy priorities (Dehaene, 1995). Belgian policy is thus mainly directed towards the management of this public deficit, the reestablishment of the firms' competitiveness and the reduction of unemployment. However, because of these economic priorities, there seems to have no long-term policies regarding education, improvement of the public service efficiency, definition of the public service or engagement towards an information society.

Being the capital of Europe (thus a central place for lobbying) but also centrally located geographically speaking, Brussels attracts a lot of international companies.¹⁰ This is also the case for many telecom companies¹¹ and the proximity of the complete liberalization of the European telecom market in 1998 speeds up this movement. The Belgian market seems thus to be more and more attractive for these companies, who consider Belgium as a battlefield for the professional telecom market (big companies) but are not interested in the final users market which is too limited.

MULTIMEDIA AND ISHs COMPETENCES IN BELGIUM

In Belgium, as in other federal states (Germany, Switzerland), this complex and fuzzy political context is surely one of the main factor that slows down the rise and the dynamism of the multimedia market as several institutions are responsible for the regulation of new multimedia services and their infrastructures.

Infrastructures: new landscapes and borderlines

Traditionally, the Belgian landscape of network infrastructures was organized around two separated worlds: the telecommunication infrastructure and the TV cable network. Telecom networks are regulated by the federal authority and the CATV infrastructure by the communities¹² because of cultural issues. According to Minon (1996), two main factors will contribute to spread confusion into the traditional borderlines between these two worlds. The first factor is the telecommunication infrastructure's liberalization, which opens the telecommunication market to alternative

⁸More than BF10,000 billion (US\$333 billion), almost 130% of the Belgian GDP (Bureau du Plan, 1994:24).

⁹Mainly the requirement of a budget deficit inferior or equal to 3% of the GDP and a total debt of maximum 60% of the GDP.

¹⁰More than 1,500 international organizations are established in Belgium, some of them have their international headquarters in Brussels (European Commission, NATO,...) (Fédération des Entreprises de Belgique, 1988). Many of these organizations are coordination and distribution centers (Dehaene, 1995).

¹¹British Telecom, Global One (consortium created by France Telecom Network Services, Deutsche Telekom and Sprint), Esprit Telecom, Unisource, Telecom Finland,... (Hart, 1995).

¹²As explained by Minon (1996), different laws have progressively widened the competences of the communities from a simple regulation of the cultural contents of broadcast services to the full regulation of the contents and their infrastructures, (mainly but not exclusively through the cable network).

infrastructures. The second element concerns the digitalization technique that will foster the competition between telecommunication and alternative infrastructures since, in a foreseeable future, each infrastructure will be technically able to offer the same range of digital services.

Telecommunication infrastructure and basic services¹³ are currently under the monopoly of the Belgian telecommunication operator, Belgacom, until January 1998. In order to consolidate Belgacom's strategic position, the federal state has opened Belgacom's capital to a new entrant, the ADSB consortium formed by Ameritech, Tele Denmark and Singapore Telecom. This strategic alliance was concluded in November 1995 as a first stage of Belgacom's competitive strategy in the context of liberalization of the alternative and traditional telecommunication infrastructures.

In this liberalization context, the federal Belgian government was the first European member state to vote a special rule concerning universal service provision. In the frame law ("loi-programme") of 20 December 1995, the federal government defined specific mechanisms to finance universal service, based on an obligatory contribution of telecom operators and service providers. On this issue, Belgium has adopted an innovative attitude by refusing to restrict the concept of universal service to the sole telephone services. This position has isolated Belgium on the European scene, the Eu having adopted a highly restrictive definition of universal service (Dermine, 1996).

Concerning the TV cable network, the infrastructure is currently under a *de facto* monopoly of local agencies usually owned by the communes with or without private partners. The communities are fully competent to regulate the diffusion of broadcast services on the TV cable network. The main characteristics of this CATV network are, on the one hand, its high penetration rate (95% of Belgian households) and, on the other hand, its important fragmentation since each local network is managed and controlled by a specific local agency. With this high penetration level, the TV cable network is presented as the main alternative infrastructure to the traditional telecommunication network in the context of the new European directives¹⁴ of November 95 and February 96 concerning, respectively, the liberalization of the CATV network and of other alternative infrastructures.

Services: who is competent? Communities or regions?

In Belgium, new multimedia services raise a particular legal problem linked to the definition of the legal framework to be applied to the supply of these services. Traditionally, in the Belgian law, a distinction is made between broadcast services,¹⁵ which are regarded as cultural matters and therefore regulated by the communities and interpersonal services linked to the telecom infrastructure and thus dependent on the federal authority. In the past, frontiers were clear between radio and television on the one hand and telephone on the other. These framework differences were therefore not

¹³Telephone, telex, radiomail, telegraph and fixed lines.

¹⁴According to this directive, owners of alternative infrastructures may open their network to telecommunication commercial services, except for telephone and basic services which will be liberalized in January 1998.

¹⁵Broadcast services can be defined as services whose emission is due to be received by the "audience in general" (State Council decision) or by the "public in general or a part of it" (decree of 17 July 1987). This definition is difficult to apply to new multimedia services as explained by Minon (1996:50): "The apparition of pay-per-view services, near video on demand and then video on demand will probably shake this definition".

so important. But nowadays, this situation is less and less coherent since all types of service, through digitalization, may be supported by many kinds of infrastructure. Similar services may then receive a different legal treatment given the supporting infrastructure or the concerned governing authority.

As long as the Belgian regulatory framework remains fuzzy regarding the definition of concepts and the delimitation of competences, conflicts will subsist on the legal and political levels. Such competences conflicts will perhaps have a negative effect in the long-range on the Belgian multimedia market despite the rather exceptional cable situation in Belgium (as this could not be extensively exploited). The solution to this problem, according to Willems, Gérard, Poulet, and Queck (1995), is probably a clear division of infrastructure and services regulation aspects and the creation of a unique regulatory institution for each of these elements. However, this technical and rational solution will probably have little chance to succeed given the Belgian political landscape.

THE POLITICAL INITIATIVES

Initiatives at the federal level

As quoted before, the Belgian federal authority remains fully competent for telecommunication infrastructure and services. Despite its competence, the federal authority has been relatively absent in the field of ISHs. As we will see later on, many reasons explain this absence of strategy, amongst them the dominance in the federal agenda of the public debt problem and the search for solutions for reducing this debt, and of the important unemployment rate.

The privatization of the national telecom operator

At the Belgian federal level, the Bangemann report (EC, 1994) did not give rise to important debates and projects because, as already mentioned, since some years, the federal agenda in the economic field has mainly been dominated by two major issues. The first one, in line with the Delors White Paper on growth, competitiveness and employment (EC, 1993), concerns the social negotiation of a new global agreement for employment. The second issue regards Belgacom's privatization. To some extent, the focus on these two issues reveals that the federal authorities perceive one of the real purposes of the Bangemann report, that is to say the claim for an accelerated agenda in the liberalization of telecommunication infrastructures. It also shows that the Belgian authorities feel that this report was an inappropriate response to one of the major European challenge: the social crisis.

So, regarding ISHs, the major initiative of the federal level concerns the privatization process of Belgacom. This process was carried out rapidly according to a very swift agenda. Launched in mid-1994, the process was brought to a successful conclusion in December 1995 through the selling of 49.9% of Belgacom's capital to ADSB.

Three main reasons explain this rapid process.

The first one is the 1998 term. As explained before, Belgium's central position makes this rather tight internal market very attractive for telecommunication operators, since many headquarters of private and public companies are located in Brussels. The perspective of telecom general liberalization in 1998 claimed urgently for a reinforcement of the competitive position of the national operator, particularly on the professional

market on which new entrants are already present, as Global One, British Telecom, Unisource, etc. But the danger for the national telecom operator comes also from new domestic entrants like CATV operators, since the July 96 European directive authorizes the commercial exploitation of "non-reserved" services on alternative infrastructures. In that context, Belgacom's privatization could also be interpreted as a strategy to reinforce the federal position in front of some regional- or community-based strategies promoting alternative infrastructures, like Telenet, that will be explained later in this paper.

More prosaically, the privatization of Belgacom (as with that of other public agencies) may ease the weight of the huge public debt because privatizations are unique operations that could bring the amount of the debt closer to the 60% of GDP required by the Maastricht conditions (Dehaene, 1995).

ADSB's motivation can be explained by the fact that the consortium joins "forces with a company that is the dominant player in the European Union's capital—a prime location for the European headquarters of international companies and a springboard for possible expansion into neighbouring France and Germany" (Tucker, 1995). This motivation justifies the overexpected price offered by ADSB to get 50% minus one share of Belgacom in spite of the fact that the state telecom company suffered from poor performance and chaotic management. In this alliance, the ADSB consortium brings its experience in the field of telecom and multimedia services, especially for the professional markets and electronic commerce.

This process was very "sensitive in Belgium where public sector unions are wary of the government's privatization ambitions" (Tucker, 1995). Employment, flexible working practices, wage freeze and status damages were the main concerns of the 26,000 workers of Belgacom. In spite of promises and guarantees made by the government and accepted by the ADSB consortium to maintain the current rate of employment until the end of 1997, trade unions are worried about possible redundancies before this term regarding the past experiences of Ameritech, Tele Denmark and Singapore Telecom.

Universal service: the Belgian way to liberalization

As quoted before, the federal Belgian government was the first European member state to vote a special law concerning universal service provision. In the "loi-programme" of 20 December 1995, the federal government considered specific mechanisms to fund universal service, based on an obligatory contribution of telecom operators and service providers. In this "loi-programme", the Belgian federal government has adopted an evolutive and extended concept of universal service, not restricted to the non-profitable segments of the telephone, fax and file transfer markets, as stated by the European Commission (EC). The Belgian law aims at extending the coverage of universal service to all telecommunication services of public interests for schools, administrations, disabled people, elderly, etc. (Lauwers, 1996). This quite innovative position has isolated Belgium on the European scene, the EU promoting a very liberal and restricted concept of universal service (Dermine).

On the Belgian scene, it has also launched a deep conflict between the federal and Flemish governments, the latter having adopted the same restricted concept of universal service as the EU. However, the conflict is more economic and political than purely conceptual. In this conflict, the Flemish government accuses the federal state of protectionism in favor of Belgacom by entrusting it with the mission of ensuring

universal service in Belgium (Lauwers, 1996). One must admit that the law under current discussion is considering the possibility to give this mission to a telecom operator that has the best national coverage and already an experience in managing such "social" services, namely Belgacom (Lauwers, 1996). For the Flemish government, this statement is clearly in opposition to the European competition law and the ongoing process of liberalization of the telecom sector. This conflict about universal service is very representative of a general conflict between two levels of power in Belgium, the federal level trying to protect federal interests, in this case those of its state telecom company, and the Flemish level trying to push its regional strategy and to defend the Telenet alternative infrastructure's project which will be explained later.

Public administration: a weak investment in ISHs

In its very market-driven approach, the Bangemann report stresses the leverage effect that the public sector, being by nature a critical mass of potential users, could have on the market of ISHs. This pure market consideration is of course more positively presented in the Bangemann report, focusing on "more efficient, transparent and responsive public services, closer to the citizens and at lower costs" (EC, 1994:5). Here again, it seems important to underline the strong technological determinism of this report, and to strongly insist on the fact that, to our knowledge, a technology has never transformed, by itself, a rigid bureaucracy into a flexible adhocracy! Apart from this consideration, one must recognize that in Belgium, the public sector does not play a leading role in general.

Three main issues can explain this weak investment. The first issue, already explained before, concerns the dramatic public debt of Belgium which prevents public authorities from realizing major investments in new technologies and services. The current time is more devoted to a large agenda of rationalization and privatization of public bodies than to modernization of public administrations.¹⁶ Secondly, the successive legal reforms to shape the federal status of the state have created a very unstable administrative context, quite inappropriate to large organizational and technological changes. Finally, the relative turnover of the Belgian government and ministers appears as a major barrier for long-term changes and investments since, paradoxically, deep changes need a high political stability to succeed. The result of this situation is a quasi-total absence of public investments¹⁷ and plans to foster the use of ISHs related services in public administrations. The sole initiatives are rather short term and often marked by motivations of some ministers willing to promote a modern self-image.

R&D: the European path

Federal competences in R&D concern fundamental research and exceptionally more applied research in domains of national interest. Considering ISHs as a domain of

¹⁶Except perhaps the Bistel project, funded by the federal government, which concerns the setting-up of a database server with administrative and news information necessary to take political decisions.

¹⁷It is probably worthwhile to mention the federal investment in Belnet, the academic and research network, use of which is still free for universities because it is funded by the government (almost BF100 million per year—US\$3.33 million).

national interest, the federal science policy department (OSTC) launched in 1994 a scientific program for telecommunications diffusion.

The objective of this federal research program was the “stimulation of telematics technologies use” (Services du Premier Ministre—Affaires Scientifiques, Techniques et Culturelles, 1996a:2) into specific users, that is, users that are usually not considered as target public by the commercial applications (i.e., the non-profit sector, the SMEs and the liberal professions). The OSTC more specifically supports projects including federal administrations or federal scientific and cultural institutions. This program has three specific axes: the development of targeted pilot applications, the constitution of an interdisciplinary expertise basis and a forum for telecom use.

This program mirrors the main European R&D initiatives of the 4th framework European program. It is built on the same technological options pushing the ISDN technology and the ATM protocols. It focuses on the development of demonstration platforms specially in domains of public and non-profit interest, following the same orientations as the EU Telematics program. But one of the major differences with the European orientations concerns the emphasis on socio-economic research through the second axis of the program: “Constitution of an interdisciplinary expertise basis”. The objective of this second axis is the setting-up of a “coherent and multidisciplinary scientific expertise basis in Belgium on all the factors conditioning the diffusion of telematics applications into specific users” (Services du Premier Ministre—Affaires Scientifiques, Techniques et Culturelles, 1996b:1).

This positively shows the willingness to address specific social, economic, legal and cultural issues regarding the shaping of the so-called information society. It is worth underlining the dominance of legal issues in this program. This dominance is not proper to this specific program but concerns more widely the Belgian public debate on ISHs. To some extent, this debate appears entirely captured by legal and technical engineering issues while fundamental debates on social aspects, for example, are pushed out of the limelight.

Concerning the demonstration platforms supported by this program, they “demonstrate” clearly the lack of imagination in the field of ISHs applications. Most of them concern rather classical process innovations based on the experimentation of network solutions for administrative or associative organizations. Again, this is not proper to this specific program. The same statement can be established for the EU Telematics program. This questions the optimistic assertion of the Bangemann report about the positive effect of ISHs on jobs’ creation since the economic analysis shows clearly that this positive scenario is highly conditioned by the development of radical product or service innovation (Delhaye, Lobet-Maris, & van Bastelaer, 1996).

Initiatives at the Flemish level

Let us recall that in Flanders, there is only one council and one government. Competences and initiatives are therefore less divided than in the Walloon Region and French-speaking community. Concretely, this Flemish council has lead the initiative, following Delors’ White Paper and the Bangemann report, of developing an ISH project for a modern Flanders radically turned towards the future. This project of “Multimedia in Vlaanderen”, formally presented in April 1996 (Vlaamse Regering, 1996), is mainly based upon the Telenet Vlaanderen project and aims at developing a Flemish information society for several reasons (Vlaamse Regering, 1996:7–10). First of all, the multimedia sector is presented as being turned towards the future and strategically important for the development of Flanders. Secondly, according to the Flemish

government, multimedia and the information society will provide net job creation.¹⁸ "Multimedia in Vlaanderen" also emphasizes the need of a Flemish anchoring in the multimedia sector and underlines, as the Bangemann report does, the potentiality of ISHs and society in the promotion of the Flemish culture and language. The project also takes as leading multimedia applications the 10 applications promoted by the Bangemann report (teleworking, teleshopping, distance learning, ...). Finally, the report stresses the necessity to guarantee the access to the information society to all Flemish people in order to avoid a dual society but, visibly not to avoid a dual Belgium!

This document expressing views of the Flemish government strongly shows that Flanders has followed main Bangemann report's statements and it really seems, that, in Belgium, the Bangemann report has been most echoed in the northern part of the country. "Multimedia in Vlaanderen" clearly expresses the involvement of the Flemish government into the "Bangemann move", especially the European-pushed process of telecom liberalization and the need for a proactive position in that field (Vlaamse Regering, 1996:9). It also denotes regionalist views of a Flemish information society (Abrahams, 1995) and constitutes a new way of claiming a long-lasting Flemish will of autonomy and independence.

The main element of "Multimedia in Vlaanderen" is the Telenet Vlaanderen project. A consortium has been formed for developing this project and is composed of the northern TV cable distributors, the Flemish government through its regional investment society (Gimv) and the American US West. The project aims at building a fully interconnected alternative digital infrastructure, based on the CATV network and competing with the Belgacom infrastructure. The project is above all political and if the political vision is clear, the economic's plan of the project remain highly uncertain. Telenet's profitability is indeed heavily doubtful¹⁹: it implies huge costs²⁰ and the benefits, if any, are risky and difficult to estimate. Moreover, the target market is the telephone services on the cable but, concerning phone services, Belgacom has an important installed basis. But, principally, Telenet Vlaanderen suffers from a lack of killing multimedia applications. This lack of killing applications and the uncertain return on investment make the search for economic partners difficult. In fact, since the launch of the project in Autumn 1994, partners retire more and more from the project and in May 1996 the holding was not yet firmly established, although announced several times (Simon, 1996).

At the regional level, the Flemish Region also launched R&D actions on the infrastructure level as well as on the services level. The R&D policy mainly consists of the Action Program in Information Technology, a multimedia fund and the Medialab project. The Action Program in Information Technology, endowed with BF1150 million (US\$38.3 million) is mainly designed for firms and research centers and has five main application fields: programs on demand, teleworking, edutainment (education and entertainment), mobile communication for transport and multimedia process control (Vlaamse Regering, 1996:28-29). The multimedia fund aims at providing risk capital via the Flemish regional investment society for the development of new services on the cable network or on PSTN in order to protect or affirm the Flemish culture (Vlaamse Regering, 1996:31). The third important part of the R&D Flemish policy, called Medialab, is the setting-up, as in the federal research program, of an expertise

¹⁸Different reports, since the Bangemann report, have been mostly doubtful about this statement (Delhaye, Lobet-Maris, & van Bastelaer, 1996; EC, 1996).

¹⁹Mercer Management, an American consultancy office specializing in telecommunications, has indeed declared, in August 1995, that this project will be a financial disaster ("Telenet, une catastrophe?", 1995).

²⁰Estimated at BF50 billion (US\$1.667 billion) (Simon, 1996) especially for the fiber optic infrastructure and the FTTH (Fiber to the Home) technique that has to be implemented.

network in IT but more specially on the socio-economic aspects of multimedia applications with four main priorities: teleworking, on-line multimedia training, on-line information access and diffusion, and teleshopping (Vlaamse Regering, 1996:33-34).

The Bangemann report presented ISHs as having a cohesive effect on the European member states but also as being a way of expressing national cultures and identities. The Flemish example seems to reveal that these two elements may be contradictory, because the will to express national cultures and identities is often linked to nationalist views of independence that do not necessarily lead to a better cohesion between regions and countries.

Initiatives at the French-speaking levels

Unlike the Flemish case, there is no political unity in the French-speaking part of Belgium allowing a unique initiative in the multimedia field, perhaps because the feeling of a regional identity is less present in Wallonia. But the main explanations for the lack of policy initiatives in the southern part of the country lie in the separation of powers and the conflict of competences that prevent the design of a coherent strategy concerning multimedia and convergence. The ISHs debate only prolongs existing tensions and conflicts between regional and community levels but on a new field. Moreover, the weak economic situation of Wallonia reduces investment capacities of political authorities as well as of firms. Concerning the cable infrastructure, the owners of the network are local companies which have less power than the Flemish firms. In this context, there is no federative project like Telenet Vlaanderen but some separate and sometimes overlapping initiatives between partners which are not always objective allies.

The first example of these initiatives is TITAN (Televisual Interactive Terminal Associates Networks), a consortium set up in 1993 by the French-speaking community in order to manage the transition of the cable network to the digital technique. This consortium was formed by the main telecom and CATV network operators, the TV channels, the main concerned industrial firms or service providers, the French- and German-speaking authorities and the main French-speaking universities. As a technical group, this association has realized major advances by conducting technical studies on five domains: services, decoding terminal, networks, financing and contacts, and legal aspects (TITAN, 1993:29).

Contrary to the Telenet group, this consortium has never abandoned its status of non-lucrative association to form a financial structure in order to develop a new strategic network offer on the Belgian market. Many reasons explain this inertia. Once again, the first reason is the crucial lack of killing applications that could foster the alliance between the major players. The second reason concerns the decoding terminal, the remaining uncertainty about the standard choice and subsequently the lack of commercial plans for the production and diffusion of this terminal. The third reason is the inability of the southern CATV operators to elaborate a real and coherent strategy due to their high fragmentation but also to the relative weakness of their management resources. The last reason is the lack of private investment to dynamize the strategy, especially investments coming from media and press companies.

The second French-speaking initiative, starting from the telecom world, was proposed in June 1995 by the Minister-President of the Walloon Region. This initiative set up a Telecom studies' syndicate, the Syndicat des Télécoms. This group gathered Belgacom, all the French-speaking Belgian CATV operators and the investment society of the Walloon Region (SRIW). The aim of the Syndicat des Télécoms is to draw up an inventory of all existing infrastructures in the Walloon Region and to design scenarios

for network developments able to support market-oriented multimedia services. The Syndicate also has to assess the necessary investments and to design a legal framework. Unfortunately, the results of the group's research are confidential. But it shows that the Telenet Vlaanderen project has had a stimulating effect on the French-speaking part of the country.

Like TITAN, the Syndicat des Télécoms never transformed into an economic holding offering new services or a new infrastructure in the Walloon Region. Because of the difficulty of setting-up a federal and economically viable project and of proposing a coherent strategy, especially in the face of the competitive satellite offer, Wallonia seems to be an open battlefield where Belgacom, CATV operators, and other new entrants will meet in disorganized order.

Concerning R&D in the Walloon Region, the regional minister in charge of research and technological development has launched, in June 1996, an "impulsional program" for the development of innovative multimedia applications in the Walloon Region called "From Digital to Multimedia". This 3-year program, from 1997 to 1999, of BF700 million (US\$23.33 million), answers the call from Martin Bangemann for a clear political sign from European member states concerning the impulse to the development of multimedia services in the framework of ISHs. This program has been designed with the users and providers of content and infrastructure through 6 months of actors' hearings. "From Digital to Multimedia" seems radically oriented towards product innovation, new services, social demand but also towards the market and will be supported by three technological poles: TCP/IP technologies and on-line services, MPEG technologies and services, and off-line technologies and services (like CD-Rom).

ANALYSIS OF THE BELGIAN SITUATION

The Belgian debate: a purely academic one

As quoted before, the Bangemann report did not give rise to important public debates about societal issues of ISHs in Belgium. This reflects a general attitude of Belgium towards European initiatives. This attitude cannot be characterized as reactive or proactive but really passive; Belgium usually follows the major European policies. But this reflects also the highly fragmented political scene of Belgium and its inability to raise fundamental and societal questions, mainly because of various and contradictory interests of major involved political players. The sole visible public debate on ISHs in Belgium concerns the concept of universal service. But as already pointed out, this debate is not dynamized by some democratic intentions but by pure games of political interests.

However, there has been a kind of societal debate about the Bangemann report but it remains purely academic.²¹ This debate has focused on two main issues. The first issue raised by academics concerns the ideology and the strong technological determinism of the Bangemann report. This report intends to position the ISHs as a radical innovation, a move towards a radical change of society, the so-called "information society". Presented as a new industrial revolution, the information society "has the

²¹Mainly via seminars and workshops organized by universities [e.g., the four seminars proposed from November 95 to February 96 by CITA, an interdisciplinary center specializing in the assessment of information and communication technologies (<http://www.info.fundp.ac.be/~bvb/SemAI.html>)].

potential to improve the quality of life of Europe's citizens, the efficiency of our social and economic organization and to reinforce cohesion" (EC, 1994:6). These Utopian statements were widely denounced by some academics (Delhay, Lobet-Maris, & van Bastelaer, 1996). First of all, those statements reveal the weakness of European policies regarding the resolution of current major social and economic issues. These issues need political solutions which are dramatically absent on the European scene. Secondly, some academics read this report as a "societal" claim to support major investments into the European telecommunication industries and to accelerate the liberalization agenda. To some extent, the Bangemann report is analyzed as a new "societal costume" to defend an old European telecommunication policy: the 80s ISDN option and the telecommunication sector liberalization.

The second issue is related to employment which appears as a central factor to legitimate new telecommunication investments. Two main statements support this strategy in the Bangemann report: the Minitel analogy and the innovation approach. Concerning the Minitel analogy, Burgelman (1995) pointed out that the very liberal approach of the Bangemann report recommends not to do what has made Minitel successful. Indeed, Minitel is a state innovation and its success must be analyzed regarding the major role played jointly by the national telecom carrier and the French government in shaping this innovation (Delhay, Lobet-Maris, & van Bastelaer, 1996).

The second criticism is related to the innovation approach. The Bangemann report (EC, 1994) and the White Paper on growth, competitiveness and employment (EC, 1993) expressed the conviction of remarkable positive effect of ISHs on employment due to "the enormous potential for new services relating to production, consumption, culture and leisure activities" (EC, 1994:4). This conviction is not shared by some academics for various reasons.

First of all, the Bangemann approach is clearly oriented towards infrastructure issues though job creation is highly dependent on the development of new markets based on radical product or service innovations (Delhay, Lobet-Maris, & van Bastelaer, 1996). On this point, the Bangemann report is short of convictions. The 10 applications quoted in the report to launch the information society concern mainly process innovation and not radical product innovation. The current reserve of major players to invest in broadband infrastructure can be explained by the uncertainty of the return on investment, since real killing applications are still missing. Even if a market of new multimedia services and products emerges, the net effect on job creation will probably not be as important as expressed by the White Paper and the Bangemann report. For instance, the White Paper states that the French Minitel has directly created 350,000 jobs, while other reports speak about a net creation of 25,000 jobs (Théry, 1994).

Secondly, the liberal approach promoted in the report has proved by crude examples that it is more destructive than creative as far as employment is concerned. British Telecom's extensive redundancies are still in memory. A European report on the employment effects of telecom liberalization will be published at the end of 1996 by DG V and the High-Level Group of Experts, and the already existing conclusions are strongly negative. Other major issues raised in this academic debate concern mainly the cohesion of Europe and the risk to create a two-tier society of information have and have-nots.

The weakness of the federal pattern for the development of a global information society

The lack of societal public debates in Belgium is probably due to the dominance of a strong conflict of competences between main political authorities. To some extent and

in opposition to Bangemann's statements, the Belgian example reveals the weakness of a federal state in defining and managing a coherent ISH strategy. This issue can be analyzed as a pure technical one since, as quoted before, the convergence between telecommunications and CATV and the regulation of the new multimedia sector are hard to manage regarding the traditional division of responsibilities. Starting with this perception of the problem, legal experts try to set up different institutional mechanisms pointing out the necessity to create a unique state department in charge of ISHs (Willems, Gérard, Poulet, & Queck, 1995). Even if this process of federal reengineering seems rational from a pure technical point of view, it has little chance to succeed since the problem is more political than simply technical. In Belgium, the ISH project contributes to crystallize, on a new domain of political interest, deep tensions and conflicts about the state reform and its political fragility. Since the Bangemann report's publication, ISHs in Belgium became a sort of battlefield coagulating long-lasting oppositions between centrifugal forces originating from strong regionalist strategies and centripetal pressures defending the state's federal organization. These oppositions very clearly show the limits of the technological determinism of the Bangemann report stating that ISHs will be a central vector of the European cohesion. The very small Belgian scene does not bring any empirical evidence to this statement.

A market-driven approach: success or failure?

For the development of the European information society, the Bangemann report underlines the necessity of a market-driven approach whose efficiency has since been questioned (Burgelman, 1995; Delhay, Lobet-Maris, & van Bastelaer, 1996). In the Belgian case, this approach is facing difficulties because the market does not seem to answer the Bangemann call. This relative market inertia can be explained by the uncertainty about the real return on investment on new infrastructures, due to the absence of killing applications that could justify these investments. However, this lack of killing applications is not specific to the Belgian market but could be found in neighboring countries (Torres, 1994).

This inertia implies that ISHs can only be pushed by a strong willful political strategy and important public fundings. This raises two major issues. The first one questions the funding capacity of the state. The Belgium case of contrasted strategies between the northern and richer part of the country and the southern area shows obviously that this primary condition could lead to a two-tier European society between rich and poor member states and, even into a same state, between rich and poor regions. The comparison between the Flemish and Walloon Regions' policies brings some empirical evidence and reveals that ISHs could foster regional disparities. But this raises also crucial questions about the value and the motivation supporting public intervention. The Belgian case and more precisely the Flemish policies show that this intervention can be dynamized by other concerns than purely economic ones. The shaping of ISHs can be strongly marked by important motivations of competition and affirmation of regional identities. These trends indicate that ISHs may increase competition between regions and, later regional disparities. The tone of the Bangemann report stresses by itself this competition when stating that "the first countries to enter the information society will reap the greatest rewards" (EC, 1994:5).

Regional identities and cohesion

While the Bangemann report stresses that ISHs will provide opportunities to express regional identities and culture but also lead to Europe's cohesion and allow the construction of a European information society, the Belgian case shows obviously that expression of regional identities appears to be contradictory with a greater cohesion. The Belgian example underlines the difficulty to build a Belgian information society as the concept of society does not seem to have any political concrete content or reality. At a more general level, it also questions the ambition of setting up a European information society and perhaps also reveals the difficulty of building a European society while respecting regional identities. The Bangemann report pointed out that "the only question is whether information highways will be a strategic creation for the whole Union, or a more fragmented and less effective amalgam of individual initiatives by Member states" (EC, 1994:5). The Belgian case seems to confirm the more pessimistic hypothesis.

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