THE GAME IS ON FOR WORLD TELEVISION

by

MAUD GAGNÉ

A thesis submitted in conformity with the requirements for the degree of Master of Laws, Graduate Department of the Faculty of Law, University of Toronto

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Abstract: This thesis seeks to shed some light on how local broadcasting regulations, international trade law and space law interact with each other in regard to direct-to-home television. An overview of the birth of direct-to-home technology, its popularity and potential as well as a historical account of the development since the sixties of the international regulatory framework applicable to the use of space and radiowaves are presented. Canada's domestic broadcasting regulatory regime is put forth as a case-study.
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Preliminary Note

With the successful introduction since the early nineties of BSB Sky in the UK and DTH satellite broadcasting over Europe, TV has taken a dramatic step towards securing international audiences. To compensate for the erosion of network audiences and audience fragmentation, traditional broadcasters have started overseas channels and aim to be more than a one-channel business. All major US networks and entertainment industry players have secured access to Europe’s growing market, are doing well in Eastern Europe and wasting no time in examining Central European and Asian markets. European players such as, for example, the BBC through BBC World and French TV networks are developing worldwide markets overseas including audiences in North and South America. It is critically important to observe that international activities are no longer characterized by the licensing of foreign programs or TV series on an ad hoc basis but rather by the exploitation in foreign territories overseas of Television programming systems (TPS) or channels in their entirety (i.e. T.N.T., CNN, Nickelodeon). Another important observation is that major mergers and consolidations have taken place such as Disney-ABC, Time Warner-Turner, Fox News Corp., Canal Plus Premiere and CLT/UFA-Kirch. Emerging markets are getting tapped very quickly by these colossi. These players may and will in the not too distant future control market access to most territories. Nothing can halt the trend towards World TV.

Given the current context, it is difficult to refute the idea that global events are influencing situations locally and not the reverse. This means that in order to maintain a desired situation locally it is necessary to be present on the global gameboard. The pyramid is inverted.

No one denies that culture is important and that TV is the most powerful mass media. Despite our relatively small population and our proximity to the USA with which we share a common language, it is critically important to be able to maintain at least our current position with regard to the nurturing of cultural expression in Canada. In order to do so, it is necessary to examine this new context in view of possibly becoming a small player in the World TV game.

The elaboration of the appropriate strategy for adjusting cultural and economic objectives related to broadcasting cannot be limited only to the study of the broadcasting industry per se at an international level (with particular emphasis for the purposes of this thesis, on North America and Europe). A holistic approach must be adopted. Technology is the strongest driving force behind World TV. It is technology that permits efficient global market access. This technological capacity has led to an increased number of
international trade agreements, notably in telecommunications. The agreements imply competition, deregulation and thus a changing role for government authorities both on the domestic front and in the international forum.

Technological developments such as digitalization and the application of computer technology to telecommunications have led to the carriage of content on different interconnecting support media. This in turn is leading to the convergence (confluence) of broadcasting and telecommunications and the collision of two very different legal regimes. Also, the motives (such as the scarcity of the airwaves and culture) behind the traditional public trust role of government authorities over TV broadcasting, are becoming less pertinent. In fact, the definition of broadcasting is gaining a broader meaning as it comes to encompass television programming systems.

The trend towards personal communication services is causing control over access to content to become very decentralized and access no longer matches specific territories. A country's control over access to content and hence over access to cultural goods is problematic. Copyright regimes are affected and are being reviewed.

As market access changes and technology converges, the economics of the TV industry is undergoing change.

International trade and telecommunications agreements are sensitive to political will and are implemented by domestic regulators as well as in international forums such as the WTO and the UN agency, the ITU.

Finally, corporations are responsible for developing profitable applications of technology and seizing the advantages and meeting the challenges of international market access and competition.

All these factors are acting in synergy. Thus a narrow approach is not appropriate for gaining insight into what the new technology and globalization mean with regard to the TV broadcasting industry and local culture. The Chaos theory (a tiny change in the initial situation can lead to change in the subsequent behavior that rapidly grows large) explained by Stephen Hawking is all the more applicable now in view of the fact that the mass of scientific knowledge doubles every four years.

It would be impossible to go into any depth on all of these topics in a thesis and it probably would be futile to do so given that technology, the driving force, pushes ahead so quickly and affects so profoundly. The goal of this thesis is to gain an insight into the main trends and determine which are likely to persevere. Such an insight can only be
obtained by stepping back from the trees to see the forest. Hence, this thesis incorporates a historical perspective where appropriate especially with regard to the political will of nations and the constitution of international bodies involved in creating the regulatory framework for World TV.

Focus is put on satellite technology and DTH TV in particular. DTH (Direct-to-Home) satellite technology is inherently wide-reaching and ideal for transborder broadcasting. Many say broadcasting is the best use for that technology. The maturing of DTH satellite broadcasting, its popularity, the recent adoption of a common standard for computer and TV monitors and the continued progress of space development projects point to a greater use of space law in the telecommunications sector and high stakes in the structure of, competition for and content of home entertainment on a global scale.

This thesis seeks to shed some light on how local broadcasting regulation, international trade law and space law interact with each other in regard to DTH television. In Part I, I propose to present an overview of the birth of DTH technology, its popularity and potential as well as a snapshot of the principal satellite operators. A survey of the current market can provide clues as to the relative importance of that technology. Part II describes the international regulatory framework applicable to DTH satellite broadcasting including the regime applicable to the use of space and radiowaves and to the transborder transmission and reception of content. Part III, examines the influence of global corporate strategies and of politics on the regulatory environment and on the outcome of the race for a controlling share of world television by observing how current trends are being dealt with in practice. Part IV presents a case-study of a broadcasting regulatory regime (Canada's) under pressure. Finally, in Part V, elements of a global positioning model for Canadian television (broadcasting & production) are put forth.

This model's main assumption is that wherever a satellite beams American programming, a market share is also available for another kind of programming, a more gentle, less abrasive type of television. This market share is anywhere between 20 to 40% of a total market comprising billions of people.

The potential up for grabs is huge, so is the gamble.
PART I: The birth of satellite technology, its popularity and potential

DTH TECHNOLOGY AND ITS COMMERCIAL APPLICATIONS

. prelude to the advent of (GEO) satellite communications technology

Communications and broadcasting may be seen as having gone through four separate ages. These are generally defined as:

. the (first) wire age between 1840 and 1900, characterized by the undersea telegraph;
. the wireless telegraphy age, characterized by the long wave telegraph transmitter;
. the age of sound broadcasting, for entertainment purposes, from 1920 onwards and
. the age of television broadcasting, from 1936-1946 to the present day.

To these, can now be added the satellite age, which began in 1965, and the age of fiber optic communications. With the exception of the latter, just now in its early stages, each of the other ages has earned its place in history, and each, in its own way, has been responsible for creating a new market in communications and broadcasting, thereby stimulating an overall increased global demand.

In 1945, only a few months after the end of World War II, an article appeared in Wireless World written by the then little-known writer, Arthur C. Clarke. In it, Clarke laid out a virtual blueprint for a new age in radio broadcasting and communications. A single satellite in space might be used as a relay station, receiving transmissions from one part of the earth's surface and relaying them back to another part. Clarke's hypothesis was that three satellites spaced at exactly 120 degrees apart, and travelling from west to east above the equator in geosynchronous (GEO) orbit, (22,300 miles high at a velocity synchronized with the earth's rotation so that the satellites maintain what appears to be a stationary position relative to a point on earth thus permitting uninterrupted use) could provide an international radio and television communication system. What this meant was that a radio or television signal could be sent to the other side of the world by a simple satellite relay of three uplinks and three downlinks in an alternating sequence. Some satellites such as military reconnaissance satellites are in other orbits, elliptical orbits, much higher above the earth. Non-commercial satellites in other orbits will not be discussed herein.

\[1\] For a good presentation of the birth and development of satellite communications technology, see J. Wood, Satellite Communications and DBS systems, (Oxford: Focal Press, 1992)
The commercial age of satellite technology began in 1965 when the U.S.A. transmitted to Europe, via satellite, a colour picture of the American flag. In 1969, 500 million people around the world were able to watch Neil Armstrong land on the moon.

Satellite communications for the purpose of television are based on the transmission of television signals ("carriers") on specified frequencies of the radio spectrum between earth stations and orbiting satellites. Before leaving earth, the TV signals/carriers are amplified and passed through a filter which limits the frequency of the signal to a designated bandwidth. The carrier/TV signal is then beamed by an antenna to the satellite in space. This is the uplink. The downlink occurs when equipment on the satellite (antenna and transponders) refilters the signals/carriers, changes the frequency for the downlink and amplifies the signals before retransmitting them back to receiving stations on earth.

. owners and operators of satellite services

The satellite age was ushered in by the creation of Intelsat, Eutelsat and Arabsat, treaty based satellite services consortia owned by governments. A second wave consisting of private ventures in space by companies such as AT&T, Hughes, RCA and SES/Astra, followed. Satellite operators began selling satellite capacity in minutes, hours, weeks or even by the year. The longer the unit, the cheaper the cost.

Satellites can provide several types of communications such as telephone, radio and TV broadcasts, videoconferencing, computer networking, personal communication services (PCS) including worldwide personal fax voice and data transmission. In this paper, our focus is on direct-to-home (DTH) television.

. the popularity of DTH TV and the possibilities of satellite technology

The move from communications satellites for relaying television programmes across continents to broadcasting stations, to the use of satellites in conjunction with satellite master television installations (SMATV) linked to cable distribution networks, was a logical step forward. The next step, the use of satellites for direct-to-home (DTH) broadcasting i.e. to earth stations no larger in diameter than an 18" pizza dish, was slower in coming because of that technology's limitations at the time.

First, any DTH system called for more satellite output amplification power, that is a stronger "footprint" or radiation of the satellite's radio beam. Without sufficient amplification power, large and expensive reception antennas/earth stations were needed
which necessarily involve re-routing which direct-to-home transmission, by definition, does not. Second, satellite receivers for the mass market had to be produced at acceptable costs and at the same time without a significant drop in technical performance.

In 1988, the Japan Broadcasting Authority pioneered the use of the much wider 27MHz bandwidth, compared with the 6MHz standard broadcasting bandwidth. The difference was a much higher definition of transmission of TV signals. The introduction of DTH/Tv via satellite in Japan provided the gateway for the high-definition television (HDTV) Muse system, where the use of 1050/60 lines was substituted for the existing NTSC standard of 525/60. Europe followed, introducing HDTV at a 1250.50 line standard\(^2\) as well as DTH satellite TV using the D2MAC standard\(^3\). Both products are a huge success and already serve tens of millions DTH subscribers. The USA and Canada have lagged behind Japan and Europe in introducing DTH. The reason for the delay is not that these countries lack the technological resources, on the contrary. Perhaps it has something to do with the high rate of cable penetration (65 million homes in the USA, 7 million in Canada) and the inevitable defence of an existing technology.

The application of computer technology's principle of digitalization to telecom and broadcasting technology is a very significant development not only with regard to the convergence possibilities it offers, i.e. the different media. PC, television and telephones, for example, are no longer service specific, but also with regard to the availability of "scarce" resources. When all information in a message is transposed to digits, the principle permits compression, which stated very simply, means that instead of storing, in linear sequential form, all the digits of a work or message, recurring patterns of digits do not necessarily have to be repeated per se, they are regrouped in algorithms and their emplacement noted in computer language. In a text, this practice could apply to recurring words and phrases, in an audio visual product product, this would apply, for example, to the immobile sets or backdrops against which the action takes place.

\(^2\) Traditionally there have been 3 main colour TV equipment standards: NTSC (National Television System Committee) adopted in Japan and North America, SECAM (Sequential Colour Memory) adopted in France, French Africa, the Soviet Union and some South American, Asean and Middle East countries and PAL (Phase Alternative Line) adopted in Germany and the U.K. Different TV equipment standards necessitates transcoding. This technique, as with photocopying, involves the loss of some detail. Tri-standard TV equipment could be an alternative, however, costs transferred to the consumer would likely be prohibitive. The discussion on an analog TV standard will become moot as digital TV's are introduced. The need for a common digital TV standard for the decoding of signals during transmission and upon reception by TV monitors, has arisen and is a crucial factor in the development of world TV. With digital technology, the loss of detail through transcoding becomes irrelevant.

\(^3\) This standard was imposed by an EC Directive on 3 November 1986. The European technology permits HDTV to be received on traditional TV sets. Both D2MAC and Muse are designed for analog.
Compression enables the saving of time and space on frequencies and satellite transponders. Thus, in comparison to analog images, the use of compressed digital images enables satellites to accommodate many more channels per transponder. Up to 20 times as many channels may be squeezed into the same transmission capacity as one analog channel. Satellite operators can therefore derive increased revenues from the same number of transponders. TV broadcasters, because they use less space on a transponder to transmit the same number of channels benefit from reduced rates. For the same budget, TV broadcasters can therefore beam new channels into niche markets.4

With regard to image quality, digitally transmitted images are superior to analog. This is because the numerical signal can be reconstituted clearly and any errors corrected, which is not the case with analog.

Digital technology, as applied to TV, has strong official support in the USA (notably from the FCC) and in spite of broadcasters reluctance to adopt the technology because of the substantial equipment investment it requires, digital technology with regard to TV is bound to be implemented in the near future.5

In addition to increasing transmission capacity, digital technology affects scarcity and frequency planning. The application of the technology for TV broadcasting services in conjunction with the satellite and DTH (or cable) may help alleviate the saturation of hertzian frequencies used by the increasing number of wireless telecom services which depend on less costly terrestrial infrastructures. Digital broadcasting applications may throw into doubt the legitimacy of the current scope of regulatory supervision exercised by government bodies over broadcasting.

As satellite technology improves, and more powerful versions of satellites are available, such as Hughes Corp.'s digital satellite HS601 and HS702 which at a mass of over 2,600Kg will offer double capacity which possesses a powerful continental footprint and superior quality imaging, DTH is bound to increase in popularity. There are signs that DTH may become the most powerful form of media of all time. It cannot be censored, and neither can the flow of information be interrupted or intercepted by third parties. The introduction in the USA of DTH is the strongest ever introduction of media equipment since television, surpassing the introductory popularity of the VCR6. As the equatorial

4 RAI and Arab Radio & TV transmit via PanAm Sat to Latin America
5 The FCC has stipulated the end of the NTSC standard by 2008. In Europe, a digital standard is being developed since 1993 by Digital Video Group (DVG) an industry association composed of Philips, Grundig, Astra, TF1, Thomson and Canal Plus.
orbit known as the Clarke orbit can accommodate a limited number of satellites (more or less 180 using the same radio frequency), a distinct possibility exists that other types of orbits and/or space stations may eventually have to be considered.

We need now take a look at the market in satellite facilities and how those are being used by satellite operators.

**THE SATELLITE OPERATORS**

*Overview of satellite systems operators offering TV/video services*

Satellite operators may be classified as follows:

- major international systems owned by governments or consortia;
- nationally owned systems and
- privately owned carriers.

Until now, satellite capacity for TV/video services has been, for the most part, under governmental or monopoly telephone operators ownership. This is a consequence of the fact that the first integrated commercial satellite communication system, Intelsat, was created as a monopoly by its consortia of national governments and of the fact that up until the recent (February 1997) wave of telecom liberalization commitments in the GATS framework, telecom was definitely, in most countries, run by state monopolies. Privately owned satellite carriers developed principally by offering TV/video broadcasting services. The scope of services they could offer was, however, restricted to exclude profitable telecom services. On the other hand, international government consortia and public telecom organization (PTO) carriers, due to their telecom operations possessed excess transponder capacity which they could and did devote to TV/video broadcasting services.

International operators (ISO's) have coverage spanning more than one ocean region. ISO's such as Intelsat, Inmarsat and Eutelsat are owned jointly by the signatories (governments or PTO's) and offer capacity at cost. Signatories use capacity themselves or resell it at a huge profit.

Nationally (government or PTO) owned systems offer domestic satellite services and include monopoly PTO's such as Deutsche Telekom (due to be deregulated in 1998).
These systems are essentially national systems offering services to one country but as
deregulation occurs, coverage will extend beyond sovereign states. To avoid being
sidetracked, PTO satellite operators may eventually merge. Not all PTO's are satellite
operators. Some such as BT, have opted for offering satellite services via an ISO such as
Intelsat in which BT has invested heavily. BT now no longer has exclusive access in
Britain to Intelsat. Deutsche Telekom, on the other hand, in addition to operating its own
satellite to provide national services, has a position in SES/Astra, the privately-owned
regional system.

Regional satellite systems operators such as privately owned SES/Astra and
AsiaSat, concentrate on a single region: Europe, for example, or Asia Pacific. In contrast
to ISO's, regional operators offer true commercial lease arrangements. For the time being,
the activities of regional operators remain limited by national laws and international
treaties protecting domestic PTO-run systems and ISO-run systems such as Intelsat's,
especially with respect to telecom services.

Currently, there are over forty commercial satellite operators7 with revenues in
excess of 5 billion dollars in 1995, a 20% increase over the previous year's. Roughly two
thirds of the satellite operators produce revenues of 100 million dollars or more and the
top 5 operators account for half of the yearly revenues. Without minimizing the
importance of the largest satellite operator, Intelsat which is not publicly quoted, it is of
interest to note that half of the top operators are privately owned and (except for
SES/Astra) publicly quoted or owned by publicly quoted companies. The fastest growing
firms are the new private commercial operators such as Luxembourg based SES, US
based PanAm Sat, Shinawatra (Thailand) and Asiasat.

Except for depreciation, satellite operating costs are fixed. Construction costs for a
satellite vary between 60 to 150 million dollars depending on the generation of its
technology, its size, capabilities and delivery deadline. Getting the satellite into orbit
entails launch and insurance costs which, as a rule of thumb, are roughly equivalent to its
construction costs. Past (GEO) satellite versions had a life span of 7 to 10 years. Newer
versions can be in service up to 15 years. The Outer Space Treaty outlaws the use of
nuclear power in space. Solar power satellites eventually die out from lack of energy.

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Their last reserves of energy are usually used to shoot them off their orbital slot to be lost in space. As more satellites are launched, the day may come when collisions on the Clarke orbit may become commonplace. The only logical solution for the future is the manned space station. A manned space station would permit refuelling satellites, upgrading their telecommunications systems and repairing faulty transponders such as Telesat Canada's Anik E-1 satellite is presently suffering from. The manned space station is on the drawing boards and has been conceptualized over the last 30 years. We may not be far from that day as the telecom business and other businesses such as the microprocessor and pharmaceutical industries increasingly look to space as their next frontier, large aerospace companies such as Boeing and McDonnell Douglas merge and the Alpha space station nears completion. The MIR program's difficulties do not set back inner-space colonisation. On the contrary, the MIR program shows that life is possible in space, even under severe environmental conditions.

Satellite lifespan is largely determined by the quality of construction and the power supply. American (Hughes, Lockheed Martin previously GEAstro and Loral Space) and European (Aerospatiale DASA and Matra Marconi) satellite manufacturers dominate with over 60% and 25% respectively of the market for the construction of satellites. At 34%, Hughes has the largest market share, European manufacturers have retained their toehold thanks to the construction of DBS satellites which have been popular in Europe.

Because transponders are key satellite components serving to amplify a signal picked up by the satellite's receiving antenna and to change its frequency prior to the signal's retransmission to a receiving station on earth, financial performance of satellite operators largely depends on the number of transponders an operator has and the price charged per transponder. Hughes DirecTV and SES/Astra are the most successful in this regard. DirecTV, a vertically integrated company which packages programming and sells to consumers in addition to operating the satellite, achieved 247 million dollars in revenues in 1995 with 24 transponders and SES/Astra achieved 300 million dollars in revenues in 1995 with 66 transponders. Both privately owned operators focus on video services which command higher per transponder prices than voice services.

Most satellites carry between 12 to 36 transponders, some carry less. The number of transponders on a satellite is limited in large part by the amount of solar power generated by the satellite (nuclear power, as noted above, is prohibited in space). Of the approximatively 7000 W generated, about 5000 W are needed to assure telemetry, tracking and control of the satellite. If left on its own, it would yield to the earth's gravity.

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8 R. Lange, P. Nearer, *UTOPIA*, (Québec, Éditions du Sagittaire, 1995). The low gravity environment will permit further progress in micro-chip and the creation of purer more potent drugs for healing disease.
Also, its position must be kept precisely aligned to earth. The remaining 1-2000 W power is needed for amplifying signals re-transmitted to earth. The more transponders there are, the less amplification power will be available. Transponders are designed for receiving and re-transmitting in certain frequency bands (i.e. C-Ku or Ka) or can accommodate mixed frequency bands. C-band transmissions imply a wider beam than the narrower Ku-band and therefore C-band signals are weaker by the time they are received on earth and require a large dish. In Latin America, North America and Asia Pacific, the ground segment functions are over 40% in C-band. The proportion in C-band is even higher in Africa and Central and Eastern Europe. In the US, close to 4 million DTH receivers are still in C-band. In Europe, by contrast, the ground segment functions mostly in Ku-band, which has, of course, made extensive DTH television possible given that the smaller dish is cheaper and more adapted to urban settings.

Each transponder can generally carry approximately 36 MHz of bandwidth for Ku-band. One analog colour video channel occupies 6 MHz but needs an entire 36 MHz transponder because the 6 MHz TV signal is at video baseband, the platform used for frequency modulation. A 36 MHz transponder, on the other hand, for voice service can carry between 1000 and 2000 simultaneous conversations depending on the quality desired and traffic density.

The worldwide supply of 36 MHz equivalent C and K-band transponders totals approximately 4,600, half of which is used for video services. Over three quarters of the supply is dedicated to North America, Western Europe and the Asia Pacific each representing a roughly equivalent proportion and 11% is used by Latin America. Over the last 10 years, capacity has been growing at a 10% rate overall and a 20% growth has taken place to serve Western Europe and the Far East. Obviously the growth rate is expected to continue in the Far East where many rapidly expanding economies and diverse linguistic and cultural areas must be served. A strong growth rate is also expected in order to meet expanding needs in Central and Eastern Europe. Some satellite operators in the Far East, such as Asiasat, are operating at 100% capacity. Growing demand will be met over the next few years by newly constructed satellites. New construction will then level off as digitalization with its expanded service capabilities, is phased in and simulcast for analog viewers is phased out.

Prices charged by operators to clients vary from region to region according to the supply demand curve. In Europe, operators have generally kept tight control on prices and on the SES/Astra satellite, for example, a Ku-band transponder was said to be sold for as high as 7 million dollars per annum. In North America, prices are low and vary between 1.5 and 2.8 million dollars for a C or Ku-band 36 MHz transponder. Prices in Western Europe for Ku-band vary between 1.8 and 7 million dollars whereas a C-band transponder can be had for between 1.5 to 4 million dollars. In the Asia Pacific region,
Ku-band transponder prices are also higher than C-band but prices are a little lower than in Europe, that is, between 1.5 and 3 million dollars for C-band and between 3.2 and 6 million dollars for Ku-band. Prices may be going up as Asiasat (STAR TV) is said to have received 5 million dollars per transponder from Zee TV. In Central and Eastern Europe, prices are relatively cheap for C-band i.e. between 1 and 2 million dollars for C-band and a little higher than in North America for Ku-band. The cheapest prices for Ku-band transponders are in South America i.e. between 1.8 and 3.5 million dollars; C-band transponders are priced at between 1 and 2.4 million dollars each.

Quite a margin of flexibility is apparent in the establishment of the final price for a transponder. Terms and conditions vary depending on the frequency, the satellites life-span, bandwidth, coverage area, duration of lease, whether payment is made in advance and whether a block (quantity) purchase is made such as ASkyB's block-purchase on the SES/Astra satellite under construction. Prices can also vary according to users. For example, the user ASkyB's channels attract a huge audience. Other broadcasters may therefore be attracted to renting transponder space on the same satellite as they stand to benefit from the installed base of consumers whose receiving equipment already points to the satellite on which ASkyB's popular channels are broadcast.

Most satellite operators do not themselves package TV offerings to the public. This is accomplished by their video services clients i.e. the lessees of the transponder(s). As we have seen, vertically integrated satellite operator DirecTV is an exception in this regard. On the other hand, both SES/Astra and Eutelsat, like DirecTV which carries its aggressive marketing in cooperation with USSB (another US-based DTH satellite operator), are separately very focused on marketing strategies.

The information which follows will give a general idea of the satellite systems currently in operation. A few preliminary remarks are in order. While we enumerate the satellite systems that offer television/video service, most of these systems offer several other services as well, such as telephone and data transmission. As for the coverage areas of each of the satellite systems, it is important to note that in spite of the fact that their respective footprints cover the described areas, in many cases, most systems do not actually serve complete regions nor, in some cases, any part of the regions within their coverage area. Also, the systems do not necessarily have market access to all regions in their respective coverage areas. It is important to remember as well that satellite systems must be compared with one another not only according to coverage area but according to channel capacity. This is usually dependent on the number of transponders. Without

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9 Dailink Satcoms Ltd data reports as cited by the General Accounting Office in GAO Report, Supra note 7 -2 at 43
doubt, Intelsat is the largest in this regard with over 1,300 transponders at 36 MHz each, 5 times more than its closest rival.

In the first category, there are four\(^{10}\) main government or consortia-owned international systems providing television/video services.

Two of these have international coverage:

1. **Intelsat**: the world's biggest satellite services consortium with over 36% of the world's satellite capacity and revenues of 805 million dollars in 1995, was formed in 1964, with the backing of the USA and 117 signatory countries which account for 90% of its revenue (it may be partially privatized in 1997); it provides the largest selection of services and serves the largest audience with its massive distribution network providing broadcasting and telecom services in over 200 countries; it operates 24 satellites 15 of which are in the European arc and has 31 orbital slots, in addition to pending applications for 10 more; and

2. **Intersputnik**: formed by the CIS (ex USSR) now operated by Russia; it has 100 transponders, approximately 22 member countries and 100 user organizations.

The other two have limited international coverage:

1. **Eutelsat**: now the third or fourth ranking satellite services consortium worldwide with revenues of 360 million dollars in 1995 and the top European satellite operator; it was formed in 1977 to link European countries; it has approximately 168 transponders and covers the Middle East and Africa in addition to Europe; and

2. **Arabsat**: formed by the Middle East Arab countries and backed by 22 signatory countries; it now covers Asia, the Middle East, Europe and Africa; it has approximately 47 transponders and revenues of 51 million dollars in 1995.

In the second category, there are seventeen main nationally (government or telephone company) owned systems providing television/video service, for the most part on a regional basis. These systems are:

1. **BrazilSat** (Embratel): the system developed by Brazil; it has approximately 80 transponders and 60 million dollars in revenues in 1995;

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\(^{10}\) Though not providing television services, Inmarsat is an important satellite system. It was formed in 1979 by 76 countries to provide maritime satellite facilities and more recently a wide range of mobile satellite services.
2. **Chinasat**: the system managed by China Telecommunications Broadcast Satellite Corp.;
3. **Insat**: the Indian government owned system; it provides limited international coverage over the Middle East, Asia, Europe and Africa; it has some 77 transponders and 150 million dollars in revenues in 1995.
4. **Palapa** (Satelindo): the Indonesian system for the entire archipelago and now Asia; it has approximately 72 transponders and 140 million dollars in revenues in 1995 and achieved close to 50% growth in 1995;
5. **Solidaridad** (Telecomunicaciones de Mexico) it has approximately 132 transponders and achieved 120 million dollars in revenues in 1995;
6. **Anik**: the Canadian system managed by Telesat; it has approximately 120 transponders and with 176 million dollars in revenues achieved, 15% growth in 1995;
7. **Télécom**: whose first satellite was launched in 1984, is owned by France Télécom (Government); it provides limited international coverage over Europe and North and Central America, the Caribbean and Africa; it has approximately 89 transponders and achieved 180 million dollars in revenues in 1995. It is the most active PTO satellite operator in Europe. It intends to develop a digital TV market though it is having difficulty marketing its powerful high power satellites to broadcasters;
8. **BS- Yuri**\(^\text{11}\): covering Asia;
9. **Russia Satellite Communications** with close to a 100 transponders achieved 20% growth in 1995 with 35 million dollars in revenues.
10. **Optus**\(^\text{12}\): covering Australia; it has approximately 85 transponders and in 1995 achieved 16% growth with 175 million dollars in revenues;
11. **Turksat**: provides limited international coverage over Asia and Europe; it has 22 transponders and achieved 4.5 million dollars in revenues in 1995;
12. **Koreasat**
13. **Amos** (Israel);
14. **Hispasat** (Spain) which launched its first satellite in 1992 experienced serious technical problems. The second satellite launched in 1993 carries 5 DTH channels and provides limited international coverage over North and Central America and the Caribbean, Europe and South America; it has 24 transponders and achieved 75 million dollars in revenues in 1995. Hispasat's delayed entry undoubtedly accounts for its relatively weak (5000) number of DTH households in comparison to SES/Astra (654,000). Hispasat is also of interest in the context of this paper because it has a

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\(^1\) Not wholly government owned
\(^2\) Not wholly government owned
high power transponder used to deliver Television, Programming and Satellite’s (TPS) digital programming package to Latin America;

15. **Nahuel** (Argentina Paracomsat) provides limited international coverage over the North and South American continent; it has approximately 24 transponders and achieved 15 million dollars in revenues in 1995;

16. **DFS/Copernicus** (Germany) (managed by recently privatized Deutsche Telekom) launched its first satellite in 1989; it has 32 transponders and achieved 100 million dollars in revenues in 1995;

17. **Thor** (Norway Telenor) it has 5 transponders and achieved 20 million dollars revenues in 1995, and

18. **Sirius** (Sweden Nordiska Satellite), it has 10 transponders and achieved 35 million dollars in revenues in 1995.

In the third category, there are a dozen main **privately-owned carriers** providing television/video services:

Only one of these has international (and domestic USA) coverage: it is:

1. **PanAmSat**: the largest international satellite system operator in private hands (now owned by Hughes which is also a top satellite manufacturer)\(^1\) and the first private company to provide global satellite services it has 4 satellites and plans for 7 more in addition to Hughes' 10 domestic satellites. Prior to the merger to be completed shortly, PanAm Sat had 4.9\% of world satellite capacity and Hughes had 5.7\%. PanAmSat has approximately 200 transponders at 36 MHz each and achieved revenues of 116 million dollars in 1995; Hughes DirecTV (AT&T bought 2.5\% with an option to buy a further 27\%) has 24 transponders and achieved revenues of 247 million dollars in 1995 and 144\% growth. US based DirecTV is the most successful satellite operator in terms of per transponder revenue. Certainly, corporations such as Hughes believe in developing space. With the purchase of the privately owned international carrier, PanAm Sat, Hughes becomes the largest provider of satellite communication and also DTH on the continents of South America and Asia. In addition to being the owner of the DTH satellite footprinting the USA under the DirecTV banner, Hughes is also seeking a foothold in the European market either through the Netherlands or through Spain.

\(^1\) GTE, Western Union, RCA-Thomson and SBS (Satellite Business Systems) are also important privately owned carriers however they do not provide television/video service.

\(^1\) Manufacturer of communications satellites and the owner of DirecTV, a major DTH/TV service in the USA
Four have limited international coverage; these systems and their coverage areas are:

2. **Columbia**: over Asia, North and Central America and Europe; it has approximately 24 transponders and achieved 29 million dollars in revenues in 1995.

3. **Asiasat** carries the Asia-Pacific region's prime satellite broadcaster STAR TV (HK) which is majority owned by NewsCorp since 1993 over Asia, the Middle East and Australia; less than 5 years old, it has approximately 57 transponders operating at full capacity and revenues of 42 million dollars in 1995; this operator offers true commercial lease arrangements but its activities are constrained by national laws protecting ISO's and domestic PTO's.

4. **Orion**: over North and Central America and Europe; it has approximately 48 transponders and achieved revenues of 22 million dollars in 1995;

5. **Thaicom** (Shinawatra Satellite): over Asia and Europe; less than 5 years old, it has approximately 26 transponders and with revenues of 71 million dollars in 1995 achieved over 350% growth;

Eight have regional coverage; these systems and their coverage are:

6. **Telstar/AT&T** (Skynet): over North and Central America and the Caribbean; it has 112 transponders and achieved 71 million dollars in revenues in 1995;

7. **Hughes-Galaxy**: over North and Central America and the Caribbean; it has 215 transponders and achieved revenues of 340 million dollars in 1995;

8. **Echostar**: offers DBS TV services over North and Central America and the Caribbean;

9. **GEAmericom**: over North and Central America and the Caribbean; it has approximately 276 transponders and achieved 400 million dollars in revenues in 1995;

10. **Superbird**: over Asia;

11. **Apstar** APT satellite co (HK): over Asia; less than 5 years old it has 24 transponders and 36.8 million revenues in 1995 achieving 413% growth;

12. **JCSAT**: over Asia; and

13. **SES/Astra** over Europe. Founded in 1989, with Sky TV as its first customer, the fleet of Astra satellites beam TV into Europe. It is the world's
most profitable and fastest growing satellite operator after PanAm Sat\textsuperscript{15} with exceptionally strong revenue growth, net income growth and stunning 90% margins. SES has over 70 transponders and achieved revenues of 300 million dollars in 1995 entirely from video services, though this may change as it is interested in data broadcasting. It reaches 64 million cable and DTH households out of 162 million households. More than 22 million households have a dish aimed at 19.2 degrees E. equipped for DTH or SMATV. The highest penetration is in Germany with 9 million households, the UK follows with 4 million, Poland with 1 million, Austria 1 million and Denmark, Spain and Hungary. With 85 channels, SES/Astra beams more channels into European homes than any other system from its 6 co-located slots at 19.2 degrees E. More satellites are planned at 19.2 degrees E and a few more for digital and Ka-band services. Astra 2A and 2B will be placed in the 28.2 degrees E position to target the UK market. The new position will enable SES to serve certain regional markets better, as well as markets it does not serve due to lack of sufficient transponders. Europe's top programmers broadcast from Astra satellites and Astra's original client, Sky TV is the largest customer and benefits therefore from advantageous lease prices. SES/Astra is looking very attentively at multimedia and interactive services. In summary, SES/Astra is a formidable competitor. Deutsche Telekom (DT) is its strategic partner. DT realized it was no match for SES/Astra and purchased a 25% stake in SES. DT has close to 10% in Eutelsat, SES/Astra's only competitor. Germany is Europe's largest TV market. SES/Astra's formula for success lies in aggressively investing and continuing its satellite construction program and in ordering state of the art satellites which are capable of accommodating leading edge technology as well as less recent technology, and whose specifications are ideal to serve the European market. SES/Astra is attentive to receiving equipment manufacturing aspects. It offers bouquets of channels to serve specific countries or languages.

Regarding the transoceanic provision of television/video, the non-privately owned operators are:

- Intelsat and Intersputnik; and
- Télécom which has coverage limited to the transatlantic.

The privately-owned operators providing transoceanic television/video services are:

\textsuperscript{15} "Satellite Operators Activate the Money Star", \textit{The (London) Economist}, (3 May 1997) 56 (hereinafter, \textit{Money Star})
. PanAmSat with full transoceanic coverage;
. Columbia which has coverage limited to the transatlantic and the transpacific;
. Orion and Hispasats' whose coverage is limited to the transatlantic; and
. Asiasat's whose coverage is limited to the transindian ocean.

Since the mid eighties, a fourth category of carrier was established for the operation of satellites designed specifically for DTH television broadcasting. The next growth in satellite usage lies in this category of carrier. According to a Merrill Lynch forecast, satellite operator revenues from DTH/TV will treble in the next 5 years, going from 4.5 billion USD in 1996 to 16.3 billion USD in 2002.  

Intelsat, which we will consider in more detail later, has announced that it was completing the contract process for a high powered satellite to provide direct-to-home TV services in the Asia Pacific Region. The United States General Accounting Office (GAO) notes that regional television/video broadcast services where signals are transmitted directly to end-users or to land-based television stations or cable systems for further redistribution is "important to review because it is a significant growth market for satellite providers."

It is appropriate now to take a look at the birth of the global satellite telecommunication system as materialized through Intelsat, the world's largest satellite services consortium and its precursor COMSAT. The advent of the system is closely related to space exploration accomplishments and US space policy.

. The birth of the global satellite telecommunication system

In anticipation of the International Geophysical Year in 1957, both the USA and the USSR developed a satellite programme. That year, Russia built and launched Sputnik and became the first space power. America became the second in 1958 with the launch of Explorer. In 1962, Canada by launching its scientific Alouette I became the third space

16 Ibid. Revenues of world FSS satellite operators are expected to treble in the next five years going from 4.5 billion USD in 1996 to 14 billion in 2002
17 Intelsat, Annual Report, (Washington, 1995-96)
18 GAO Report, Supra note 7-2 at 38
19 "Regional" as used by the GAO, refers to large regions such as Asia; the Middle East, North and Central America and the Caribbean; South America, Europe, Australia and Africa
power; its activities in recent years are considerably small however. In 1965 France launched Asterisk and became the fourth space power. The other space powers in order of rank are Japan, China, the UK, India and Israël. From the beginning of space exploration, the importance of satellite communications in space was apparent. The National Aeronautics and Space Act (1958)\(^{20}\) established the National Aeronautics and Space Administration (NASA). One of the stated purposes of that Act is:

> the preservation of the role of the United States as a leader in aeronautical and space science and technology and its application thereof to the conduct of peaceful activities within and outside the atmosphere.

In 1959, an additional purpose was added:

> to assist in the establishment of operational communications satellite systems.

NASA greatly assisted the development of many satellite communications projects, however, to give it full operational responsibility for a commercial communications satellite network would have run counter to the American abhorrence of entrusting a federal agency or department of state with the management of a commercial enterprise.

President Eisenhower, in 1960, clearly established that the development and provision of communications satellite systems and services would involve both Government and private enterprise as well as the participation of communications organizations in foreign countries.\(^{21}\) The following year, President Kennedy "...invited all nations to participate in a communications satellite system." A satellite policy was developed in the United States in 1961 whereby private ownership of the system would be encouraged, though the government would have an important role, for example, in the provision of launches, the negotiation of international agreements and the sharing of research.

COMSAT was established in 1962 by "An Act to provide for the establishment, ownership, operation and regulation of a commercial communication satellite system and for other purposes."\(^{22}\) COMSAT was given monopoly status in the provision of international services using the satellite link it was to put into operation. Its primary purpose was to establish, in cooperation with other countries and as quickly as possible, a commercial satellite telecommunications system and its extension to provide global

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\(^{20}\) Public Law 85-568 (1958). 72 Stat 426, 42 USC 2451, s. 102 (c) (5)
\(^{21}\) U.S. Department of State Bulletin (16 January 1961)
\(^{22}\) 76 Stat. 419, 47; 701 U.S.C. 44 (1962) (hereinafter COMSAT Act)
coverage. The new enterprise was to be supervised by the President, the FCC, NASA and the State Department.

Under the Act establishing COMSAT, the President's role is very ample indeed. It includes, for example, supervising the relationship of COMSAT with foreign governments and international bodies to make sure that COMSAT's role remains consistent with the USA's national interest; and assisting in policy making and the planning of the development and execution of a national and global satellite communications programme. The reference to the President's responsibility with regard to the national space programme is also important to the achievement of COMSAT's purposes. Though NASA was not to be subordinate or under COMSAT's direction in any way, NASA had to provide launch facilities at cost, as well as other services paid for and requested by COMSAT.

The FCC's regulatory powers were also extensive with regard to COMSAT's activities and touch upon, for example, the ownership and operation of the earth stations, tariffs, rate procedure, access and basically all the usual powers the FCC has in relation to any telecommunications enterprise under its jurisdiction.

Whenever requested to do so by the FCC acting under the Secretary of State's instructions, COMSAT must establish communication links with a particular foreign point. Also, the State Department must be notified by COMSAT whenever it enters negotiations with an international or foreign business entity.

Thus though COMSAT is not specifically an agency or part of the American government in any way, it is subject to serious operational restrictions having to do especially with national interest and American foreign policy.

COMSAT's particular share structure limited foreign ownership and reserved a certain amount of shares for common carriers certified by the FCC. The rest of the shares were very successfully sold through a public issue. Three of COMSAT's 15 directors were to be nominated by the President, all directors, as well as officers, were required to be American citizens.

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23 Ibid. Comsat Act at s. 102 a
24 Ibid. s. 210
25 Ibid. s. 2 & 3
26 48 Stat 1064; 47 USC 609 (1934) (hereinafter Communications Act)
27 Supra note 22 at s. 402
Foreign participation was quite limited both as to the direction of COMSAT as well as to its ownership. The fact that COMSAT was subject to close supervisory control and likely to interact closely with the American government meant, of course, that the establishment of a global satellite system with the cooperation of foreign countries indicated that there would be need for another agency.

In the interest of expediting the establishment of a global communications satellite system, interim arrangements in the form of a joint venture were agreed upon in 1964. The Communist bloc countries were absent. For ideological reasons, those countries did not feel comfortable with the commercial and private ownership concepts included in the envisaged global satellite telecommunications system, nor with the principle of weighted voting. During the interim-Intelsat stage, the number of participating countries increased from 14 to 83. The member-states participating in the interim agreement each delegated their respective national telecommunications bodies to act as signatories. As the number of votes per member-state was based on each state's respective use of the system, COMSAT had a majority voice. COMSAT was designated by the intergovernmental agreement as the manager of the design and construction of the space segment.

It was important that the interim arrangement be finalised because, as it stood, the satellite system under development belonged to the parties, not to a separate organization or entity. Also, it became necessary to address the fair distribution of procurement contracts among all capable countries despite the fact that the European tenders, for instance, did not always achieve in the best price to quality ratio. Another concern at the time, well expressed by the UK's Postmaster General, in 1963, before the House of Commons, was:

there is now a growing feeling that according to the trend of present talks, we shall finally end by starving the transatlantic cable for telegraphic communications from America and assist COMSAT to get off the ground and that Britain will merely end up renting a line from Americans.30

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29 "Global or American Space Communication Systems?" International Affairs (Moscow) (December 1994) 69

30 U.K., H.C., Parliamentary Debates, col 420 (1963-1964) at 690
Even though the USA might have had more to gain by negotiating bi-lateral agreements with major potential users of the global system, the European nations, in order to obtain the best terms, regrouped in the face of what they correctly perceived to be a strategically important industry. All countries involved, including the USA, realized that it was essential to set up one global system and that if the financial requisites were to be met, the system would have, to a certain extent, to be protected from competition. This requirement constituted an additional impetus for a global agreement.

Based in Washington, D.C., the permanent Intelsat was established in 1971 by way of an Agreement between member-sates which came into force in 1973 and by virtue of an Operating Agreement between public and/or private telecommunication entities designated as signatories to the Operating Agreement by the member-states. By the Agreement which has the status of an international treaty, Intelsat became a juridical entity with full legal capacity to enter into agreements with other states and international organizations. All parties became bound by the Agreement to recognize Intelsat as a full legal person within their respective jurisdictions. The Agreement was open meaning that other countries could join over time; the Agreement excludes reservations though amendments are possible. A generally compulsory dispute settlement mechanism with binding decisions is provided for. Disputants are limited to Parties, former parties, and signatories of Intelsat.

As a simple signatory, COMSAT's role became more limited, especially once its management services contract expired in 1979. As a result, COMSAT's role and structure were revised in the early 80's.

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31 28 U.S.T. 2248 T.I.A.S. 8542 the American government is the depository of the Intelsat Agreement
33 1. Intelsat Agreement, Ibid. at XVIII
2. Intelsat Operating Agreement at s. 20 Ann C-B. The ultimate sanction in case of failure to comply with a decision or to pay the required contribution is "deemed withdrawal", suspension or expulsion.
34 Intelsat, Report of the Board of Governors to the Assembly of Parties Concerning Management Services Contract, BG-35-63
35 1. 77 FCC 2d 564 (1980), 99 FCC 2d (1984). Comsat was divided into 2 main groupings, a parent organization comprised of Headquarters and World Systems, which is responsible for Comsat's jurisdictional activities i.e. as a signatory of Intelsat, as a carrier of international communication services and as a provider of technical services to Intelsat. The other grouping consists of various subsidiaries and partnerships which carry-out non-jurisdictional activities such as providing domestic USA satellite service to AT&T and providing satellite business systems such as that contemplated in a joint venture with AETNA and IBM before AT&T's divestiture in 1982-3. Also, in 1984, the monopoly status of the Earth Station Ownership Committee in which Comsat had, along with the other members of a consortium of carriers including AT&T, ITT, RCA and Western Union International, a (50%)
. The original objectives and functioning of Intelsat

Though Intelsat, an international cooperative telecom monopoly is currently being restructured it is important to study its constitution as it occupies several high value orbital slots. When restructured, its commercial arm will concentrate on broadcasting services. The Preamble of the Agreement clearly expresses the will of the Parties, among others, to achieve a single global commercial telecommunications satellite system as part of an improved global telecommunication network. The goal is to be achieved within a non-discriminating rate policy for each service meaning that charges for the same service are not necessarily lower when they are offered on a major route. For a given service, the rate is the same no matter where it is provided across the world: rates may, however, vary depending on the amount of transponders used and the duration of the contract. Intelsat does not determine the rates ultimately charged to the consumer. It has control only over the rates charged to its own clients or members.

Intelsat's finance comes from two sources, the first being from the capital contributions paid by the Signatories (telecommunication entities) in proportion to their investment shares. Comsat holds the largest investment share at nearly 20%. As of March 1996, it is followed by British Telecom which has a 6% investment share, Telecom Italia which has a 4.8% investment, France Telecom which has a 4.5% investment, KDD of Japan which has a 4.48% investment share and Deutsche Telekom and Telstra which each have an over 3% investment share. Canada's investment is somewhat lower at 1.81%. Subject to a minimum share of 0.05%, the calculation of these investment shares is tied to the utilization of the system.36 The second source of finance comes from the utilization charges (based on "postalized" rates) paid by users; users may include non Intelsat members. The small proportion (10%) of such users has increased lately as telecom is being liberalized and direct access permitted. Mercury Communications of the

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36 Intelsat Operating Agreement. Supra note 33-2 at Principle 6A of the Operating Agreement providing that each signatory's investment share in Intelsat is equal to the percentage which its direct utilization of the space segment of the global system bears to the total utilization of that segment by all signatories.
UK, for example, is a large non-signatory user with a 1% investment share. Though Intelsat operates commercially, it is not bent on maximizing profit. A large proportion of its revenues are from wholesale capacity sold to its Member signatories who then re-sell at profit. Fifty percent of its revenues stem from the 10 countries with the largest investment shares.

Three decision-making bodies and the management constitute the international organization's structure: the Board of Governors, the Executive Directorate, the Assembly of Parties and the Meeting of Signatories. Though each organ has separate functions and responsibilities, each organ must take note of and give due consideration to the views of the other.

On a day to day basis, the **Board of Governors** is the most important organ. It meets four times a year. The Governors on the Board are representatives of the Signatories. The Governors represent respectively either one eligible signatory or a group of signatories whose cumulative investment shares are equal to the minimum (approximately 1.91%) required to be eligible to the Board; or a geographical area. Even if a Signatory has the required minimum investment share, it is not obliged to designate a representative. The Board is a a relatively small group (close to 30) of well-versed technical people. Voting weight is provided for but no governor can cast more than 40% of the total voting participation of all signatories. In fact, the Board endeavors to decide matters unanimously.

The main function of the Board of Governors is the design, development, construction, establishment, operation and maintenance of the Intelsat space segment. Two companies which have traditionally acted as prime contractors are Ford Aerospace and Hughes Aircraft. In many instances, 40% of the work has been sub-contracted. The Board plans the programmes, oversees procurement and intellectual property issues; it appoints and removes the executive director and his staff. Very importantly, the Board decides on the establishment by its members of separate (non-Intelsat) satellite systems for domestic public telecommunications. It also prepares coordination reports for the establishment of separate systems of any type.

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37 COMSAT holds 19% of the voting share on the Board of Governors  
38 *Intelsat Operating Agreement, Ibid*, at s. 17 providing the modalities of the RFP (request for proposals) and deals with the acquisition and use by Intelsat of intellectual property rights. Contracts with American contractors have been delicate to clarify with regard to Intelsat's technology disclosure to its members requirements. This has been the case because Intelsat is considered a foreign national for the purpose of American International Traffic on Arms Regulations.  
39 *Intelsat Agreement, Supra* note 32 at s.XIV of the Agreement; there have been many cases, to cite only two, let us mention Anik and Westar III.
The Assembly of Parties\textsuperscript{40} (139 in 1996)\textsuperscript{41} whose members must belong to the International Telecommunication Union (ITU) meets every 2 years. The Assembly is composed of the representatives of sovereign states; it is politically rather than technologically oriented. Each member of the Assembly of Parties has one vote. On issues of substance, the vote of 2/3 of the representatives present and voting is required. The main functions of the Assembly consist in deciding on the formal relations between the states and Intelsat, in determining measures to prevent the conflict with other multilateral international agreements such as, for example, the ITU's and the conventions on the use of geostationary orbit; in deciding on proposals for amendments to the Intelsat agreement; in authorizing the utilization of Intelsat space segment or the provision of satellites for specialized telecommunication services; very importantly, in authorizing separate specialized satellite systems such as DBS systems or separate international public telecom systems; in deciding on withdrawal and expulsion procedures; and in considering complaints and in selecting experts for the settlement of disputes.

The Meeting of Signatories\textsuperscript{42} (139 in 1996)\textsuperscript{43} is held annually. Each member state (Party to the Agreement) appoints a Signatory. These Signatories are usually telecommunications agencies or government-owned corporations. In the case of more than 2/3 of the Signatories, the signatories are the respective national regulatory authorities or related entities.\textsuperscript{44} In the past, users had to purchase the satellite services through their country's Signatory, and could not purchase services directly from Intelsat. However, currently, 70 countries allow users to purchase satellite services directly from Intelsat. The delegates to the meeting of Signatories represent the entities who bear the costs of Intelsat and share in its financial interests. Each Signatory has one vote and matters of substance require the votes of 2/3 of the Signatories present and voting.

The Signatories' scale of financial interest is reflected in the criteria for eligibility to the Board of Governors. A function of the meeting of Signatories is the determination of the minimum investment share required for a seat on the Board of Governors, which determination, as we have noted above, is related to the ordinary use of Intelsat space segment by all Signatories. Contributions by Signatories are made in proportion to the share of satellite services used and requiring capital expenditure. Profits are distributed to Signatories on the basis of each of the Signatories' respective investment shares.

\textsuperscript{40} Intelsat Agreement, \textit{Ibid.} at ss VI and VII
\textsuperscript{41} GAO Report, \textit{Supra} note 7-2 at 21
\textsuperscript{42} Intelsat Agreement, \textit{Supra} note 29 at s. VIII
\textsuperscript{43} GAO Report, \textit{Supra} note 7-2 at 21
\textsuperscript{44} This statement taken from the GAO Report is in fact disputed by COMSAT which insists that licensing and access policy decisions are generally made by governmental entities, not the Signatory operators; \textit{Ibid} at 61.
The other principal functions of the meeting of Signatories are related to questions of finance and operational costs; issues of high policy; their functions also include the adoption of rules for the approval of earth stations for access to Intelsat space segment; the allotment of space segment capacity and fixing the rate charged for use of the space segment in accordance with the non-discriminatory rates policy; and expulsion.

From Intelsat's stated goal of achieving a single global telecommunications satellite system one can understand that the main service it must offer is international public telecommunications services and equiparated domestic services. Intelsat must make its system available for domestic public telecommunications services if this is not harmful to the fulfillment of its prime objective.

Intelsat may offer facilities for international or domestic specialized services, provided this does not endanger its prime objective and provided that arrangements are technically and economically acceptable. Broadcasting services for the general public are included in the definition of specialized services. Many countries secure the use of Intelsat's available facilities for specialized services either on a lease or on a permanent basis. Whole transponders may be leased on an indefeasible basis without the responsibilities of ownership.

Finally, Intelsat may provide satellites and facilities separate from its normal system for domestic or international public telecommunications within or between Parties or for specialized services provided that this does not unfavorably affect the efficient and economic operation of its normal system.

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45 Intelsat Agreement, Supra note 32 at s. III b Article III b specifies what constitutes an equiparation of a domestic to an international service, i.e. where, for example, areas within a state, because of its geography, cannot be practicably linked by terrestrial wide-band links; see also article 1k for the definition of public telecommunications which does not include DTH: "fixed or mobile telecommunications services which can be provided by satellite and which are available for use by the public, such as telephony, telegraphy, telex, facsimile, data transmission, transmission of radio and television programs between approved earth stations having access to the Intelsat space segment for further transmission to the public, and lease circuits for any of these purposes." It is up to Intelsat and more particularly up to its Board of Governors to determine whether a service falls under the definition of international public telecommunications service.

46 Intelsat Agreement, Ibid. at s. III c

47 Ibid. at s. III d

48 Ibid. s. I I telecommunication services which can be provided by satellite, other than (public telecom services which are) those defined in par. K of the article including but not limited, to radio navigation services, broadcasting satellite services for reception by the general public, space research services, meteorological (...)
On the other hand, non-Intelsat space telecommunications developments and acquisitions by the members of Intelsat (whether a party, the signatory or the party within whose jurisdiction a person plans a separate or non-Intelsat system) must be cleared by Intelsat\textsuperscript{50} (Board of Governors and/or the Assembly of Parties as the case may be) with regard to technical compatibility. In the case of the establishment of a separate international public telecommunication network, in addition to a technical compatibility and coordination test, an economic test is imposed which includes determining if the planned non-Intelsat system may cause significant harm to Intelsat's global system and whether it may prejudice the establishment of a direct link between Intelsat and all its members.\textsuperscript{51}

Despite the plain meaning of the Agreement and in order to avoid the "no economic harm" test, American companies such as Orion, RCA, Pan Am Sat and Western Union began in the 80's, with the blessing of the FCC and the American President\textsuperscript{52}, assert the desirability of subjecting Intelsat to competition on certain of Intelsat's popular international routes. Companies such as AT&T launched their own satellites through companies such as Hughes which was then highly focused on the military industry.

As mentioned above, separate (from Intelsat) specialized domestic or international satellite services such as DBS need only clear the technical compatibility test with the Assembly of parties. Technical compatibility studies as to orbit location and frequency are first submitted to the Board of Governors which then presents its study of the matter and recommendation to the Assembly of parties. Many specialized DBS satellite services have been cleared with Intelsat.

\textsuperscript{50} Ibid. s. XIV
\textsuperscript{51} Ibid. s. XIVd, hence the test is much more exacting than a simple technical coordination. Many American companies in competing with Intelsat have tried to evade having their separate systems proposals classified as international public telecom and thus avoid the "no economic harm" test. Pan Am Sat's service, in Peru, obtained an authorization from Intelsat because PanAmSat did not plan to serve Intelsat's popular North Atlantic route. Some groups, such as Arabsat, simply alleged that terrestrial links were planned thus indicating that Intelsat would loose out anyhow to terrestrial competition and that therefore the planned separate satellite system was not responsible for economic harm to Intelsat.
\textsuperscript{52} Ibid. s. XIV, as discussed above. Presidential Determination 85-2 of 28 November 1984, U.S.Public Papers of the President. 20 Weekly Compilation of Presidential Documents 1853 (1984) Reagan; see also the Separate Systems Report and Order issued by the Secretary of commerce and the FCC which provides for certain limiting criteria; modification of the Communication Satellite Act. Supra note 22 at s.102 d. There was a restriction in the 1984 Presidential Determination, i.e. the determination applied only to systems not connected to the country's switched public telephone network. The restriction will disappear in 1997.
Intelsat has always been tolerant in coordinating transborder spillover; and the FCC has granted hundreds of transborder authorizations such as that granted, for example, to Hughes Communications Galaxy Inc., to accommodate transborder broadcasting signals for Turner Broadcasting.

. The restructuring of Intelsat

As noted above, Intelsat was originally established as a "not for profit cost-sharing cooperative" distinct from its members (nations or designated entities) and was given as its main object the provision and establishment of satellite facilities in such a manner as to ensure a low cost and reliable international system of communications "on a global and non-discriminatory basis." The costs, risks and profits, if any, are shared by the members in proportion to their actual use of the system's ordinary services. Initially, Intelsat's capacity could only be accessed indirectly by satellite service providers through their respective nations' Signatories. As noted above, this is no longer the case for most countries a process which has been accelerated with the liberalization under the GATS agreement on basic telecom.

Intelsat has, over a period of 30 years, accomplished its original purpose. It now carries over half the world's telephone calls, the larger part of data transmissions and nearly all transoceanic and intercontinental broadcasts. Its core mission, the establishment of an international public telecommunication satellite system has been fully implemented. Its success with regard to that element of its activities is largely due to the fact that, at the outset, members and signatories agreed to not compete with Intelsat and refrain from establishing or permitting the establishment of separate satellite systems in the public telecommunications services sector.

As we have seen, this international agreement to refrain from competition eroded unofficially in the eighties when the USA took the position that unfavorable findings by Intelsat under article XIV could be overlooked by the FCC which could go ahead and authorize separate systems (which do not interconnect to a public switched network) if such separate systems were found to be in the national interest. In 1988, the FCC's "balanced loading policy system" under which US carriers such as AT&T, for example, were obligated to distribute their international telecom traffic equally between cable (in which AT&T has invested substantially) and satellite was abolished. In brief, during the first fifteen years of its existence, Intelsat was protected not only from the establishment

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53 Intelsat Agreement, Supra note 32 at article XIV as discussed above.
by its members of separate satellite systems but also, to a certain degree, from competing systems using a different technology. In the international public telecommunications sector, competition from fibre optic cable technology which is equally cost competitive with satellite technology, is quite strong.

The USA is now widely advocating the merits of competition and is relentlessly pursuing its objective of obtaining market access on a global basis. In its view, this approach is ultimately in consumers' best interests. Intelsat's original structure was very useful in achieving the progress we witness in communications. Today, Intelsat's structure is said to be in flagrant conflict with GATS commitment to basic telecom competition and market access rules, the now predominant ideology of this decade. Intelsat is said to be in a conflict of interest because it allegedly gives priority treatment to its members who in turn are said to privilege Intelsat as their ownership shares depend on their previous year's use of the ISO's services. The organization is said to subsidize Third World Countries by establishing a price system based on average world cost as opposed to a price reflecting traffic density or other factors. Finally services are rented at cost. All of these elements, in theory, hinder competition.

Any major shift away from the protection from competition it was initially granted will have an important impact on Intelsat, especially given the importance of the USA's investment share in Intelsat and the recent success of the WTO telecommunication negotiations. A restructuring of Intelsat is foreseeable in 1997. As early as 1995, Intelsat's CEO, Irving Goldstein, noted\(^\text{54}\) that "the rapidly changing regulatory environment affects Intelsat and the ITU."

In response to this basic shift, and to the realization that its central mission has largely been accomplished and its activities coveted by private enterprise, Intelsat's Assembly of Parties created a task force to review the organization, its mission and development plans for the future. Intelsat anticipates that its efforts will be focused in functional areas such as standards setting, serving rural areas where satellite technology is essential; it envisages going beyond universal service and in accordance with the ITU's initiatives, actively fostering expanded telecom services for rural and remote regions. Intelsat also noted\(^\text{55}\) that:

satellites are the ideal medium for the world's growing requirements for broadcast services that let all nations watch coverage of global news, sports and entertainment.


\(^{55}\) Ibid.
In its 1995-96 annual report, Intelsat announced that it will introduce a wide range of new services to enable it to compete effectively and will rapidly complete the contract process for a high power DTH service in the Asia Pacific. Some of Intelsat's newer satellites such as Intelsat K, focus on TV/video services. In the past, Intelsat's satellites were mostly multi-purpose satellites which meant that when offering specialized services (services other than basic telephone) Intelsat could not successfully compete on quality with its competitors' purpose built satellites.

On the other hand, in October 1996, the USA's General Accounting Office (GAO) was asked by the Senate Committee on Commerce, Science and Transportation to examine whether any elements of Intelsat's institutional framework hinder competition. This mandate was given to the GAO following concerns over the existence of competitive advantages prohibiting entry by private American companies (such as Orion and PanAm Sat) seeking to establish or develop international communications satellite systems.

Among the restructuring options considered by Intelsat in April 1997, were the following:

- the elimination of Intelsat and the sale of its assets. This option is unlikely to be adopted. It has little support from Intelsat's members who, in general, want Intelsat to expand into new services. Also, developing countries want to retain the guaranteed global service they now benefit from;

- the privatization of Intelsat through the creation of one or more private companies or affiliates with little or no government ownership; this option was proposed by COMSAT in 1994; it has garnered little support and was rejected by developing countries;

- the creation of private (publicly traded) corporations, perhaps four in number and the retention of an Intergovernmental structure for a smaller Intelsat. Smaller Intelsat would concentrate on providing new services and would not provide satellite systems for any basic telephone services except in certain regions in developing countries where it would assure lifeline activities on a non-profit basis. This option has garnered support. The USA's proposal under this option specifies that Intelsat would not have intergovernmental status, that the private corporation would receive half of Intelsat's satellites and that the private corporations would not be majority owned by government related institutions.

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56 GAO Report, Supra note 7-2
57 Intelsat, Press release of 25 April 1997
Intelsat's backers agreed to split the communications satellites business in two parts, one being a "commercial arm". The "commercial arm" of Intelsat would concentrate on non telephone/data services. Issues which remain to be clarified are how many Intelsat satellites should the "commercial arm" be allowed to keep and how much of a stake should the Intelsat consortium retain in the "commercial arm".

In its report, GAO makes no recommendations on Intelsat's restucturing. It simply considers Intelsat's restucturing with regard to competition issues from the perspective of Intelsat's organizational structure as well as from the perspective of Intelsat's market activities and scope of services. GAO notes that multilateral trade negotiations to open markets such as the WTO negotiations to remove trade barriers in basic telecom services; and using access to the US market to gain leverage such as expressed for instance, in the proposed DISCO (Domestic and International Satellite Consolidation Order) protocol may do more to improve market access than the restucturing of Intelsat.

In its report on competition issues with regard to Intelsat, GAO analysed the world telecommunication markets by examining whether or not alternate providers were currently in operation and examining the ability of potential competitors to enter the market. Price and cost data which are useful indications of competition were not considered as these were not, according to GAO, readily available.

Both Intelsat's international telephone service market as well as its broadcast and video market were analysed. With regard to Intelsat's main activity, the provision of international telephone satellite service, GAO found that this was indeed Intelsat's largest sector and that although its activities in international public telecommunication services are increasing, Intelsat is losing market share either to low cost fibre optic cable systems or to alternative non-Intelsat satellite systems. During the past 10 years, the number of countries served by cable has more than doubled and currently, 100 countries are served by cable.58 Though less subject to sabotage, GEO satellite technology is at a disadvantage for voice transmissions in that it has the inconvenience of echo. Satellite signals travel at the speed of light, 186,000 mps. The "delay" occasioned to travel to and back from the satellite and earth is a quarter second.

In short, one can conclude that with the success of the WTO telecom negotiations in February 1997, Intelsat's core activity is and will continue to be subject to ever increasing competition. The regional and transoceanic TV/video markets do not form part

of Intelsat's core activities nor are they a priority according to the international agreement. The analysis of Intelsat's activities in these markets is important, however, because as Intelsat has been losing its monopoly and some of its market share in its core activity,\(^{59}\) it may look increasingly towards its ancillary activities, such as satellite broadcast services, to ensure its future. Also, as noted above, the restructuring of Intelsat is imminent.

With regard to regional (continental) broadcasting, Intelsat is not subject to substantial competition from fibre optics technology as the latter technology is presently inefficient for point to multi-point communication. In general, on a short term basis, because of its excess capacity, Intelsat is the preferred supplier. For standard term contracts, American satellite operators as well as other international and regional domestic systems have become viable competitors. GAO notes, however, that most of these alternative systems worldwide are owned by governments or telephone company monopolies and this characteristic may affect pricing. It is worth reiterating here GAO's observation that regional (continental) broadcasting by satellite transmission of TV signals direct-to-home or to head-ends for further redistribution represents a significant growth market. While it lasted, the now largely defunct restriction on setting up separate non-Intelsat satellite systems to compete in the international public telecom market, encouraged competing satellite systems to concentrate their efforts on developing other markets such as private communication systems and international TV/video.

With regard to the transoceanic TV/video market which includes transoceanic broadcasting and the relay of international TV between regions, GAO notes that according to the Brattle Group's report\(^{60}\), Intelsat's market share for the service to and from the USA decreased from 80% in 1993 to 50% in 1996. The decrease is not emphasized by GAO which finds the statistic misleading in the light of Intelsat's excess capacity. GAO concludes that Intelsat's excess capacity and its access to many markets on account of its extensive network of earth stations situated in 136 countries, qualify Intelsat as a dominant player.

Competitors in that market are currently limited basically to Intersputnik and Telecom. Intelsat is the preferred supplier to countries for the relay of TV broadcasts between regions. Only one American private venture has achieved nearly global coverage. The US networks are large users of the service for their international news gathering purposes.

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\(^{59}\) Ten years ago, Intelsat carried 50% of the world international telecom traffic, now it carries only 20%. In North America, telephone and voice via satellite accounts for less than one tenth of satellite capacity. In emerging countries such as Asia, one half of all satellite capacity is used for voice and data transmission.

\(^{60}\) Brattle Group, Supra note 58
Finally, GAO observes that 4 American companies are licensed and operating (two way multi-purpose) geostationary satellite systems in the C (4-GHz) and Ku (12-14 GHz) bands; that no American company has a (one-way) single purpose broadcasting satellite service in operation though an application to operate one is pending; and that 11 applications are pending by American companies for 28 GHz or higher frequency systems to provide on demand data or video applications directly to the home.

In the examination of Intelsat's institutional/organizational framework, GAO found that the elements hindering competition stemmed mainly from Intelsat's intergovernmental status and not so much from its ownership structure. The principal elements highlighted by GAO are:

- many (71%) of the signatories of Intelsat are the regulatory authorities which decide (i.e. authorize an earth station to access satellite service) which satellite systems have access to their domestic markets. This fact is compounded by the fact that Signatories have a financial incentive since they are investors in Intelsat and since they are often owners of earth stations. In reality, alternative regional satellite broadcasting services are not hindered because domestic satellites in preference to Intelsat's are often encouraged.
- as an intergovernmental organization, Intelsat enjoys simplified application procedures for scarce geostationary orbit locations because Intelsat does not need to be cleared by a domestic regulatory authority such as the FCC which in some cases can take up to 5 years to complete the review of an international filing; Intelsat's ownership structure facilitates financing;
- Intelsat's intergovernmental status confers immunity from tax and from law suits; because of its excess capacity, wide market access and the volume of its services, Intelsat dominates the market; in fact. PanAmSat (bought by Hughes Corp.) is the only private global competitor; this trend may change as many alternative systems are more oriented at handling TV/video broadcasting than is Intelsat which for the time being mostly uses multi-purpose satellites;
- in technical interference and economic harm determinations, private companies must in GAO's opinion reveal proprietary information; an added component is that Intelsat, when determining criteria for unacceptable interference in the case of a valuable orbital position, presumably puts its own best interests first.61

Intelsat is a strong well positioned global company with expected revenues of 1 billion dollars in 1997. Its strategies for continued success include increasing its market

61 FCC, Decision In the Matter of Columbia Communications Corp. DA96-703 (6 May 1996)
share in video services, digitalizing its systems, decentralizing its operations, registering with the FCC to provide Ka-band (interactive) services. In anticipation of its imminent privatization, Intelsat, assisted by its substantial amount of unused (and unusable due to coordination problems) capacity is hoarding orbital slots. A privatized status for Intelsat will mean loss of tax immunity and other advantages and its credit rating is likely to drop somewhat, however, the entities formed by the break-up will retain a substantial amount of Intelsat's assets as well as its customers' long term commitments and sales will no longer necessarily be wholesale.

One can only question whether there ever will be true competition in such a highly capital intensive industry where the number of players is likely to remain small whether they be government related or from the private sector. One can also question whether players such as Hughes Corp. are non-governmental in the full sense of the word when such companies owe their success in large part to huge government defense contracts. It will be interesting to see if Intelsat can manage to survive at least in part in its "cooperative" form which requires the coordination of nation-states whose powers global corporations are increasingly diluting.

Eutelsat, Europe's regional satellite network

In order to counterbalance the strengthening of the USA's monopoly on satellite and space communications and in order to acquire some autonomy in that sector, 17 members of the European Conference of PTTs (government-owned companies) founded Eutelsat, in 1977, under the auspices of the European Space Agency. Based in Paris, its constitution and mode of operation were confirmed by 24 European countries in 1985. Over 40 countries are now Eutelsat members including Eastern European countries and Russia (since 1994). As a treaty based organization, Eutelsat's governmental structure and financial organization basically mirrors that of Intelsat's. Eutelsat's mission is to operate the space segment necessary to provide international public telecom services in Europe including telephone, video, mobile services and TV. Each signatory is responsible for the ground segment and the marketing of the service. Signatories purchase capacity at cost for themselves, or lease it to others. The system spans many regions and is owned by the signatories.

62 1. For an excellent discussion of Europe's regional response, see F. Lyall, Law and Space Telecommunications, (Brookfield (Ver.) Gower, 1989) 2. see also Eutelsat, Annual Report, Paris (1995-96)
Signatories are usually the PTO's and these handle leasing arrangements. Four shareholders own half the system. British Telecom (BT) at 21% is the largest shareholder followed by France Télécom with a 15% share, Telecom Spa's (Italy) 10% share and Deutsche Telekom with a 9.2% share. Shareholdings are revised annually and are based on the previous year's use. Shareholders receive non taxable dividend payments. Access was liberalized in 1994 and in 1996 Eutelsat amended its Operating Agreement to authorize more than one signatory per country. Newly admitted shareholders have the same rights and duties as signatories but no voting rights. In January 1997, the parties and signatories of Austria, Belgium, France, Germany, the Netherlands, Switzerland and the UK signed multiple access agreements whereby the service providers in any of these countries may mutually obtain capacity from each other's country. Hence, BSkyB, for example, can obtain the capacity from France Télécom. In 1996, uplink arrangements were liberalized under EC Directive 94-96. The organization owns the largest number of satellites in Europe and offers a wider coverage area than any other regional carrier. Although at the outset, Eutelsat focused on telecom, the television sector now contributes 70% of it's total revenues (360 million dollars in 1995).

The European Space Agency (ESA) founded in 1978, developed and provided, under the European Satellites Communications Program, the first generation of satellites to Eutelsat. With regard to TV, ESA has participated in the experimental Olympus program which carries 2 broadcasting channels, the BBC and RAI.

In addition to the ESA, as regards space technology and facilities, another important institutional factor in Eutelsat's success and development of activities in the TV broadcasting sector, has been the European Broadcasting Union (UER). Founded as a non-profit organization in 1950, the UER's object is to represent the interests of state owned broadcasters for the exchange of current events coverage. Close to 70 countries are members of the Geneva-based UER. The UER's two principal accomplishments have been its participation in the development of a European policy on HDTV and the establishment of Eurovision (1954), a European trade market for the sale and purchase of TV programs.

Sports events represent 87% of Eurovision's market inventory. When satellite technology became available in the seventies, programs were transmitted using Intelsat's facilities in preference to the PTT's terrestrial facilities. Since the eighties, the UER has worked in close collaboration with Eutelsat. For example, at the occasion of the broadcasting of the last Olympic games, the UER bought program rights in the name of its members and 25 earth stations were installed at the Olympic site.

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63 Eutelsat now assumes full responsibility for its fleet of (50W, 16 transponders) satellites
UER leases 4.5 transponders full time. In 1992, UER launched the Euronews channel. Meant to compete with CNN, this channel was financed by UER’s members (54%) public funds (24%) and sponsoring (22%); the total funding required was 300 million French francs, a relatively normal budget for a news channel.

The UER does not collaborate with the private sector which is generally excluded from retransmitting programs whose rights have been acquired by the UER. The Commercial TV Association (ATC) formed in 1989, brings together 5 private TV networks. ATC is especially interested in buying rights to sports events for its members. Today, ATC provides growing competition to UER.

Eutelsat rents channels to broadcasters in such a way as to ensure the provision of a selection of public and cable channels and the viewing needs of a pluriculural European public. As of 1997, 105 digital TV channels and 73 analog TV channels are available from Eutelsat's facilities. BT leases 11 transponders on Eutelsat's two "Hot Birds". TF1 has leased 5 transponders to prepare the launch of Télévision par Satellite (TPS). Broadcasters include, for example, the BBC, Telepiu, CLT, Nethold, EBN, Eurosport, ABSAT, MTV Europe (Viacom), Rai, TV5, TV Poland, Telecom Poland, TVE Internacional. Broadcasting is uni- or multi-lingual. Multilingual broadcasting is especially well adapted to news and sports events. Some channels are also available, such, as TV Plus, via DTH with the Eurocrypt card and decoder. Inaugurated in 1992, the TV Plus channel is broadcast in the prescribed D2 MAC format. An increasing number of commercial programs are broadcast in that format. Eutelsat is an active member of the "Digital Video Broadcasting Group" which is involved in the development of standards.

Due to the European Union's policy of fragmenting the telecom market (as of January 1, 1998, there will be competition throughout Europe), Eutelsat is experiencing very similar pressures to those placed on Intelsat as discussed in the preceding section. Long term solutions are being studied including the establishment of commercial companies which would remain under government control.

64 UER previously launched 2 other channels, one in 1986. Europa TV, a pan European news channel and the other in 1989, Eurosport, in association with Rupert Murdoch. The latter channel was taken over by TF1, the French TV network, and the former ceased operations. Euronews has met with financial difficulties as certain countries have been late in paying their respective shares of contribution.
65 Merrill Lynch Report, Supra note 7-1 at 146 and Eutelsat Press Release of March 1997
This pressure is likely to increase as the soon to be finalized new GATS telecom Annex\textsuperscript{67} providing for an international trade in services agreement on basic telecom, is implemented in 1998. Though broadcasting services are expressly excluded, telecom services via satellite are definitely covered under the new agreement. Most satellite TV broadcasting, including DTH TV is currently transmitted on multi-purpose medium powered satellites. When a satellite operator's usually profitable telecom business is affected, the management of its TV service sector is bound to be affected as well. Eutelsat is a step in advance since its activities are already focused on video services. As Eutelsat's telecom revenues fall, the focus on video services will no doubt strengthen.

Finally, Eutelsat must compete with SES/Astra, a very successful private satellite operator based in Luxembourg which also focuses on video services. Though it achieves poor revenues per transponder, with its "Hot Bird" position at 13 degree E. it is a very credible competitor of SES/Astra (19.2E) and is very marketing oriented. It is the leading "Hot Bird" in Italy, Central Europe and the Mediterranean. In Southern European markets such as Spain and Italy over half of the market of DTH consumers have Eutelsat compatible equipment. Eutelsat is now targeting the UK market, especially minorities living there. In Western Europe, Germany represents a 4 million households market, Poland a 1.5 million households market, Denmark and Algeria a market over 600,000 households each, Czechoslovakia, Spain and Austria, markets with over 300,000 households each. Overall, Eutelsat captures one third of the DTH/SMATV market in Western Europe, half of the DTH/SMATV market in Eastern Europe and nearly two thirds of the market in the Mediterranean basin. Eutelsat has 8 satellites under construction four of which are "Hot Birds": these satellites are to be launched between now and 1999 at 13 degree E. All the transponder space on these satellites is firmly booked and more satellites are being planned. New Eutelsat satellites are compatible with the latest in digital technology as well as with analog.

\footnote{\textsuperscript{67} WTO, Group on Basic Telecommunications, Reference Paper on Regulatory Principles Issued by the Chairman of the Negotiating Group on Basic Telecom. 24 April 1996, S/GBT/ W1 Add.6/Rev.2 of February 1997 (hereinafter GATS Basic Telecom)
PART II: The international regulatory framework applicable to DTH satellite broadcasting

The use of TV signals carried on radio waves and satellite facilities situated in space in the geostationary orbit, both essential to DTH broadcasting, are matters of international concern. These matters are dealt with respectively by the UN Committee On the Peaceful Uses of Outer Space (COPUOS) and by the International Telecommunications Union (ITU), a UN agency.

In this Part, we will examine the substantive elements of the international regulatory framework, its evolution since the sixties as various countries influenced its course and the constitution and workings of the international bodies providing the forum.

The transmission and reception of content across borders raise copyright, sovereignty and public trust (of government authorities with regard to TV programming) issues. These matters must necessarily be dealt with on a regional basis (i.e. satellite footprint).

The European Union's (EU) legal regime and in particular the TV Without Frontiers Directive and the Satellite and Cable Directive fully address these matters and will be seen in the last section of this Part.

Finally, the impact of digitalization and of international trade (telecom) agreements on the legal regime and on the TV industry, will be analysed.

THE LEGAL STATUS OF RADIO WAVES: RES COMMUNIS

TV signals like radio signals travel or are carried on radio waves. It is important to note the legal status of radio waves which constitute, the physical support and therefore essential element in the functioning of TV and radio broadcasting. The concept of res communis is now a fait accompli in relation to radio space.\(^{68}\)

In the fifties, legal doctrine assimilated the status of radio space to that of airspace\(^{69}\) over which states have sovereignty. Thus "...the principle of exclusive


\(^{69}\) *International Civil Aviation Organization (ICAO) Agreement* (1919)
sovereignty in the airspace for the subjacent State which has received general approval in connection with aerial navigation, enables that State to prohibit the disturbance of the airspace over its territory by means of Hertzian waves caused for the purpose of wireless communication and emanating from a foreign source." This erroneous viewpoint stemmed from an incorrect appreciation of the scientific reality of radio. These waves are part of the electromagnetic field and spread, at the speed of light, across the whole radio space travelling freely and without limits to and from Outer Space. Radio waves are of course used for terrestrial transmission as well as for satellite communication systems.

Without the coordination of frequencies, that is the setting aside of different frequency ranges of the radio-spectrum for specific uses and users, interference between signals is most likely whether (in some cases) on different frequencies, whether terrestrially transmitted, satellite based or both. The usable range extends from very low (1Khz) frequency to extremely high frequencies (300,000,000 GHz). For example, the band attributed to AM Radio is called LF (Low Frequency) and is broadcasted in the 0.1MHz to 1.0 MHz range.

Not all frequency bands have the same commercial value. For example, C-band (4GHz - 8GHz) frequencies are extensively used for terrestrial applications because the signals can pass through rain and fog without interference. Microwaves extensively used in urban locations interfere with weaker C-band signals and this is why C-band earth stations are generally located outside of city centers and connected to urban users by cable or microwave. Part of the Ku-band of frequencies (12- 18GHz) is used by DTH satellite services for signal transmission. Signals transmitted in this band are slightly prone to interference from fog and rain, however, receiving equipment has been improved. Part of the Ka-band (18-40GHz) has been allocated for satellite usage (18.3-22.2GHz) including interactive services.

At the end of World War II, an acute controversy between the USA and the Soviet Union emerged over the legal status of the Berne List which contained the International Telecommunication Union's (ITU) comprehensive list of all frequencies. The USA, supported by the majority of ITU members, argued that the spectrum reality had changed to such an extent that no right, even under the prior tempore portior jure principle alleged by the Soviets, could be attached to former Berne List Entries. The ITU Convention itself also supports, without mentioning it specifically, the res communis status of radio waves when it refers, for example, to the Frequency Registration Board as "custodians of international public trust." Free passage of radio waves and interference is permitted in certain cases.

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70 Oppenheimer, International Law 8th ed. (Lauterpacht, 1955) vol 1 at 259
Sovereignty or legal title over frequencies cannot be claimed either by occupation or prescription. However, cooperation, planning and registration of the use of frequencies is coordinated by the ITU - otherwise, utter chaos in radiocommunications would be the result.

The concept of *res communis* also governs the status of Outer Space. The Outer Space Treaty (1967)\(^{71}\) provides for a free use of outer space in accordance with international law, prohibits national appropriation of outer space, thereby denying sovereignty (which applies only in the satellite *per se* wherein the law of the state of registration applies).

The use of microwave permits clear transmissions over long distances and therefore over and well within national boundaries. At this point in time, it may be too late for proponents of sovereignty to try to introduce a distinction between short radio waves used for terrestrial broadcasting (VOA, BBC, CBC World) and microwave used for DTH broadcasting in the hope of excluding microwave from the regime associated with *res communis* status.

The concept of *res communis* is very adaptable to change and technological progress and more advantageous to the USA and other G7 countries which may be the first positioned to extensively operate world DTH TV satellites. The fact that Outer Space and radio waves share a similar legal status is favorable to a global system of international communications free of sovereignty.

The *res communis* principle also recurs in national jurisdictions\(^{72}\) where radio frequencies are considered public property.

We need now to turn to an examination of the ITU, the international treaty based organization which, since the early part of this century has been entrusted with the critically important roles of allocating bands of radio-frequency spectrum, of registering the assignments authorized by Member States for broadcasters in their respective territories as well as, more recently, with the role of registering orbital locations with regard to satellite delivered TV.

Partly because radio space is borderless and because many European countries are in close proximity to one another, international coordination was essential and the

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\(^{71}\) 610 U.N.T.S. 295; 18 U.S.T. 2410, T. I. A.S. 6599, 6 ILM 386 (1966) (hereinafter, *Space Treaty*) the treaty is discussed in more detail further on under the COPUOS section of this Part.

\(^{72}\) *Broadcasting Act*, S.C. 1991, C. 11. S. 3(1)b (s. 2a of the 1967 Act) (hereinafter *Broadcasting Act*)
European-based ITU appears to be the appropriate body for that role. The ITU has long been responsible for ensuring efficient communications including all types of telecom services, within and between regions of the world and has carried out its role successfully by a practical approach which has surmounted war and peace and technological change.

INTERNATIONAL TELECOMMUNICATION UNION (ITU): THE UN AGENCY

It goes without saying that much has changed in the world since the advent of radio communications. In general, the International Telecommunication Union (ITU) the body responsible for regulating radio communications (management of orbit and frequency spectrum) and international telecommunication through treaties which have force of international law and whose regulations, the member states must observe in national law, has adjusted well to change. Certain more recent changes such as, for example, the end of the Cold War, the liberalization (and privatization) of telecom, a sector traditionally run by state monopolies, globalization, market access and free trade, and the ever increasing pace of technological developments (in particular, the convergence of computer and telecom technologies) are posing a great challenge to the ITU in its present structure. The 880 billion dollar world-wide telecom market sector in which the ITU is an important player is of key strategic importance to the growth of the world's economy. The information communication industry (which includes the telecom, the computer and audio visual sectors) represents 6% of the world GDP and is growing at twice the pace of the rest of the economy. Increasingly, telecom is seen as the modern trade route for goods and services.

In this section, we will examine in some detail the ITU's operating conditions and how these have functioned both in the past and currently. This will provide an essential context in which to consider growth in world television. These operating conditions include, for example: membership structure, according to which core or full membership is reserved exclusively for sovereign States: the express recognition of the international law principle of national sovereignty whereby the international aspect of the ITU's role is

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generally limited to coordinating communications between countries; it being understood (unless otherwise agreed to) that the receiving country assumes the re-communication/distribution role within its own territory, and the regulation of orbital and frequency assignments within its borders in accordance with ITU regulations; the role of making sure that communications are coordinated so that those carried out in one state do not interfere with communications carried out in another state and that overspill, if any, is limited to the least technically possible amount, it being understood that no country can utilise orbit and spectrum resources within its borders without regard for the international ITU agreements; and the ITU's role with regard to elaborating standards and assisting developing countries.

Until now, the most contentious matter in the ITU forum relating to our subject has been the regulation of DBS services and access to geostationary orbital slots. Regarding DBS, the ITU quite naturally has up to now always addressed the issue from a technical point of view and on the whole refused to enter discussions on content. Such a narrow approach is appropriate to telecom which carries essentially private point to point communications but may not remain indefinitely so for broadcasting (point to multipoint). In the seventies, the ITU "resolved" the issue by attributing DBS purpose specific frequency bands (out of the Ku-band) for use by high powered satellites with beams tightly wrapped around a State's (or consenting neighboring state's) borders. Later on, it became technologically feasible to use traditional medium powered FSS multipurpose (telecom-video) satellites to transmit DTH to small dish-owning consumers well outside of the broadcaster's state. This opportunity was seized as it permitted more channels to be offered. This meant that the issue of the regulation of DTH broadcasting resurfaced. The problem then attenuated considerably, at least in Europe, with the advent of the EC directives related to broadcasting and satellites and in particular, the TV Without Frontiers Directive in 1989 (discussed further on in this thesis) which provides for the free movement of television programs across the EC.

Regarding the other contentious matter, access to a geostationary orbital location, developing countries, as latecomers, have strongly voiced their concern over the unfairness for new entrants of the coordination process with incumbent satellite operators. The challenge of ensuring that each country, at least in theory, can satisfy a national satellite communications service was addressed in the mid eighties partly by establishing an a priori allotment plan for FSS satellite services and partly by establishing improved procedures for FSS coordination in unplanned bands. The a priori allotment plan attributed to each country at least one orbital slot in the arc over the designated service area, a minimum (800 MHz) quantity of bandwidth as well as a predetermined part of the frequency band.
Finally, we shall examine new assumptions brought to the fore by recent factors of change. The latter contribute to the ever growing demand for the limited resource of geostationary orbital slots and the tremendous economic potential which satellite communications technology represents for newly expanding economies, as well as for operators offering DTH/TV and other interactive media and global business services. Though PCN are a personal communications services and may not for the time being include broadcasting services to any significant extent, the inadequacy of the current ITU framework for PCN and its eventual recasting will have an inevitable impact on DTH broadcasting given the global nature of PCN services.

Both the USTR (US Trade Representative) and the Department of Commerce have identified satellite technology as being one of eight strategic technologies for future growth because of its importance for economic performance and high-tech job creation. The largest satellite manufacturers in the world with a 67% market share, are the US companies: Hughes Aircraft and Lockheed Martin. The European companies Matra Marconi and Aerospatiale DASA, follow with a 25% market share. According to Merrill Lynch, between 262 and 313 geostationary satellites are projected to be sold between 1996 and 2006 and 108 or over 36% of this projected market is already under firm production contracts. Though in the past, commercial satellites have mostly been used to provide telecom services, as we have seen in the Intelsat section, with the advent of fibre optics, satellites will be used more as a back up and services will be principally broadcasting and PCN. The EC has also identified satellite technology as a key strategic future technology. The European Space Agency (ESA) is a major political support and pillar behind Eutelsat, the European cooperative PTO owned satellite operator and Arianespace, the number one launch provider in the world. Obviously APEC (Asia Pacific Economic Community) also sees the satellite sector as strategic and is active in that regard in the WTO and ITU forums. India and China, on the other hand, are nurturing their own satellite industry.

Some of the ITU's basic operational conditions may well need to be modified in order to respond to new factors if the world is to continue to benefit from its considerable expertise and generally equitable approach. Otherwise, the existing balance may eventually risk being fully subsumed into trade and economic issues and the WTO's ambit in which concerns peculiar to broadcasting and the media (such as pluralism), have little place.
With its origins sketching back over 130 years, the International Telecommunication Union (ITU) is the world's oldest inter-governmental association. Established before World War II under the International Telecommunication Convention (Madrid, 1932), the Geneva based ITU resulted from an amalgamation of two Unions which had cooperated for years: the International Telegraph Union founded in Paris, in 1865, by 20 European nations to facilitate the international exchange of telegrams by harmonizing incompatibilities between national systems and the International Radio Telegraph Union founded in 1906 to coordinate the use of wireless transmission between countries. The ITU's original function was therefore to standardize the technical, operational and tariff aspects of telegraphy. The International Telecommunication Convention in 1932 regrouped the principles common to the three communication technologies of the time: the telegraph, the telephone and the radio. The commercial exploitation of television had only barely commenced at that time. In 1947, the ITU became a specialized agency of the UN and remains so to this day.

The ITU's goal is to foster and stimulate the global development of telecommunications for the universal benefit of all. Based on the principle that a coherent set of regulations is essential to ensure efficient communications systems within and between regions of the world, the ITU's role is to supervise and regulate the development of all types of telecommunication.

In particular, with regard to satellites and space, its role is to:
- promote the extension of the benefits of the new technologies to all the world's habitants;
- promote the use of telecommunications services with the objective of facilitating peaceful relations;
- harmonise the actions of the members in the attainment of these ends; (...)
- allocate bands of the radio-frequency spectrum, and registration of radio-frequency assignments and associated orbital positions in geostationary satellite orbit.  

As of June 1995 and presently, 184 countries are core members of the ITU including Canada, the UK, France, the USA, China and Russia, to name but a few.

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76 ITU Celebrating, Supra note 54 at 11. 350 non-sovereign state members also participate in the ITU's work though they do not benefit from full member status. These non core members include major
The ITU's approach is based on laws and treaties with an emphasis on cooperative action and mutual consent. Member countries adopt international regulations and treaties governing all land and space\textsuperscript{77} uses of radio frequencies as well as the uses and allocation of geostationary satellite orbits. The coordination procedures aim to ensure that satellites and satellite systems (as well as terrestrial systems) operate with minimal if any interference. In short, the ITU is the international organization through which governments and the private sector coordinate global telecommunication networks and services.

The ITU's authority and guiding principles are derived from its Constitution, its Convention and its administrative regulations: the International Telecommunication Regulations which replace the older Telegraph and Telephone Regulations, and the Radio Regulations.

. the ITU's organizational structure

The structure of the ITU is comprised of the Plenipotentiary Conference, the Council, the Administrative Conferences and the ITU's permanent organs: the General Secretariat, the Telecommunication Standards Sector (former CCITT) the Radiocommunication Sector, including the important Radio Regulation Board (former International Frequency Registration Board) and the Telecommunication Development Sector.\textsuperscript{78}

The Plenipotentiary Conference is the ITU's supreme organ. It is composed of delegations representing each of its member countries, each state having a single vote. The Conference is convened every four years: the ITU's next Plenipotentiary Conference is due to be held in Minneapolis, USA, in October 1998. The Plenipotentiary Conference determines the ITU's general policies in the light of the Convention's principles:

. to maintain and extend international cooperation between all members for the improvement and the rational use of telecommunications of all kinds, as well as to promote and to offer technical assistance to developing countries in the field of telecommunications;

\textsuperscript{77} J.E.S. Fawcett in "Satellite Broadcasting", 27 (1971) \textit{World Today} 76-82 commented on the jurisdiction of ITU over satellite communication characterizing ITU's jurisdiction as "the 'accumulating of law designed to regulate a particular function, in this case the international use of radio'" not specifically citing ITU jurisdiction as an extension of international law to outer space

\textsuperscript{78} cf Appendix I. ITU Organizational Structure
to promote the development of technical facilities and their most efficient operation, with a view to improving the efficiency of telecommunication services, increasing their usefulness and making them, as far as possible, generally available to the public;

- to harmonise the actions of nations in the attainment of those ends.

The Plenipotentiary Conference reviews the work completed by the Council since the last conference; revises the Constitution and Convention, if necessary, establishes the budget, elects the Administrative Council, the General Secretary and the directors of the three sectorial Bureaus.

At the most recent Plenipotentiary Conference 79 reports were tabled by the Conference to the Council on the subjects of strengthening the financial base of the Union and of enhancing the rights and obligations of ITU members.

The Administrative Council's role is to act for the Plenipotentiary Conference between meetings; it is responsible for implementing the Constitution, Convention and Administrative Regulations as well as the decisions of the Plenipotentiary Conference and other ITU conference and meetings' decisions. The Council supervises the administrative functions, examines the budget and coordinates the activities of the permanent organs. The Administrative Council meets once a year in Geneva. As of June 1997, it is composed of 46 members: eight for Region A, the Americas; eight for Region B, Western Europe; five for Region C, Eastern Europe and Northern Asia; thirteen for Region D, Africa; twelve for Region E, Australia and Asia.

At its 1996 session, the Administrative Council discussed 80 the role of the Union in the rapidly changing telecom environment including:

- the establishment of conditions for the development of the new "Information Society",
- the improvement of mechanisms of assistance to the developing world,
- the current activities of the ITU in view of the goal of strengthening the financial base of the organization,
- the development of proposals to strengthen the relationships between the public and private sectors of industry and the government membership of the ITU.

79 cf Appendix II: Plenipotentiary Conferences between 1865 and 1994, Table of results
- the establishment of a fair balance between the rights and obligations of Member States and Sector members (public and private sectors of the industry, non-governmental entities and intergovernmental organizations),
- the improvement of the Union's structure and working methods, and
- the future of the ITU as an intergovernmental organization.

The Administrative Council also discussed the ITU's next Strategic Plan which will cover 1999 to 2003. The Plan is to address:

- the impact of telecom liberalization and globalization at the national and international levels,
- the impact of the convergence of telecommunication, computer and broadcasting technologies, and
- the development of the Global Information Infrastructures and Global Information Society.

The Administrative Council also established a working group, ITU 2000, which following the 1994 resolutions taken by the Plenipotentiary Conference, is examining:

- extending the participation of members,
- broadening membership per se,
- developing new ITU products and services,
- reviewing working methods,
- developing outsourcing and cost recovery strategies and making changes to the contributions of members.

The Administrative Conferences meet at irregular intervals to consider special telecommunication matters and deal with specific communication issues. The goal of these conferences is to oversee the implementation of the ITU's Convention, policy and Administrative Regulations. World Administrative Conferences can enact a partial or full revision of the Administrative Regulations. Regional Administrative Conferences are limited to specifically regional issues. The decisions of the Administrative Conferences are incorporated in the Regulations when agreed to by national administrations and have the legal status of an international treaty. With regard to direct-to-home television, the work of the World Administrative Radio Conferences is particularly important and we shall examine it in some detail below.

The General Secretariat's role is mainly to give legal advice to the ITU organs, deal with ratification and accession instruments and publish the text of all ITU legal instruments. The General Secretary is the Chief Executive and legal representative of the ITU.
Following the 1992 Plenipotentiary Conference in Geneva, the structure of the ITU's sector bureaus was modified. As from March 1993, the CCITT or International Telegraphic and Telephone Consultative Committee and the CCIR or International Radio Consultative Committee have been re-structured and are no longer known by the same names. The Telecommunication Standards Sector (ITU-T, former CCITT) bureau is concerned with technical operating and tariff issues as well as with the implementation of technical standards that enable interconnection and interoperability. ITU-T makes recommendations related to the standardisation of telecommunications on a world wide basis. As AT&T's CEO, Robert Allen, affirms, compatibility is key: uniform global standards make it easier for telecommunications customers to conduct business; standards permit one nation's system to connect with another's; as equipment from different technologies ranging from undersea fiber optic cables to satellites, is sold by a plethora of vendors, ensuring inter-operability of services and equipment is essential.81

ITU-T's study groups system has been maintained. A World Telecommunication Standards Conference is held every four years. An agenda of questions to examine is suggested to the study groups. These are comprised of delegations from member countries as well as delegations from private equipment manufacturing and designing companies. In principle, the study groups submit their reports to and for consideration by the next Conference. The study groups' reports can now be approved by correspondance and published individually without having to wait the four years. An advisory group reviews priorities and strategy.

The Telecommunication Development Sector (TDS) bureau's main function is to assist and advise nations on developing telecommunication infrastructure and systems. Its forum is also the World and Regional Administrative Conferences. One of the purposes of this Sector is to bring together members of the Union at the ministerial level to discuss the gap or imbalance between rural and urban needs and between developed and developing nations with regard to telecom and the telecom resources required for the progress of the whole of human kind.

The Radiocommunication Sector (ITU-R) Bureau which includes the Radio Regulation Board (former International Frequency Registration Board, IFRB) is concerned with the efficient allocation and management of the radio spectrum, the examination and registration of frequency assignments in the Master International Frequency Register and ensuring the application of the Radio Regulations. This sector is obviously critical to satellite and wireless operators.

81 ITU Celebrating, Supra note 54 at 102
The ITU-R Sector Bureau operates in general like the ITU-T sector, that is it involves study groups (composed of government and private industry representatives) and World or Regional Conferences. The Radiocommunication Assembly manages the work of the study groups and approves their recommendations. It is not necessary to wait for the plenary assembly, approval by correspondence is possible thus speeding up the procedure considerably. World Administrative Radio Conferences (WARCs) meet every two years to review the Radio Regulations. Regional Radio Conferences meet when necessary.

The **Radio Regulation Board** (former IFRB) based in Geneva is composed of five full-time radio experts from different regions. Elected by the Plenipotentiary Conference, they are custodians of the international public trust. The initial duties of the Radio Regulation Board (RRB) as defined for the IFRB in the 1947 Atlantic City Convention were:

- the orderly recording of frequency assignments made by different countries to establish in accordance with the Radio Regulations the date, purpose and technical characteristics of each assignment with a view to ensuring formal international recognition,
- to advise members with a view to operating the maximum number of radio channels in portions of the spectrum where interference may occur.

The RRB's duties now include:
- recording frequency assignments to stations of space radiocommunications,
- recording orbital positions assigned by administrations to their space stations using the geostationary (GSO) satellite orbit,
- assisting the administration in the application of the Radio Regulations,
- technically assisting and preparing ITU meetings, WARC's and RARC's,
- international monitoring,
- training,
- resolving harmful interference issues,
- developing technical standards,
- preparing publications such as the Weekly Circular and International Frequency Lists.

Though not specifically provided for in the Convention or Radio Regulations, the RRB interprets the Radio Regulations, updates regional plans and safeguards the interests of countries not represented in regional or world planning Conferences.
When the radio frequencies assigned by countries to stations are in accord with the Radio Regulations and not likely to cause interference they are entered in the Master International Frequency Register (which contains well over 1 million assignments), thereby acquiring formal international recognition and protection.

Scope of the ITU's instruments

The scope of the ITU's rules and regulations is set out in the ITU's Constitution which provides that the main instruments of the Union are the Constitution, the Convention and the Administrative Regulations, that their provisions shall be binding, and that in case of inconsistency, the Constitution prevails over the Convention and the Convention over the Regulations. The ITU has no permanent charter. Both the Convention and the Constitution have from time to time been amended at Plenipotentiary Conferences and new versions ratified anew, as for example in 1992 though some nations had not deposited the instruments of ratification as of January 1, 1994. When adopting a new Convention, the revised Radio Regulations are annexed to it and are an integral part of the treaty, that is binding upon all member countries. The preamble of the ITU Convention states that the Convention is agreed to while fully recognizing the sovereign right of each country to regulate its telecommunications.

The Constitution sets out the purposes of the ITU, its composition, the rights and obligations of members, general provisions relating to telecom including a definition of rights and obligations of a general nature which should form the basis for the provision of international telecom services including the right of the public to use telecom services and the right for members to stop or suspend services.

It is important to specify that the ITU's instruments are binding not only on its member states but on individuals and private companies as well. The Constitution states that the ITU instruments are binding:

- on members with regard to all telecommunication offices and stations established or operated by them which engage in international services or which are capable of causing harmful interference to radio services of other countries.

Also,

- members must take the necessary steps to impose the observance of the provisions of the ITU instruments upon operating agencies authorized by them to establish and operate telecommunications and which engage in

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82 Constitution, Supra note 75
83 ITU, Convention (Geneva: General Secretariat, 1992)
international services or which operate stations capable of causing harmful interference to radio service of other countries.

Operating agencies are defined in the Constitution's Annex as:
Any individual, company, corporation or governmental agency which operates a telecommunication service or capable of causing harmful interference with such a service.

A Recognized Operating Agency (ROA) is defined as follows:
Any operating agency, as defined above, which operates a public correspondence or broadcasting service and upon which the obligations provided for in Article 6 of this Constitution are imposed by the Member in whose territory the head office of the agency is situated, or by the Member which has authorized this operating agency to establish and operate a telecommunication service on its territory.

This provision may mean that the operator providing international service is only directly bound by the rules and regulations of the ITU if the national government which licenses it has fulfilled its obligations under article 6 either by imposing suitable conditions in the license or by some other means ensuring that the duty of complying with the ITU instruments is met.

In theory, all operators should be bound. The ROA tag simply confirms that the operator providing international public correspondence or broadcasting service has been made directly bound by the ITU rules and regulations. Despite there being no express obligation to that effect, most ITU members notify the ITU of the operating agencies they have recognized.

The settlement of disputes is stipulated for in the Constitution. Where negotiation fails, recourse to arbitration is provided for in accordance with the procedures set out in the Convention. Alternatively, where both member parties to the dispute are also parties to the Protocol, disputes can be settled by referring to the Optional Protocol on the Compulsory Settlement of Disputes. Some states, including Canada and the UK, have subscribed to the Compulsory Settlement of Disputes. The ITU, however, is not endowed with any powers of enforcement, nor with any powers in sovereign states.
The Convention deals with procedural issues related to the ITU's functions, the operation of telecom services including charges, free services, the rendering and settlement of accounts, the financing of the ITU and the procedure for arbitration in case of dispute between members.

The Radio Regulations are a product of the WARC's. Annexed to the Convention, they have treaty force and are binding on all members of the Union. As each country maintains its sovereign right over its own telecommunication environment, states can, and often do in fact, adopt the Regulations with reservations which are noted in ITU instruments. With regard to satellite broadcasting, the Radio Regulations contain the rules governing the use of the radio frequency spectrum for space activities and in particular those relating to the use of the geostationary satellite orbit.

The Radio Regulations, as products of the WARC's, result from the initial participation and input of the study groups which, as mentioned earlier, include not only delegates from the member countries, but delegates from private telecommunication networks and delegates from private international satellite systems operators as well.

The Radio Regulations are initiated under the ITU-R's umbrella. The first step for ITU-R, and in particular the study groups, is to recommend technical criteria, for example, the preferred frequency bands for a given service and the conditions governing sharing and set standards which have the status of recommendations. In a second step, the WARC representatives accredited by their respective countries meet and adopt the regulations, provisions and technical criteria. These may amend former Radio Regulations. Any new Regulations are included in the Final Acts with a date for entry into force. Frequency planning conferences allot to each country the frequencies its stations may use as well as specify technical characteristics governing their use. Finally, the ITU-R and the Administrative Council apply procedures in the Regulations to permit state

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84 *Convention, ibid.*

85 The Radio Regulations are divided into two parts: **Part A** contains the General Provisions (terminology, measures against interference and administrative provisions for radio stations) and the Regulations for frequency allocations including the Table of Allocations for various radio services, notification and registration to the Registration Board and procedures for coordination. Many of these regulations concern space services. The 12 GHz band is shared by many services including broadcast satellite services. **Part B** contains technical provisions concerning groups of services and specific services and specifications. **Footnotes** indicate exceptions or conditions of usage favoring certain states and priority rights vesting mechanisms.

86 **Allotments** are specific frequencies or bands for the use of particular countries or areas under specific conditions. **Allocations** are groups of frequencies dedicated to a service; priority within services is decided largely on a first come first served basis. **Assignments** are authorizations given by national administrations for radio stations to use frequencies or frequency channels under specific conditions.
administrations to fulfill their respective countries' obligations and to allow the RRB to guarantee rights. For example, the right to use a frequency or occupy an orbital position depends on registration in the Master Register. National assignments must correlate with international allotments.

In fact, in contrast with the UN, the ITU (though it is a UN agency) has a very practical approach, which can be described generally as being in the incrementalist common law tradition. The Anglo-American Common Law tradition develops rules of law from precedent and develops general principles gradually through the resolution of specific concrete problems as they arise. This ad hoc approach is appropriate to the rapid developments, the extreme diversity of applications i.e. telephone, telegraph, data transmission, space operations, broadcasting, mobile communications each with specific features and a wide variety of user types such as government, military, civil, telecom operators, private individuals, industry, broadcasters and widely differing national constraints.

Both the ITU's Constitution as we have noted earlier and the Convention in articles 9, 10, 33 and 35 contain similar provisions regarding the ITU's supervisory role of all types of telecommunication including the allocation of bands of the radio-frequency spectrum, registration of radio-frequency assignments and associated orbital positions in geostationary orbit; the efficient and economic use and equitable access to radio frequencies and the geostationary satellite orbit as well as the avoidance of harmful interference.

. The RRB's co-ordinating role with regard to the use of the frequency spectrum and geostationary satellite orbital slots.

As we have noted at the beginning of this section, the frequency coordination function and interference control mechanisms of the ITU can be traced as far back as 1906. The coordination of activity in the geostationary satellite orbit (GSO) began in earnest in the 1970's.

The notification procedure provided for in the Radio Regulations is important to the coordination of frequencies and the use of orbital slots. Prior to being launched into an orbital slot, an international satellite operator such as Intelsat or a sovereign state must obtain a licence. The process has evolved from its post-war form where states submitted evidence of their proposed use of the spectrum to the IFRB (now the RRB) and co-ordinated the orbit and the frequency between state administrations prior to beginning notification procedures.
For unplanned bands, the licensing process managed by the RRB can take up to 6 years to complete. The satellite operator must first identify the sovereign state it wants to use as a host country. When this is agreed to, the host country and the satellite operator prepare an AP4\(^{87}\) (Advanced Publication) filing and deposit it at the ITU. This document serves to notify all satellite operators and sovereign states of the need to coordinate frequencies in order to avoid signal interference. Approximately six months is usually allowed for this preparatory first phase. The AP4 filing must specify the frequencies to be used by the satellite network and the area of the footprint. Hence, to deploy a space station in GSO, a country must first inform the other administrations of its intention 2 to 5 years prior to the launch date and provide information on the satellite system's technical characteristics in the RRB Circular. The filing of the AP4 document marks the beginning of the 9 year period during which the designated orbital slot will be reserved, if it is registered. Countries wishing to launch above the equator must request the use of specific orbital locations at given frequencies. The information given to the ITU must be sufficient to permit countries to determine whether the proposed GEO satellite will affect their satellites or systems. Countries have four months to comment on potential interference.

Six (to 9) months from the filing of the AP4, the host country files an AP3 form or the Request for co-ordination documentation. This form contains detailed descriptions of the system including terminal equipment, the transponder frequency plan and the neighboring systems which may be affected. Should a state administration consider that the proposed system may be harmful to the efficient functioning of its systems, the state administration communicates details and suggested modifications to the deploying state. Sometimes the assistance of other states is required and in some cases, an orbiting satellite may even be moved to accommodate an incumbent. The RRB may be brought in either by the deploying state or by the affected state. Countries and satellite operators listed in the AP3 form work together, usually on a bilateral basis within the ITU framework to solve the issue. This can take between 12 to 36 months.

The role of the RRB in that regard is one of mediation and inquiry. It has no definite arbitration powers. In the event of conflict, the Radio Regulations provide *inter alia* that the systems which are already in place have priority in the sense that any system modifications cannot be imposed unilaterally and require their owners' prior agreement. The costs of such changes are generally borne by the entrant. Once the modifications are completed, the formal RRB notification procedures commence. During this phase the satellite operator's host government submits a new filing similar to the AP3 form but

\(^{87}\) ITU AP3 and AP4 documents
including the changes resulting from the bilateral co-ordination. The formal notification phase may be completed in 3 to 6 months.

Once the coordination is completed, the ITU records the assignment of the orbital slot on its Master Register if the characteristics of the system described in the notification documents satisfy the requirements of the Radio Regulations. When recorded in the Register, the exclusive use of the designated orbital position is protected and it is up to subsequent entrants to ensure that their proposed system does not involve unacceptable interference to the recorded stations. If a network is not in service after the 9 year long reservation period has expired, the designation is deleted from the registry. By virtue of the Intelsat agreement, the launch by a private company requires prior consultation with Intelsat whose members belong to ITU. According to the FCC, in that event, coordination with the ITU is less necessary.

Applications to the ITU for orbital slots have risen sharply in recent years to unprecedented levels.

. The ensuring against harmful interference principle

Radio frequency spectrum is used for a wide range of applications, from toys and broadcast TV to satellite services. The frequency spectrum is a finite resource. New applications place pressure on a well subscribed spectrum. Either the spectrum can be shared on an agreed basis with an existing service, existing spectrum from another service can be re-allocated or the quantity of usable spectrum can be increased through technological advances. Spectrum is more often than not re-allocated from less utilized frequencies.

Space telecom activities have been allocated in a spectrum already allocated to terrestrial telecom activities. As noted, all services, space and terrestrial, require a certain number of parts of the spectrum or frequency bands, some of which are congested. All space radiocommunication is conducted simultaneously with conventional terrestrial radiocommunication and in the same frequency spectrum. That spectrum has a limited capacity and is a common global resource.

Hence, the need to ensure against harmful interference, a basic concept defined in the ITU Convention\(^8\) as:

\(^8\) *Convention, Supra* note 83
interference which endangers the functioning of a radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with the Radio Regulations.

For space telecommunications, in contrast to terrestrial telecommunications, eliminating interference and its sources is difficult, costly and sometimes practically impossible. However, wavelengths do not respect frontiers, some international order must be established through a regulatory framework.

The Registration System can be easily applied to all operators and services whether space oriented or terrestrial. National applications are in general restricted to the territory of the transmitting country, spillover being accepted only insofar as it is technically unavoidable. Should transmissions involve more than one country, or an international satellite network, the agreement of all the countries concerned is presumed. Sometimes frequency and design characteristics are suggested by a centralized highly automated system operated by ITU-R. This system assists in making quality transmissions possible for smaller users.

National administrations make the spectrum available within their borders but spectrum allocation on a global basis is needed in order to permit systems to develop near borders and spread across borders compatibly. Without the ITU forum where global spectrum allocation is established, the incentive to manufacture and finance equipment would be close to nil.

The vital clearinghouse function performed by the ITU for satellite communications inter alia and the international agreements governing the international use and sharing of the radio spectrum, are essential to the feasibility of the next generation of wireless communications. The service ensures against one country's satellites harmfully interfering with another country's satellite communications.

. The geostationary satellite orbit, a limited resource as well (as the spectrum).

The primary restriction on the capacity of the GSO is not so much one of the carrying capacity of the orbit without collision risk, but one resulting from electromagnetic interference. As the space between satellites using the same frequencies decreases, interference increases. For an acceptable signal to noise ratio, assuming a common value of 2 degrees for the circumference, the GSO can hold approximatively 180 satellites using the same frequency bands. Presently, approximatively 140 FSS satellites
are in geostationary orbit. One thousand five hundred satellites are planned on paper. There are 108 firm orders for FSS satellites, approximately 50 of which are to replace ones which are currently in orbit. By the year 2000, 190 new orders are possible as replacements and as additions to the current stock.\(^8^9\) Thirty five of Asia's 37 countries are planning satellites. The majority of currently operating satellites operate in the 4/6GHz band (C-band). Some parts of the orbit are already so congested that there are no spaces available within the current spacing limits.

Though the satellites are much larger nowadays and can accommodate more transponders and can offer more TV channels thanks to digital compression, the geostationary orbit continues to be a scarce resource because some orbital segments, for example, over regions with rapidly expanding telecom needs, are extremely congested. To avoid interference between geostationary satellites, each orbital slot must be located at least at 2 degrees longitude from its neighbour. This has, so far, been the rule for C-band transmissions. In general, satellites are usually separated by 2 to 5\(^9^0\) degrees depending on the coverage area, earth station features and frequency bands. As regards transmissions in the same BSS part of the Ku-band, orbital slots must, in principle, be located at 2 to 9 degrees apart from each other. Technological improvements may eventually permit the usual 2 degrees separation. Satellites using the same or different frequency bands may, when properly coordinated, be co-located in the same orbital position. From a marketing point of view, this is an interesting option as it permits a larger selection of channels for an installed consumer base. The coordination process has become complex and costly. Between 1976 and 1983, many detailed network and coordination procedures were required. Contrary to national networks, international networks like Intelsat have limited flexibility as to orbital position. New frequencies in addition to the 4/6 GHz band have been added. Developing countries are concerned there will no longer be suitable orbital positions for them.

There is no doubt that scarcity has driven up the price for using orbital assets. Some slots, mainly those pointing directly at the Americas and at Europe, have more value than slots above the Pacific ocean, for example, where there is very little population under the satellite's footprint. Some slots are therefore used strictly as relays for uplinks and downlinks. This is generally the case for satellites positioned over the Indian ocean. Over the years, prices for slots over developed countries have skyrocketed. Satellite orbital slots covering the US were virtually given away a few years ago. Consider, for example, the 687.5 million dollar price paid in 1996 during an FCC auction by phone giant MCI (acquired by BT) for the right of its DTH venture with News Corp's ASkyB, to

\(^8^9\) Merrill Lynch Report, Supra note 7-1 at 7
\(^9^0\) M. Naraine, Constraints in the Geostationary Orbit (Tokyo: United Nations University Press, 1991) sales No. E.91.111.4.9 at 106
broadcast from the 110 degrees W orbital slot in the segment over the continental USA. Since BT's acquisition of MCI, the venture has been under intense scrutiny at the FCC in the light of foreign ownership rules. In the light of such scarcity and the importance of access to such an asset, the relevant ITU regulations and notification procedures may have to be rethought. Currently, there are orbital disputes and more are likely to occur in the future. "Paper satellites" or overfilings abound, some of which are made on a purely speculative basis. Some operators proceed with launches without completing the notification process. Decommissioned satellites are parked in orbital slots in order to prolong the reservation period.

Orbital disputes are presently flaring up, for example, between Eutelsat and SES, two DTH satellite broadcasting rival operators. SES/Astra plans to launch and co-locate 2 satellites at 28.2 degrees E for its digital service. Eutelsat which previously filed for the 29 degrees E position in 1989 for BSS frequencies has received notification. Priority was to expire for Eutelsat in May 1997. However, Eutelsat temporarily parked its Hot Bird 2 satellite in the 29 degrees E slot before moving it to the 13 degrees E slot. Broadcasting from the 29 degrees E slot by Eutelsat would interfere should SES/Astra in its planned 28.2 degrees E slot and Eutelsat both transmit in Ku-band unless the frequency coordination between the two rivals results in Eutelsat transmitting FSS and SES only in BSS. Eutelsat in order to protect its claim over 29 degrees E may drag in a satellite to occupy the space. SES is arguing that Eutelsat being an organization and not a sovereign state is not a member of the ITU and therefore not covered by the WARC 1977 frequency coordination agreement. The dispute may eventually be settled as some of the users of these two rival satellite operators are shareholders or signatories of both.

Currently, Canada and the USA are subject to RARC-83's ITU BSS plans. Canada has positions at 82 degrees W and 91 degrees W for BSS and associated 500MHz BSS bands (12.2 - 12.7 GHz) which can be used for DBS/DTH (other positions are 70.5, 72.5, 129 and 139 W). The provision of satellite facilities to a foreign country such as the USA for example would require technical modifications to the ITU BSS plan according to the Canadian Minister of Industry, John Manley. Such modifications would have to be negotiated with the foreign country and coordinated by the ITU to assist in obtaining concurrence. In contrast to Canada's under-used BSS positions, due in part to a lack of satellites, the USA's positions are congested. Should the USA negotiate on a first come first served basis additional slots at the ITU, spaced at only 1 degree from Canada's orbital positions, American broadcasts from those slots, though not interfering with domestic Canadian broadcasts, would certainly interfere with the Canadian satellite's cross-border broadcasts, if any, into the USA.

91 Letter of the Minister of Industry, the Honourable John Manley to Larry Boisvert, the President and CEO of Telesat Canada (29February 1996)
This situation raises serious issues which will be discussed in more detail in the fourth part of this thesis which deals with the challenges facing the entertainment and TV broadcasting industry in Canada.

Because operators fear the outcome of the frequency co-ordination process, overfiling for future use is rampant. There have been a huge number of filings in the past 3 years and a large number of files are still being received. "Paper satellites" have priority on orbital slots and coveted frequencies over "real" satellites filed at a later date. Though it has recently taken on large proportions, overfiling has always existed. However, in the past, state administrations have accommodated newcomers and have not had recourse to interference in order to maintain priority on orbital locations.

Finally, some sovereign states have adopted a speculative approach. In 1988, the Kingdom of Tonga\textsuperscript{92} filed for 16 orbital slots located over the Pacific Rim with the intention of renting the orbital locations. Under pressure from Intelsat, the number requested was reduced by the ITU to 8. Tongasat acted as the private corporate agent for the Tonga government for the purposes of filing, co-ordinating and renting orbital slots to corporations who want to provide satellite services but lack access to orbital slots. Slots were rented by Tongasat to Rimsat and to Hong Kong based APT satellite Co. Ltd (Apstar 1).

Tonga, as a sovereign nation, has the same right as any other nation to file requests for orbital locations and Tonga has argued that is free to make whatever financial arrangements it deems appropriate with satellite operators who use the orbital locations it has co-ordinated and filed via Tongasat. From a speculative point of view, it is advantageous to file for as many orbital positions as possible, collect rent therefrom and be in a position to enforce rent in case of default. Any nation of any size and any financial capability can file. Though the ITU member countries are taking measures to minimize speculation in frequency and orbital assignments and unauthorized use, the ITU it will be recalled has no true enforcement powers.

Because of its crucial importance to all countries, the allocation of scarce orbit and frequency spectrum is becoming a trade issue. Before analysing the consequences, for the ITU's role and instruments, of the issues described above, we should complete our examination of the current regulatory framework as it has been developed in the World Administrative Radio Conferences (WARCS).

\textsuperscript{92} RRB Circular and Filings (1988)
Formal definitions relating to the geostationary satellite orbit are contained in the Radio Regulations:

geosynchronous satellites:
All earth satellites whose period of revolution is equal to the period of rotation of the Earth about its axis.

geostationary satellites:
A geosynchronous satellite whose circular and direct orbit lies in the plane of Earth's equator and which thus remains fixed relative to the Earth.

geostationary-satellite orbit:
The orbit in which a satellite must be placed to be a geostationary satellite.

Two types of satellites are used for broadcasting, the telecom satellite known as "FSS" (fixed satellite service), which is usually low or medium powered; and the broadcasting satellite known as "BSS" (broadcasting satellite service), which is a high powered satellite.

In the course of its WARC's, the ITU defined BSS as "a radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public." Originally it was thought that BSS "would be the basis for direct to home (DTH) satellite broadcasting. Many BSS frequencies were awarded by the UK to B Sky B. Technology, however, now permits medium powered FSS satellites to transmit DTH broadcasting. "FSS" is defined by the ITU as "a

93 Broadcasting is defined as a radiocommunication in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmission or other types of transmission.
94 Radiocommunication is defined in the Convention as "telecommunication by means of radio waves. Radio waves are electromagnetic waves of frequencies arbitrarily lower than 3,000 GHz, propagated in space without artificial guide." In certain instances, frequencies, above 3,000 GHz are also included in the definition. Telecommunication is defined as any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.
telecommunications service between fixed stations using one or more satellites. FSS satellites are not precluded from transmitting DTH.

The UK amended its Telecommunication Act to permit transmissions by FSS satellites such as Astra's to be lawfully received in the UK without requiring individual end-users to procure licences.

In the following paragraphs we shall review how issues related to satellite TV broadcasting (i.e. overspill, foreign content, access to orbital slots, technical standards, vested rights) have been discussed and regulated within the framework of successive (ITU) World Administrative Radio Conferences (WARCs)

. World administrative radio conference for space telecommunications (WARC - Spa 1971)95: partial revision of the Radio Regulations dealing with the Registration Procedure, overspill and the definition of "BSS"

Given that in 1971, only two states had the technology to carry out large payload launches and place satellites in geostationary orbit, given that radio frequencies and the geostationary satellite orbit are limited material resources which must be effectively and economically used and given the ITU registration procedure, the concern was that RRB (then IFRB) procedures would favour first claimants. This would constitute, in fact, a rights vesting mechanism conferring de facto ownership of orbital positions.

The Soviet Union, as it then was, supported by other countries, felt that the registration with the ITU of frequency assignments to space communication services and the use of the assignments should not provide any permanent prior right for an individual country or group of countries nor prevent other countries from eventually establishing space systems. France felt that some safeguards existed by virtue of the fact that ITU registration was unenforceable and that the notification procedures could always be modified by calling a WARC.

The Soviet's Resolution 2-1 became article 33 of the International Telecommunication Convention. After the Plenipotentiary (Malaga), Article 33 read:

In using frequency spectrum for space radio services, Members shall bear in mind that radio-frequencies and the geostationary satellite orbit are limited natural resources, that they must be used efficiently and economically so that countries or groups of countries may have equitable access to both in conformity with the provisions of the Radio Regulations according to their needs and the technical facilities at their disposal.

Promoted by Western European States, Resolution 2-2 introduced a new service, the broadcasting service. Those states were anxious to minimize the disturbance to developments in terrestrial microwave. The resolution established procedures for the efficient and equitable use of the broadcasting service, and called for another WARC to adopt a plan or agreement so as to prevent the harmful effects of an uncontrolled beam over a large area.

Regulation 428 A in the Final Acts of the 1971 WARC-Spa (article 7 of the revised Radio Regulations) originated with Sweden, France and Canada. It won the support of many countries, including both developing and developed countries some of which were less supportive of their earlier positions. 428A attempted to address the need, recognized since 1963, to restrict overspill except with the prior consent of the bordering or affected state. Article 428 A states:

In devising the characteristics of a space station in broadcasting-satellite service, all technical means available shall be used to reduce to the maximum extent practicable, the radiation over the territory of other countries unless an agreement has been previously reached with such countries.

At the time it was felt that DBS TV broadcasting stations would have to be able to refrain from broadcasting upon another country and to hold their orbit and antennae positions should the affected country object to such transborder broadcasting upon its territory.

Some say article 428 A is unclear. In particular, the United States' position is that article 428 A targets only technical aspects, basing its argument on human rights and free flow of information without censorship principles. This is not to say, however, that the United States generally, or in every context, rejects the principle of prior consent. The majority of states support the principle of prior consent and based on the sovereignty of states principle, read regulation 428 A as mandating that, unless states obtain prior consent, spillover transmissions, are not allowed.

Radio Regulation 428 A, as it applies to prior consent, fails to define what types of sanctions would apply, what type of agreement would satisfy prior consent and which
countries have standing to insist on prior consent. In fact, it does not prohibit all spillover, but only technically unavoidable spillover. To this day, the ITU closely follows technological developments in order to appreciate as exactly as possible what spillover is technically unavoidable.

Definitions of "fixed satellite service" (FSS) and "broadcasting satellite service" (BSS) noted earlier were also elaborated in 1971. Both services were described as radiocommunication services, the principal distinguishing feature between the two being that FSS flows from one point to another point whereas BSS flows from one point to an indeterminate number of points as the signals are intended for direct reception by the general public.

Direct reception is defined as encompassing both individual reception by simple domestic installations, for example, and community reception by larger or complex equipment which can also include the distribution of the signals over a limited area. Community reception can also include the use by a group of the general public at one location.

In reality, nowadays, the main distinguishing feature between FSS and BSS lies in their technical specifications as to power and range of frequencies. Both systems can accommodate broadcasting, FSS services are usually in the low and medium power range.

World administrative radio conference for the planning of the broadcasting satellite service in frequency bands 11.7-12.2GHz Regions 2 (the Americas, the Caribbean & Greenland) and 3 (Asia Pacific) and 11.7-12.5GHz Region 1 (Europe, Africa, the Middle East, the ex-USSR & Mongolia), WARC BS-197796: setting out an a priori allotment plan for high powered DBS

Pursuant to the 1971 WARC Spa Resolution 2, the WARC BS-1977 set out an a priori plan for BSS by region, which meant that all states obtained at least one orbital position and a few frequency channels reserved for their use (high power DBS) irrespective of their level of technological development and their ability to use the allocations. Part(11.7-12.5GHz) of the Ku-band range of frequencies was designated by the WARC exclusively for TV broadcasting. This range known as BSS (Broadcasting Satellite Service) was then divided up among all countries with each country receiving

BSS orbital locations and enough bandwidth to broadcast a few (5 each in Europe) analog channels. It is a planned band. The rest of the Ku-band, known as FSS (Fixed Satellite Service) remained unregulated; it is, like the heavily used C, Ka-band in FSS and the L-band in MSS, subject to frequency coordination and to the first come first served principle. By 1983, all ITU members recognized that article 33\(^97\) of the Convention with its sometimes seemingly conflicting notions of equitable access and efficient and economical use of the limited resources of the spectrum and orbit could be satisfied by means of an *a priori* allotment of orbital positions and frequency channels.

WARC 1977 tried to alleviate the consequences of spillover by allotting to the European countries, channels and orbital positions for high powered DBS in such a way that at the time, for a 90cm dish, a 50dBW footprint was free from interference and as tightly wrapped as possible around borders. No attempt was made to standardize DBS systems or give orbital positions or channels for other BSS nor was any attempt made to solve the legal consequences of transmission outside the intended coverage area.

WARC 1977's accomplishments with regard to trying to technically guard against spillover are now out of date as the old 50dBW footprint can now be served by a 60cm dish and 50W medium powered DBS services can reach a wide part of Europe and require a receiving dish only slightly larger than that recommended for receiving a broadcast from a high powered DBS satellite.

The 16 channel Astra satellite with its 50 dBW footprint serves, since the late eighties, a wide area of Western Europe and 85 cm dishes are amply sufficient. Eutelsat's medium powered direct broadcast satellite covers an even wider area.

**Spillover** has in fact always been an inevitable consequence of radio and TV broadcasting and the usual way of countering spillover is jamming, a practice subject to reproach and possibly illegal.\(^98\) The CIS has broadcast access to Western Europe. No formal approval of the countries in the footprint has been given. It may eventually be estopped from arguing that other countries have no right to transmit broadcasting signals into its country without its consent by virtue of the clean hands doctrine.\(^99\)

Jamming or the deliberate use of interfering radio or TV signals from a transmitter(s) to garble legitimate transmissions in order to make them unintelligible at reception is seen as justifiable by the CIS and Cuba if the broadcasting threatens morals or national security.

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\(^97\) WARC - Spa 1971, *Supra* note 95

\(^98\) UN GA Res 424 S, UN GAOR Supp. 20 at 44. UN Doc A/1775 (1950)

\(^99\) *Netherlands v. Belgium* (1937) PICJ No 70 at 9-25
However, every ITU Convention since 1947 has specifically prohibited jamming by constantly reiterating that broadcasts cannot "result in harmful interference to the radio services of other members." Harmful interference is defined as:

interference which endangers the functioning of a radio navigation service or of other safety devices or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with the Radio Regulations.

Because the CIS and Cuba have recourse to jamming, the UN resolutions condemning jamming are not binding as they are not part of customary international law. The UN has condemned jamming, but it is not a law-creating body.

There is no clear duty on a State not to have recourse to the jamming of broadcasts from other states into its territory. The right to jam may conceivably be justifiable as an act of self-defence though where no treaty provides for the free flow of information it may be preferable to consider jamming as an act of sovereignty, rather than one of self-defence.

Jamming DBS broadcasts traditionally has required the jamming signal to be in the same frequency and have the same orbit position as the DBS satellite.100

In the interesting TV Marti case involving offshore terrestrial broadcasting by the USA on Cuba in 1990, the ITU's IFRB (now RRB) concluded that the operation by the USA of TV Marti was in contravention of the Radio Regulations and requested that the USA eliminate harmful interference. The Board stated that the height (10,000 feet) of the TV antenna in Florida could not be considered efficient use of spectrum in an area which includes other countries. Despite the Board's conclusion, the USA continued the TV Marti broadcasts. These were jammed by Cuba and the operation was considered relatively inexpensive101 by the Cuban authorities. Jamming a satellite signal would probably be much more difficult and expensive.

WARC 1979 world administrative radio conference: dealing with equitable access and rejecting technical regulation of DBS; and discussing the regulation of foreign content

There was a heated debate at that WARC between the developed and the developing countries on guaranteeing access to the geostationary orbit. The concerns of the Bogota Declaration permeated the debate. This declaration made in 1976 by 8 equatorial countries led by Columbia, asserted the sovereignty of these countries over the geostationary orbit. The affirmation was made on the basis that the orbit is not part of Outer Space since its existence depends on earth's gravity. Hence satellites positioned in that orbit would require prior authorization from equatorial countries. The Declaration is discussed in more detail in the following section of this thesis. Little support emerged, however, for claims over the geostationary orbit and the most equatorial countries achieved at the time was the addition of a vague phrase to article 33 (above quoted) which in fine would now read:

... taking into account the special needs of the developing countries and the geographical situation of particular countries, " instead of the previous 1973 text: "... according to their needs and technical facilities at their disposal.

The developing countries were concerned by the costs of new technology and of the coordination process. Costs may often be incurred as a result of the need to coordinate out of date technology and/or new networks with those in place. The 6/4 GHz band is favorable to developing countries because it is widely used, it is less costly, also, it is not affected by heavy rainfall. However, more powerful and expensive satellites than those operating in the 6/4 GHz range are required to transmit TV signals via low or medium powered satellites.

Brazil, India and Indonesia introduced their own satellites for domestic services. These satellites and Intelsat's interfered with each other and the issue was resolved, though not without problems. India also met with problems with Soviet domestic networks. These considerably limited India's ability to make full use of its orbit and frequency channels. As a latecomer, India was penalized.

In the WARC's Final Acts, it was universally agreed that states retain the right to regulate the technical logistical features of DBS. Countries also agreed that they should work together to avoid interference and encourage the development of compatible technologies. There was debate and no agreement was reached on the issue of how and whether states should regulate foreign content.
The World administrative conference on the use of the geostationary satellite orbit (1st session) WARC-ORB 1985: dealing with a limited *a priori* allotment plan for FSS

This WARC\(^{102}\) discussed the allocation of frequencies and orbits for geostationary services. The principle of an allotment plan limited to the expansion of bands for the FSS service and limited to the expansion of bands currently not in use was agreed. The plan's goal was restricted to ensuring national or domestic service in such a way that each country could satisfy the requirements for national service from at least one orbital position within a predetermined orbital arc with a total of 800 MHz of bandwidth in a defined service area and within predetermined bands. Improved procedures for other widely used parts of the spectrum were also agreed to.

The delegates once again intensively discussed article 33 of the Convention and the correct balance to maintain between efficiency and equity. Developing countries argued with regard to "guaranteed access", that the obtained *a priori* planning with fixed orbital positions for most FSS bands was not sufficient to guarantee access. In fact, "guaranteed access" required, in addition to appropriate orbital positions and frequency channels to protect it from interference, a satellite as well as the ability and finances to launch and position it in orbit. Developed countries argued that the international sharing of the international commons (orbit and frequencies) was successfully agreed to, that the other components were within the states' prerogatives and that eventually, easier access to the geostationary orbit would be made available through technological advances.

Obviously, developing countries tend to opt for political solutions rather than technological solutions or expectations as these are controlled by developed countries. One could ask whether the spirit of international cooperation which characterized the period following World War II had already faded somewhat.

WARC-ORB-1985 did not constitute international law but simply established a report on the above mentioned points for submission to WRC-ORB-1988.

On the other hand, the Final Acts of WARC-ORB-1985 included the planning for the Broadcasting Satellite Service for Region 2 decided at the regional conference in 1983.

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World administrative radio conference on the use of the geostationary satellite orbit and the planning of the space services utilizing it. WARC-ORB II-1988: establishing an allotment plan and new procedures for FSS in unplanned bands

This WARC\textsuperscript{103} was successful. It established a new international regime. With regard to FSS in certain bands, it created provisions for an allotment plan and associated procedures including technical standards, parameters and criteria applicable to the use of allotment frequency bands. With regard to FSS and space services in unplanned frequency bands, WARC-ORB 1988 established improved regulatory procedures, technical standards, parameters and criteria. With regard to feeder links in certain bands and regions to stations in a broadcasting-satellite service, a plan and procedures were set out. Some definitions relating to space services were reviewed.

World administrative radio conference for the mobile services WRC-MOB-1995: allotting spectrum for MSS and debating the status of recorded frequency assignments

This WARC\textsuperscript{104} was particularly concerned with the allocation of spectrum for mobile satellite services (MSS): such as little (under 1 GHz) Low Orbit satellite systems. The date of commencement of Big (2GHz) LEO systems was set for January 1, 2000. It was decided that Teledisic's non GEO system would share the spectrum with GEO systems. Known as "fibre in the sky", Teledisic obtained 400MHz spectrum in the 19GHz and 29GHz bands.

Global PCN systems such as Globalstar and Odyssey which have been licensed by the FCC, comply with the ITU procedures for frequency assignments established by WARC '92 and benefit from the ITU's first come first served priciple. Obviously, because of the personal mobility of PCN users, a gap exists in respect of the national sovereignty principle which is fundamental to the ITU's framework. According to resolutions 46 and 70 of the 1992 WARC, national administrations can pose licensing regimes for systems in their own countries. No procedures for obtaining a global license

\textsuperscript{103} Final Acts Adopted by the Second Session of the world Administrative Radio Conference on the Use of the Geostationary Orbit (ORBII) (Geneva, 1988)

exist. PCN services present bypass, roaming and spectrum allocation problems in sovereign states as they are used by mobile consumers worldwide.

Also, standards for the equipment are likely to be decided upon by satellite service operators and the enforcement of national or regional MSS licensing restrictions will be difficult considering that services may be offered in a country from satellite providers, gateways and operators outside the country. This form of trade in services is well within the GATS (Art 1.2) definition of trade in services which includes the cross-border, consumption abroad, commercial presence and presence of natural person supply modes. It must be recalled that countries representing perhaps 90% of the world's telecom traffic agreed in February 1997 to the recent GATS Agreement on Basic Telecom services.  

Though these systems are not likely to be used for broadcasting purposes and though satellite broadcasting services are not covered by GATS agreement on basic telecom, the way in which the issues will be solved may have an influence on the principles to be developed with regard to the supply of global satellite broadcasting services in a free trade context.

The Radio Regulations were simplified amid heated debate by the developing countries over revised articles 8 and 9. These articles concern the international status of frequency assignments recorded in the Master International Frequency Register as well as the procedure for coordinating or obtaining agreement from other administrations. Developing countries feared these particular articles would leave them open to "harmful interference".

. World radiocommunication conference 1997, WARC-1997: due to consider the planning of BSS and international broadcasting rights

The agenda foreseen for WARC 1997 includes the planning of Broadcast Satellite Systems, the scope of international broadcasting rights, associated plans in Europe, Africa and the Asia Pacific regions for broadcasting satellite services in frequency bands 11/12 GHz and for feeder-links of broadcasting satellites in frequency bands 11/12, 14 and 18 GHz, the requirements of space services such as inter-satellite links and space research services; the availability of new shortwave broadcasting bands, further requirements of mobile satellite systems and finally, a review of the revised sections 8

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105 GATS, Basic Telecom, Supra note 67 and New York Times (17 February, 1997 p 14)
106 ITU, Plenary Draft agenda for WARC’-97 (18 November 1995) No 95-37. Both these items were determined by the World Regional Conference (WRC) (15 September 1995) No 96-18
and 9 of the Radio Regulations pursuant to the objections proffered by developing
countries at the WRC-1995.

Concluding note on the ITU: glimpse into the future

From the above description of the ITU's role, one can conclude that the ITU is
essentially a coordinating agency which follows a common law approach in that it
develops with the collaboration of its member countries, mechanisms and rules for solving
technical problems as they occur. One can also note that communication satellites use the
radio spectrum and the geostationary orbit both of which require and elicit international
cooperation in order to prevent chaos in communications. The ITU's continued role
depends not only on itself but on developments in key member countries and on the
international context wherein a major part of the world telecom market has decided to
adopt a trade oriented approach which implies reciprocity, equal market access and
global services. Though the international trade (GATS) agreement on basic telecom does
not include broadcasting services, telecom constitutes a large part of the ITU's activity.
The fundamental changes the ITU must adopt following these major shifts in the telecom
sector will inevitably affect its work with respect to broadcasting services. The provision
of broadcasting services, interactive and business services via satellite technology is
bound to increase in relation to telephone services which are increasingly serviced via
very cost-efficient fibre optics technology.

The huge capital outlays prescribed presuppose the privatization and liberalization
of telecom. As the privatization requirement is phased in, the ITU's core members,
sovereign states, will no longer be the principal telecom operators and privileged
monopoly international satellite operators such as Intelsat will have to face competition.

Also, the ITU will be called upon much more often than it presently is to co-
ordinate frequencies for global services as the provision of exclusive national services, up
to now the traditional focus of the ITU's work, becomes cost prohibitive and
impracticable.

The ITU's Fifth Regulatory Colloquium\(^{107}\) (1995) analysed the (then) anticipated
GATS agreement on Basic Telecom and found that spectrum allocation processes at the
supra-national level are likely to become trade access issues, that its standards-making
procedures may need to be altered as standards may well be used to perpetuate or
develop trading blocs; and that the participation of a private sector in its forum should be

\(^{107}\) ITU, Fifth Regulatory Colloquium, *Chairman's Report on Regulatory Implications of Trade
(hereinafter, *ITU Report on Trade*)
increased. The inclusion of the private sector, possibly through trade associations, is especially important given the tremendous commercial stakes involved in the establishment of standards, the 7 year average delay taken by the ITU to develop a standard and increasing tendency by industry to take matters in its own hands. Private sector involvement is also important given that ITU Signatories, sovereign states, are no longer the service providers and that the number of providers is likely to increase substantially and more often than not be controlled by head offices in countries different from those where the services are provided to consumers.

Carrying out such coordinations whereby services are offered from one country to users in several countries, is considerably more technically complex and it may well be that coordination between regional services as opposed to coordination between national services will become the norm.

The equitable access to scarce resources for all countries principle currently applied, for example, through the planned BSS bands and corresponding orbital slots may not remain entirely appropriate in light of the current congestion of commercially valuable orbital slots. It may give way to an "international communication needs" principle which may, in turn, lead to the auctioning of the use of allotted, but unused, slots.

In the unplanned bands, the first come first served principle may be inappropriate for such highly valuable resources. Consider for example, the issues described above arising out of the unilateral licensing of global PCN American satellite operators.

The notification process may need to be speeded up and revised in order to free up current congestion occasioned by overfiling and paper satellites. Some sort of evidence of financial capability for actually using the resource may eventually have to be required or alternatively a shorter time limit allowed to run before the end of which the scarce resource must be used, failing which the orbital position becomes re-assignable.

The ITU most likely must restructure and elaborate new strategies such as those outlined above to meet the global issues regarding the management of the scarce resources of radio spectrum and orbit which arise under the new assumptions discussed above. There is a need to reconcile national, regional and global communications trade interests.

The ITU's important mandate with regard to developing countries may become a token one as the private sector as a result of the WTO/GATS basic telecom agreement, takes on a star role and market access takes root. These countries will lose control over their telecom systems, the revenue stream therefrom will be wiped out and increasingly
the frequencies used by their national services and compatible with their equipment may be re-allocated for the use of services they may not desire or be able to afford.

To state it bluntly, much depends on the input of European countries. These countries PTO's have naturally been the most influential ITU members. The EC WTO negotiating team, the European Space Agency and key national governments, may well elaborate guiding principles for the evolution of the satellite industry's regulatory environment. The reconciliation of global, regional and national communications trade interests stand as a major trade issue between the USA and the EC.

With the end of the Cold War, the increased implementation of commercial satellite applications originally developed in a military environment where sovereignty, subsidies, government control and secrecy were critical, the emphasis on global economics and world trade and the access to and possession of satellite technology by some developing and emerging countries, the ITU will no doubt not be weighted down by the exact same arguments throughout its debates. The traditional international approach to the design of regulatory frameworks and resolution of issues will undoubtedly change.

The distinction between international public and private law may become blurred as the private law approach is allowed to take on a larger place in relation to the slow-paced treaty-based approach of international law which to some seems incapable of dealing with issues rising from rapidly evolving technology which cannot be contained within the borders of sovereign states.

Two constants likely to continue to underly debates are the space race between Europe and the Unites States, and in some countries, cultural sensitivities to foreign broadcasting content. The European Space Agency (ESA) is responsible for the creation of Eutelsat the very successful satellite operator and for Ariane the world's premiere satellite launch service. American corporations hold the major part of the satellite manufacturing market and are the prime contractors (Boeing) for the Alpha space station.

Finally, it should be noted that because communication satellites are located in Outer Space, the ITU has had to develop a part of the body of space law which, many would say as a matter of theory should be in the domain of the Committee on the Peaceful Uses of Outer Space (COPUOS). It is to this body that we should now turn.
- THE ESTABLISHMENT OF THE COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE (COPUOS)

As seen in the previous section, the ITU's instruments are primarily concerned with the technical aspects of direct-to-home broadcasting and do not squarely address the issue of a state's right to regulate direct broadcasts originating from other countries.

Circling the Earth in as little as 90 minutes, satellites have a global orientation. Assignments of radio spectrum frequencies and orbital positions are essential to the efficient functioning of any radiocommunication technology, including DBS, and the ITU's radio regulations must be observed. Space experts have been mission-oriented and international cooperation has shaped space law. No nation has ever objected to the overflight of satellites. Fifty years ago, the Institute of International Law described as innocent a simple passage of foreign wavelengths over state territory. The main concern has been to keep the exploration of space peaceful. As this includes keeping the uses of space peaceful, and as satellite and direct-to-home satellite broadcasting implies a use of Outer Space, many states have looked to Outer Space Law to find the basis for a DBS regulatory framework.

The purposes of the United Nations (UN) under its Charter (1945 s. 1 and 13 (1) and (2)) include the maintenance of international peace and security, as well as encouraging the progressive development of international law and its codification. The UN first considered outer space issues in the context of nuclear test bans and disarmament. In 1958, however, on behalf of President Eisenhower, Senator L. Johnson emphasized, prior to the formation by the General Assembly of a UN ad hoc Committee on Outer Space, that all mankind is concerned by the opening of outer space which is as yet untouched, "no nation holds a concession there (...) it must remain this way."

The ad hoc Committee was to study among others, the activities and resources of the UN, its specialized agencies and other international bodies as they relate to the peaceful use of outer space, the nature of legal problems which could arise in the carrying out of programs to explore Outer Space and future organizational arrangements to facilitate international cooperation in space activities within the UN's framework.

This ad hoc Committee on Outer Space became permanent the following year. The International body for cooperation in the study of Outer Space for peaceful purposes, is known as the Committee on the Peaceful Uses of Outer Space (COPUOS). It reports to

108 UN GA Res 1348, UN GAOR, 13th Sess., Supp. 18, UN Doc A/4090 (1958)
UN agencies and international bodies. Sixty-one countries are now members of COPUOS, including Canada, China, France, India, Indonesia, Japan, Mexico, the Russian Federation, the U.K., Columbia and the USA. COPUOS meets once a year for a period of three weeks. COPUOS's approach, in contrast with the ITU's, is more in the civil law tradition of continental Europe, in that it formulates general principles. COPUOS adopted the consensus mode of functioning in 1961. COPUOS makes recommendations to the UN's General Assembly, which also usually proceeds by consensus. In spite of impediments characterizing such a mode of proceeding, COPUOS with the assistance of its subcommittees, the Legal Subcommittee and the Scientific and Technical Subcommittee which also meet once a year, has adopted five space law treaties and four sets of legal principles. The space law treaties are:

1) Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies, known as the Outer Space Treaty (1967);
2) Agreement on the Rescue of Astronauts and the Return of Objects Launched into Outer Space (1968);
3) Convention on International Liability for Damage Caused by Space Objects known as the Liability Convention (1972);
4) Convention on Registration of Objects Launched in Outer Space, known as the Registration Convention (1975); and the
5) Agreement Governing the Activities of States on the Moon and other Celestial Bodies, known as the Moon Agreement (1979).

The Legal Principles are:

1) The Principles Governing the Use of Artificial Earth Satellites for International Direct Television Broadcasting, known as the DBS principles (1982);
2) The Principles Relating to Remote Sensing of the Earth from Outer Space, known as the RS principles (1986);

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109 UN GA, UN Doc. A/AC 105/602 (27 January, 1995)
110 UN GA Res 1721, 16th Sess (December 1961)
111 UN Doc A/5109 (1962)
112 Space Treaty, Supra note 71
116 1363 U.N.T.S. 3, 18 ILM 1434 (1979)
3) Principles Relating to the Use of Nuclear Power Sources in Outer Space\textsuperscript{119}, known as the nuclear power principles (1992) and the
4) Declaration of Legal Principles Governing the Activities of States in the Exploration and the use of Outer Space\textsuperscript{120}, known as the Outer Space Declaration (1962).

Though many points in these multi-lateral space law treaties, now all signed, except for the Moon Agreement, (which has been denounced by corporate interests) by close to 100 countries each, and in the legal Principles, such as registration, liability and nuclear power source ban, as well as recent discussions concerning space debris, affect DBS systems hardware, only the Outer Space Declaration (1962), the Outer Space Treaty (1967) and the DBS Principles (1982) have direct bearing on the issue of DBS cross-border broadcasting.

The Outer Space Declaration (1962) established a standard for international responsibility in space related activities. Also, it reiterates the 1947 General Assembly's resolution condemning propaganda disruptful to peace. Though it has no legal force, the Declaration was recalled in the preamble of the Outer Space Treaty (1967).

\textbf{. The Outer Space Treaty (1967)}

The Outer Space Treaty (1967) restates the principle of state responsibility for damage to countries and juridical persons by objects launched in space (including DBS satellites), prohibits nuclear weapons and as mentioned, recalls in its preamble a condemnation of propaganda designed to pose a threat to peace or provoke aggression. This preamble was included at the insistence of Egypt which had the foresight to think of the potential difficulties of some DBS applications.

The parameters of the Outer Space Treaty are broad, covering all space exploration and utilization. Except for the definition of launching authority which was added later on, no definitions, not even a definition of Outer Space, are included in the Treaty and no definition of Outer Space exists to this day.\textsuperscript{121}
The Treaty establishes the common heritage of mankind (CMH) principle which has become important in international law and extends now to the Law of the Sea. Article 1 of the Treaty states:

The exploration and use of outer space, including the Moon and other Celestial Bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development and shall be the province of all mankind.

The article goes on to state that Outer Space is free for exploration and use by all States on a basis of equality and in accordance with international law.

Article 2 of the Treaty states that:

Outer Space (...) is not subject to national appropriation by claim of sovereignty, by means of use or occupation or by any other means.

This "province of mankind" approach "inspired by the great prospects opening up before mankind as a result of man's entry into outer space," constitutes a sort of internationalization of a global commons which leaves behind notions of sovereignty. The CHM principle is a central tenet of international space law.

For a number of years, some developing countries have not been satisfied with the way the Treaty translates in reality and are pressing COPUOS for a codification of rights and responsibilities in order to ensure the application of Article 1 of the Treaty where it stipulates that the use of Outer Space is to be carried out for the benefit of all countries.

Satellite broadcasting and remote sensing have always been, since the seventies, very sensitive issues due to a sense of vulnerability to economic and cultural exploitation. COPUOS considered a convention to regulate DBS broadcasts and to settle the question of the legality of DBS spillover. There was some consensus that satellite broadcasting ought to be regulated, but no clear-cut principle emerged to justify regulation. Divergent views on whether or not prior consent is a barrier to the free flow of information principle hindered any progress in regulatory drafting on satellite broadcasting within COPUOS.

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122 UN, *Convention on the Law of the Sea*, 21 I L M. 1261. Though negotiations of the Convention were initially supported by the USA, the country, under President Reagan, withdrew and was not party to the Convention in 1982.
The DBS principles (1982)

Different regulatory proposals were submitted to the COPUOS working group on DBS:

1) The French proposal postulated that although each country has a right to broadcast via DBS, a broadcaster may not broadcast a program into another country, if its content disregards the receiving nation's sovereignty. The proposal outlined the type of programs it would consider illegal i.e. programs which interfere with the internal affairs of a sovereign state; propaganda injurious to international or internal peace; programs which attack the dignity or rights of individuals; material offensive to the moral, religious, philosophical or political sensibilities of the country's audience; material harmful to the development of children; material disrespectful of cultures within the area of transmission or which tend to destroy a civilization, culture, religion or tradition. The proposal, moreover, called for advertising to be truthful and be of artistic, documentary or educational interest. No mode of enforcement being set out, a state suffering illegal broadcasts would have to litigate or seek a diplomatic remedy.

2) The Soviet Union's proposal\(^{123}\) codified most of the principles in the French proposal. In addition, it identified sanctions for illegal DBS spillover, including using the means at its disposal to counteract illegal television broadcasting of which it is the object, not only in its own territory but also in outer space and other areas beyond the limits of the national jurisdiction of any State." The Soviet proposal, in contrast to the French proposal, does not envisage litigation; it squarely asserts the right to forcefully disable DBS satellites, as well as their ground organization where an affected country has not consented to spillover or disapproves the DBS-carried programming's content. The Soviet proposal left open the possibility that this principle would apply even if the affected country could not establish that anyone in the territory had the equipment to actually receive the program. The Soviets viewed the disabling of satellites as a self-defence right, justifiable by virtue of the absolute sovereignty they claim over their own territory. Absolute sovereignty implies that one nation's sovereignty can override another nation's sovereignty over the latter's territory.

Because the Soviet Union covered a large area and because an individual DBS satellite can potentially beam over 40% of the Earth's surface, the Soviet proposal meant that it could effectively veto much of the world's DBS programming. The proposal also

\(^{123}\) 27 UN GAOR, UN Doc A/771 (1972) at s IX (1-2)
posed a problem with regard to small Western European countries who even with a concentrated high powered beam would see their DBS programming subject to the veto of neighboring countries.

Moreover, the Soviet Union and its successor, the CIS does not recognize "free flow of information" as a principle of international law. Mr. Piradov explained the Soviet position succinctly 124, arguing that DTH is an outer space activity. The principles of the 1967 Outer Space Treaty therefore govern DTH. Article IX of that Treaty consecrates the principle of state sovereignty and provides for consultations.

Prior consent is therefore a key principle in the exercise of DTH satellite broadcasting activity. Moreover, article III of the Outer Space Treaty provides that States must carry out activities in space in the interest of maintaining international peace and security and to promote cooperation and understanding. From this, Mr. Piradov concluded that not all broadcasting using Outer Space is permissible.

The Soviet Union's and France's proposals both assert that transborder transmissions via DBS are improper without the consent of countries in the spillover range. They enjoyed the support of the Eastern European countries and of the developing countries. The proposals are based, in part on environmental law i.e. although a state is sovereign over its own territory, it must not allow activities within its territory to injure other countries or individuals in other states. 125 In effect, France sees "foreign content" somewhat like pollution! It is of course not quite the same, and part of the difficulty lies in finding an international standard of what constitutes prohibitory content. In fact, it is not clear whether or not the Outer Space Treaty any more than ITU 126 instruments can be used to regulate the content of DBS. What most states want to regulate may in fact not constitute propaganda such as that referred to in the preamble of the Outer Space Treaty and which threatens world peace or provokes violence. What states wish to regulate will, in reality, for the most part consist of factual information, more or less objectively presented. If related to a controversial subject it may be prohibited in the receiving country, or may damage the government in some way, but the programming does not squarely fall under the Treaty's scope. This brings us back to the

124 N. Jasenuliyana and R.S.K. Lee, eds., Manual on Space Law, vol IV (New York: Oceana, 1988) at 262 and 268 This manual provides useful historical references with regard to the development of space communications law
125 Lake Lanos Arbitration 24 I.L.R. 101 (1957)
126 T.I.A.S. 6267 (1965), the ITU reserved the rights of its members to stop the transmissions of telegraphs or cut communications of contents dangerous to the state or to the public order.
question of the need and difficulty of establishing an international standard. Any understanding of what constitutes "propaganda" may well vary from country to country.

3) The American proposal put forth in 1974 recognizes that all States have a right to transmit international broadcasts via DBS. Only the technical aspects of DBS need to be regulated. Content should not be regulated. The U.S. seeks to maintain a balance between the principle of state sovereignty and the free flow of information principle. It contends that a human right exists at international law to impart and receive information across national borders. This is why no prior consent is necessary from countries receiving and using broadcast spillover, nor are international controls on program content.

The American argument rests on two premises: first, that transmissions alone do not interfere with sovereign rights unless a compatible technology exists to receive them. Otherwise, the signals go undetected. Second, the U.S.A. maintains that there is increasing support for the right at international law\(^{127}\) to convey and receive information. The U.S.A. advances the view that many countries have included this right in their constitutions. The American view is that the Outer Space Treaty does not override all existing law. It has to be reconciled, or weighed against, other rights such as human rights.

In fact, many countries have not recognized (except in human rights issues) the right at international law to convey and receive information. Many limit the kind of information which can be disseminated within their territory and quite often apply stricter standards to foreign material.

The right to receive and impart information is well established, but not universal or fundamental; it is therefore possible to limit the right by treaty and the right must be balanced against other international rights and obligations.

4) The Canada/Sweden proposal put forth an intermediate standard which called for prior consent via the negotiation of bilateral agreements and cooperation before allowing reciprocal cross-border broadcasting.

Even though it appeared that the Soviet proposal would become the rule for much of the world, and a mix of the France and Canada/Sweden proposals might become the standard for the regulation of DBS spillover in the remaining nations, this has not been the

case. Nor has the American position prevailed. No right to regulate foreign broadcast services has yet emerged.

In the absence of a treaty agreement countries are willing to honour, transmissions go unregulated. When Japan's NHK's DBS broadcasts were picked up in South Korea, South Korea protested, but since the two countries were not bound by bilateral treaty, South Korea was unable to get NHK or the Japanese government to curb the broadcasts.\(^{128}\)

Many countries mutually agree to regulate several aspects of cross-border broadcasting but in reality it is impracticable to regulate DBS. Moreover, the trend towards the privatization of broadcasting enterprises makes it even more difficult to scrutinize broadcasting and for state authorities to be held responsible for any defaults on international agreements.

In 1983, tired of the sterile discussions, delegations from Brazil and the former Soviet Union took a variation of the Canada/Sweden proposal to the UN's General Assembly where, contrary to the usual pattern of consensus, it was adopted by a majority vote. Japan, Canada, the U.S., France and most of the members of the Council of Europe where high or medium powered DBS services were in operation did not vote in favour of the General Assembly's resolution. The Legal Principles on DBS provide that:

- international DBS services should be carried out in a manner compatible with the sovereign rights of states and the right of everyone to seek and impart information. In Egypt's view, the information should be useful to all concerned. (article 1);
- states bear international responsibility for DBS operations;
- access to satellite broadcasting technology should be available to all states (article 4);
- activities are to be carried out in accordance with international law (article 5);
- satellite broadcasting is based on international co-operation, therefore attention should be given to developing countries who use the technology for national development (article 6);
- a state planning an international direct TV broadcasting by satellite service should notify receiving states and should only establish the service based on agreements with any states who so request (articles 13 & 14);
- any dispute should be settled peacefully.

\(^{128}\) *Journal de Genève*, (24 January 1984)
The Bogota Declaration (1976)

Developing nations have also sought, since 1977 to have the physical nature and technical attributes of the geostationary orbit clarified within the COPUOS forum and space law\(^{129}\) in order to ensure access in practice to the geostationary orbit.

Article 1 of the Outer Space Treaty poses the principle of equal access i.e. outer space is free for exploration and use by all on an equal basis. However, the Constitution and the Convention (1992) of the International Telecommunication Union states at article 45 that: "all stations whatever their purpose must be established and operated in such a manner as not to cause harmful interference to the radio services or communications of other members or of recognized operating agencies, or of other duly authorized agencies which carry on a radio service and which operate in accordance with the provisions of the Radio Regulations." In other words, a country which wants to put a DBS satellite into orbit must make sure that it does not interfere with a previously registered system.

The ITU system is of course based on the first come first served principle. In practice, because developed countries are the first to put satellites up in orbit, developing countries' access appears restricted. Indeed, as we saw in the ITU section (above), this has been a problem, for example, for India and Indonesia which found that well established nations occupying the geostationary orbit were not flexible in making adjustments.

As a strategy to avoid being precluded from using the geostationary orbit, equatorial countries in 1976 made a declaration proclaiming sovereignty over portions of the orbit. The declaration is known as the Bogota Declaration. It provides, in article 4, that there is no definition of outer space that is valid and satisfactory for the international community such as might be cited to support that the geostationary orbit is part of Outer Space. The sections of the orbit over sovereign states are therefore within their respective jurisdictions, whereas the sections of the orbit over the high seas are beyond national jurisdictions and form part of the Common Heritage of Mankind.\(^{130}\)

We have seen how developing countries have attempted to secure some guarantee to the geostationary satellite orbit and how they have in fact succeeded in obtaining an equitable access principle as set out in the ITU Convention (1982)\(^{131}\):

\(^{129}\) UN Doc A/AC 105/203 (1977) and Doc A/AC 105/404 (1988)
\(^{130}\) "The International Regime for Satellite Communications, the meaning for developing countries"; (1994) Asian Yearbook of International Law, 49
\(^{131}\) replaced by the 1992 Convention, Supra note 83
radio frequencies and the geostationary satellite orbit are limited natural resources and (...) must be used efficiently and economically (...) so that countries (...) may have equitable access to both.

We also noted in the ITU section (above) that an allotment plan, which entered into force in 1990, has been agreed upon. It is limited to expansion bands for FSS and is conceived to permit each country to satisfy national service requirements from at least one orbital position and with a prescribed amount of bandwidth. Many extensive bands of frequencies and services have not yet been subject to planning and access to orbit and frequencies remains on a first come first served basis. Regulations concerning unplanned services may give rise to costly operational restrictions.

Notwithstanding the limited FSS allotment plan, developing countries continue to contend that because of the geostationary satellite orbit's particular features and uses, access to the radio spectrum and orbit can be costly for late-comers. They point out that because the GEO satellites revolve over the equator with the same rotational period as the Earth no re-orientation of ground antenna is needed to track the satellite: also, to transmit or relay information, DBS satellites rely on the radio frequency spectrum which means that satellites interfere with each other if they use the same operating frequency thus implying that the distance between satellites using the same frequency must be limited and finally, the geostationary satellite orbit is quite clearly limited and in certain areas very congested and may become saturated.

Over the past several years, COPUOS has been trying to develop legal principles in the form of a working paper sponsored by Colombia to develop, without prejudice to the ITU's technical role, a *sui generis* regulatory regime to ensure equitable access to this limited resource for developing countries who do not currently use the GSO. Developing countries want a reserved right. Developed countries maintain that the ITU has sole competence, and that any type of reservation or *a priori* claim would constitute an appropriation of Outer Space contrary to the Outer Space Treaty.

. Recent work/discussions in the COPUOS forum and agenda for 1997

In 1995, COPUOS reported to the General Assembly on four principal areas of discussion:

1) the delimitation of Outer Space - some countries feel it is necessary to establish a boundary between air space and outer space, some say it isn't necessary;

2) the use of the geostationary satellite orbit (discussed above in this paper) based on Columbia's working paper - some states object to even discussing the item as they
maintain that it is not within the Committee's mandate and that the ITU instruments and the Outer Space Treaty govern the use of the geostationary satellite orbit;

3) the review of the "benefit of mankind" principle contained in article 1 of the Treaty in order to codify it and take into account the technological gap between developing and developed nations as well as the question of space debris. France and Germany have established a working paper describing, first, the elements of international cooperation in the peaceful uses of outer space, second, the modalities of such cooperation and finally the possible areas of cooperation. Their paper proposes that states be free to determine the aspects of cooperation whether bilateral or multilateral, commercial or non commercial and that states choose the most efficient and appropriate modes of cooperation to allocate resources efficiently. Of course, developed countries are concerned to obtain adequate compensation for technology transfers. In the end, the formulation of standard contracts may emerge as a solution.

4) a questionnaire\textsuperscript{132} to seek the preliminary view of states on possible legal issues with regard to aerospace objects was finalized.

In 1996, COPUOS's legal subcommittee continued the consideration\textsuperscript{133} of the definition and delimitation of Outer Space as well as the characteristics and use of the geostationary satellite orbit. It discussed the Common Heritage of Mankind Principle with regard to preferential rights of access to position frequencies, as well as the disadvantages of reservations for "paper satellites".

In COPUOS's 1996 report to the General Assembly, it explained that replies to the questionnaire seeking views on legal issues with regard to aerospace objects is being collated. Not all states are happy with the procedure. The report also notes that further discussion is needed on the question of the possibility of separating the definition and delimitation of Outer Space from the characteristics and utilization of the geostationary satellite orbit.

The agenda for 1997 calls for the discussion of the status of Outer Space Treaties, the commercial aspects of space activities (property, insurance liability, international law, space debris) as well as a comparison of Space Law to Environmental Law. Finally, COPUOS discussed a possible agenda for a UNISPACE\textsuperscript{134} conference to which it had agreed in 1995 could be held before the end of the century.

\textsuperscript{132} UN Doc A/AC105 c.2 CRP 3 Rev 3 (1995)
\textsuperscript{133} UN Doc A/AC 105/6 39 (11 April 1996)
\textsuperscript{134} UNISPACE conferences have been the forum for reviewing progress in space applications and activities. The UN Program on Space Applications was created in 1970. It was concerned for example with telecommunications, disaster, warnings and many other applications.
In short, the telecommunications aspect of DBS depends on the ITU's internationally agreed instruments whereas the uses DBS systems make of Outer Space are governed by Space Law. The ITU's instruments provide for the division of the ether by allocation of wavelengths and frequencies and the provision prohibiting "harmful interference" is all important. On the other hand, space law provides for the liability for objects placed in space and the governing "Outer Space is the Common Heritage of Mankind" principle, is all important.

Neither legal regime is directly concerned with issues related to content. These issues tend in general to be resolved within international copyright regimes.

REGIONAL TV IN THE EUROPEAN COMMUNITY

DTH satellite TV, because of the immense size of a satellite "footprint" is bound to have a regional, as opposed to a local vocation. Its reach also gives it a commercial advantage in that required critical penetration rates are lower than for terrestrial systems which have limited license areas. The regional vocation is likely to persist notwithstanding the introduction of the new Ka-Ku band (500 Km diameter) "spot beam" satellites which are intended to serve interactive TV and video needs ("data broadcasting") for the most part. A regional vocation implies cooperation between countries. The European experience is especially interesting in this regard as it is comprised of several relatively small sized, though well populated, countries.

The construction of the European Community (EC) as well as the significant market size the EC represents for the audiovisual industry, have favoured the development of transborder broadcasting in Europe. DTH satellite TV is currently very popular in Germany, and in the U.K. Estimates suggest that close to half of European homes will be equipped with DTH TV receiving equipment by the year 2015. According to SES, one of the most successful DBS services in the world, it reaches roughly 30 million DTH subscribers in Europe, this compared to American DirecTV's under 3 million.

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135 WDTR. Supra note 73. Except for the Benelux countries, Sweden and Switzerland, most European countries have low cable TV penetration, 43% of cable TV subscribers worldwide are in North America and 36% in Asia.
The regulation of broadcasting in the context of the European Union (EU) raises issues with regard to content (including quotas) and copyright, technical and transmission standards, as well as with regard to competition, as businesses form alliances.

Now, let us briefly telescope back in time to understand the background leading to the TV without Frontiers Directive of 1989 which deals with the free movement of TV programs, origin of content, production and controversial airtime quotas, advertising, the protection of minors and the right of reply with which all European broadcasters, regardless of the mode of transmission, must comply; and to the Satellite and Cable Directive of 1993 which deals with copyright issues. These two instruments are key to the achievement of a single audiovisual area, an EU goal.

. The TV Without Frontiers Directive

In Europe, the state's involvement in communications goes back to the 16th century with the establishment of state postal monopolies. The regulation of the press at times was liberalized and at other times tightly maintained. TV broadcasting, believed to play an essential role in aiding to preserve democracy was (and still is) government regulated in order to uphold standards, assign frequencies and serve economic and political interests.

Concerns over transborder broadcasting began long before the advent of DTH/TV and even before that of the mass use of hertzian transmitted images. In the thirties, the League of Nations adopted a Convention the aim of which was to prevent radio broadcasting in one country from upsetting national security in another. World War II followed and the Convention was left to aside.

The Treaty of Rome signatory countries (France, West Germany, Italy, Belgium, The Netherlands and Luxembourg) concerned at the outset with rebuilding and mending

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137 The trend in the nineties towards privatization and the end of government monopolies, including in telecom, is definitely confirmed in national laws and in international treaties such as GATS. British Telecom, a precursor, ended its monopoly over PTT in 1984
139 *International Convention Concerning the Use of Broadcasting in the Cause of Peace*, 186 LNTS 301, 1936
war wounds, gradually opened the Treaty to include more countries (Great Britain, Ireland, Denmark in 1973, Spain and Portugal in 1986, Greece in 1981, Austria, Sweden and Finland in 1995; 10 applications are pending). The Treaty involved some cooperation between countries with regard to broadcasting. Indeed, the Treaty's free movement of goods principle was applied to TV advertising. In the early eighties, the 1992 target date for the coming together of the EC countries into a common single market was officially set. The market was to include broadcasting.

A group, the Committee on Mass Media, commissioned in 1976 by the Committee of Ministers of the Council of Europe, (over 20 countries) submitted a preliminary report in 1980. On the State's role with regard to media, the Committee found that the State had a role in ensuring the plurality of information sources, thereby ensuring the pluralism of ideas and of opinion; on the international aspect of the free movement of information, \textit{laissez faire} was recommended; finally, regarding the distribution of radio and TV via cable, the State's right to intervene was affirmed. Overall, this approach was rather open-minded and libertarian.

On the other hand, France, in contrast, maintained the view expressed since 1972 in the COPUS forum whereby it showed concern over the cultural threat posed by DTH technology. As explained earlier in this thesis, France proposed a set of principles for regulating DBS spillover whereby prior consent would be required, among others, for material disrespectful of cultures or tending to destroy civilizations, cultures, religions or traditions. The proposal did not meet with success in the COPUS forum and though DBS Principles were adopted by the UN General Assembly in 1982, they were not consented to by major DTH TV using countries. Undaunted, François Mitterand, then President of France, sought the support of other EC countries in thwarting "the risk of DBS transmissions crushing the cultural identities of receiving countries with a flood of

include the elimination of quantitative restrictions on imports and the abolition of obstacles to freedom of movement for persons, services and capital thus ensuring that competition is not distorted; and the harmonisation of laws. Article 6 provides that any discrimination on grounds of nationality is prohibited. Sections 30 to 36 provide for the promotion of the free movement of goods and services; articles 85 and 86 respectively prohibit the use of restrictive trade practices and prevent abuse of dominant positions; also worthy of note in the context of this paper, is article 222 which provides that nothing shall prejudice the rules of Member States which govern their system of property ownership. See also \textit{Treaty On European Union}, 7 February 1992 O J C. 224/1 I C M L R. 719

\textbf{141} \textit{Guiseppe Saachi} case, C- 155/73 (1974) E.C.R. 409, (1974) 2CMLR 177 This case is also interesting in that it states that in the absence of express dispositions to the contrary, TV programs, as intangibles, come under the rules governing the provisions of services. On the other hand, the Court stated that the exchange of all support material for sound and films, machines and other products used to distribute messages are subject to the rules governing the free movement of goods.
low quality non-European programs." The EC prepared a Green Paper in 1984 and a White Paper in 1985. These were very protectionist in their approach.

In Europe at the time, due to the natural barrier of language, only 10% of programs produced in one country were viewed in another European country. Protectionism was directed therefore not so much against other European countries, but rather against American programming. The proliferation of private TV networks, coincided with extensive purchases of American programming, that is, American blockbuster movies, made for TV movies and popular TV series. This trend was certainly apparent in the case of Sylvio Berlusconi's successful Cinque network. As private networks competed, the winning formula turned out to be American programming combined with lots of TV commercials. American programming was cheap to buy (one tenth of the price approximatively) in relation to nationally produced programming whose prices reflected the fact that costs had to be recouped principally in the programs' originating markets. American programs, that is, movies and series, popular with consumers, drew advertisers, an important source of network financing. This trend was said to gravely impact the European audiovisual industry; hence the protectionist approach towards non-European programs, proposed by the Commission in 1986 and adopted in the TV Without Frontiers Directive of 1989.

The Convention of Transborder TV of 15 March 1989, an instrument of the Council of Europe, was negotiated at the same time as the TV Without Frontiers Directive. It was, however, adopted 6 months earlier. Though the Convention's focus is

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142 "European Principles on the Use of Satellites for TV and Sound Broadcasting" (1985) 10 Annals of Air & Space Law 367
146 Six months prior to the Convention, a grass roots meeting of Europe's intellectual, artistic and creative elite met in Delphes in Greece and produced a Charter for the Defense of and the Future of Audiovisual Creativity (reprinted in "La Culture européenne et la grand marché" (1991) Jan-Feb. Dossiers de l'audiovisuel p.53). The Charter provides at s.1 that the television program is an essential expression of living culture and not a simple product, nor must it be exploited like a simple service. S. 2 provides that television, as living culture, reflects the social and cultural values and characteristics of a nation. The Charter expresses both the public's freedom of choice and the right of artists to express themselves. These rights are often sacrificed to economic or political considerations. The Charter advanced that the Community has a duty to promote and secure pluralism. Though the Charter has no legal value, it certainly acted as a strong impetus for drafting the Directive
more on the free movement of ideas with regard to the human rights of freedom of expression and information, the Directive's focus more economic, these instruments are substantially to the same effect. In any event, for EU countries, in case of conflict, the text of the Directive prevails.

During the negotiation of the Directive between EU members, the USA brought much pressure to bear in order to further the interests of its domestic audiovisual industry alleging that the cultural motive was simply a disguise for economic protectionism. Indeed, the USA did not accept the notion of "European" culture, arguing that the continent was multi-cultural and that cultures. at the most, were related to particular nations on an individual basis. On the other hand, the U.K. and Germany, in the latter's case, in large part for constitutional reasons (the Länder, as noted further on), were opposed to the enactment of overly constraining measures opening the possibility for Community interference in domestic affairs. The European broadcasting industry (especially privately-owned groups) was not overjoyed as it foresaw that the airtime quota for "European" works prescribed by the Directive would constrain its freedom to schedule and broadcast relatively low-cost popular American programming.

The Preamble of the TV without Frontiers Directive clearly highlights the priority of ensuring pluralism and diversity and the need to promote freedom of movement and trade in TV programs within the EC.

The scope of the Directive covers all forms of TV including programs transmitted by satellite for DTH TV reception. In fact, all programs destined to the general public, including coded programs for which decoders are sold on the market, are included. The Directive's definition of broadcasting includes coded or uncoded satellite transmissions of radio or TV broadcasts destined to the general public.148

The purpose of the Directive is to determine minimum standards for TV broadcasting in the European Union whereby "it is necessary and sufficient that all broadcasters comply with the law of the member state from which they emanate." Licensing and taxation remain the responsibility of each State. A broadcaster licensed by one Member State can freely transmit programs to any other member State.

147 The most the USA might possibly accept was the notion of separate cultures within Europe, i.e. Italian, British and so forth.
148 "TV broadcasting is the initial transmission ( . . ) of television programmes intended for reception by the public." (section 1A) S. 2.1 completes the definition by including satellite broadcasts to the general public whether coded or uncoded. Video on demand, assimilated to telecom is excluded. Programs transmitted over private networks not intended for public use are also excluded.
Member States have responsibility for ensuring that broadcasting by organizations situated in their respective jurisdictions conform with their respective national laws, including the Directive, due to be introduced in domestic law by October 1991. Broadcasters have no direct responsibility. Member States must supervise broadcasters to make sure programming rules are followed. Where broadcasting originates from a non-Member State, the responsible Member State is the one which granted the use of the frequency, satellite capacity or uplink to a Member State's satellite.

Directives bind Member States as to the goals to attain but leave national regulators free and competent to determine the ways and means of achieving these goals. According to the Treaty of Rome, the Commission must control the respect by Member States of their duties. In case of violation, recourse to the Court of Justice of the European Community is provided for. Member States must prepare statistical reports every two years for the Commission which, in turn, submits the reports to the European Parliament.

Though much ink has flowed on both sides of the Atlantic concerning the program airtime quotas for "European works" section of the Directive, its language is relatively weak and observance of the quotas may or may not constitute a legal obligation. This very weakness, however, is what may have protected that part of the Directive from being somehow struck down in the international trade regulatory forum.

The Directive poses the principle of the free movement of TV programs (including those transmitted DTH via satellite) within the EC. Section 2.2 states the principle of freedom of reception and provides that a Member State cannot oppose the retransmission on its territory of TV signals from other Member States. Provisory suspensions of programs are permitted only where the protection of minors is a concern.

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149 TV Without Frontiers Directive, Supra note 145 s.2
150 In the UK, for example, the European Communities Act (1972) s.2 provides that Community Law takes precedent over inconsistent domestic law. Section 2 allows the amendment of existing law by statutory instrument (bypassing Parliament's supervision). As to whether the directive is correctly implemented, the relevant Community text has precedence.
151 TV Without Frontiers Directive, Supra note 145, s. 22
152 A responsible state would be hard to identify where programs are beamed across Europe from satellite space rented to a non member state and where the uplink is not located in a member state.
153 EC Treaty of Rome, Supra note 140; décret n° 92-279 de mars 1992, incorporating the Directive in the French law
154 The air time quotas for "European works" section of the Directive will be examined in more detail a little further on.
155 R v Secretary of State for National Heritage ex parte Continental BL (1993) 2 C M L R. 333 DC; (1993) C M L R. 387 CA known as the "Red Hot TV" case. CT, a Dutch TV broadcaster, transmitted porn between 12 and 4 am to subscribers who rented or purchased a decoder. Programming could be
The Directive also covers the important subject of advertising and sponsoring, an indispensable source of financing for broadcasters. The Directive attempts to harmonize the very diverse advertising rules applicable in Member States. National advertising rules are considered a limiting factor in the free movement of programs. The harmonization of rules aims to ensure a balanced circulation flow of programs by trying to reduce the risks of competitive distortions potentially caused by a few national laws being overly favourable to advertisers. The harmonization covers quotas for the allocation of air time to publicity, the mode of insertion of advertising into, after or between programs, the presentation of advertisements in such a way as they be clearly distinguished from programs and identified as publicity and, finally, restrictions concerning content with regard to tobacco, alcohol, prescription drugs products and with regard to viewers, that is, minors.

States may derogate from the harmonized rules provided for in the Directive and thereby block publicity/TV ads emanating from other Member States by adopting, for their respective jurisdiction, stricter\(^{156}\) rules on publicity quotas (rules on the amount of time advertising can occupy in relation to the length of program viewing time). The rules on sponsoring (which concern name brand and image as opposed to product) are straightforward and provide essentially for the proper identification of sponsors and for a prohibition on influencing content. News journals cannot be sponsored.\(^{157}\)

Finally, in addition to the production quota whereby 10% of broadcasters programming budget be used to acquire European produced programming, the Directive fixes the much debated airtime quotas at 51% for "European works" calculated on the total airtime per year per network. States can adopt stricter and more detailed rules as necessary to meet cultural objectives.\(^{158}\) Several\(^{159}\) European countries already had air

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156 TV Without Frontiers Directive, Supra note 145 section 19. See also s. 20 whereby Member States can derogate from the Directive by adopting laxer publicity and insertion quotas for local TV networks whose signals cannot be captured in other Member States. This has little impact on transborder broadcasting.

157 TV Without Frontiers Directive, Ibid. at section 17 (3)

158 Ibid section 8, Stricter rules however, do not apply to retransmitted programs from other EU countries.

159 The UK, France, Denmark, Holland, Belgium and Italy for example, In France, the quota for original French works under the Tosca law of 1986 was no less than 50% of annual air time. In the UK, the BBC respected a self imposed quota of no more than 15% (25% after midnight) of non EC programs.
time quota systems in place for nationally or European produced works. Others, such as Portugal, Luxembourg, Ireland, Greece and Spain had little and in some cases no constraints at all.

Sports, events, games, advertising, teletext and generally works in which there is no significant editorial or production input are excluded from qualifying for the European label. The European label, in a nutshell, requires the work to be of European creation, production, control, labor and funding. To be more precise, works created by authors and employees residing in one or more states of the Convention and made by at least one producer residing in those states or supervised by a producer in those states or if co-produced, which have neither been subjected to the control of a non Convention member producer nor have a European expenses portion inferior to the total production cost, constitute European works. In the event that the work is created by authors and employees residing in one or more states of the Convention but where the other production or financial prerequisites are not met, the work is considered European in proportion to the financial contributions made by European producers over the total production cost of the work.

The USA's reaction may, at first glance, be surprising if one considers that the section on the air time quota for "European works" is, in places, on important points clothed in apparently timid language:

Quotas on independent networks (ITV and Channel 4) imposed by Parliament provided that 86% of all programming must be of EC origin.

160 In Germany, the only restriction is that a substantial portion of airtime must be reserved for independently produced works. In Germany, in part because the länders have traditionally taken the responsibility for upholding their respective local cultures, and because the Constitution guarantees freedom of communication, no air time quotas were in place for nationally or EC produced works.

161 TV Without Frontiers Directive, Supra note 145 at section 5, section 4 (1) provides that a majority proportion of retransmission time be reserved for European works "excluding the time appointed to news, sports events, games, advertising and teletext." This exclusion of newscasts from the airtime quota requirement is no doubt a contributing factor to CNN's success in Europe.

162 TV Without Frontiers Directive, Ibid at section 6, since 1995, teleshopping is included in the quota calculation.

163 The US House of Representatives immediately denounced the Directive as a trade restriction in violation of GATT and urged the USTR to take action, including, as necessary, the use of s. 301 of the US Omnibus Trade and Competitiveness Act (authorizing unilateral retaliation for unfair practices for sectors not included under GATT) to protect US access to the EC's broadcasting market. Normally, however, proof of injury needs to be advanced. The section was used in the eighties and is not very effective. Europe could conceivably decide to adopt its own s 301. Public Law 100-418 (1988) 1301, 102 Stat. 1164 codified as amended 19 U.S.C. 2411-19 (1994) s. 301
Though 3 years were given to all EC countries (except two) to include the Directive into respective national legislation, no specific deadline for meeting the recommended proportion of European works on the total broadcasting airtime is fixed in the Directive. Only a standstill provision is provided for which, practically speaking, means that little or no "European works" air time quotas are imposed in some countries;
- Member States individually have wide discretion under the Directive in deciding the appropriate ways in which to attain the airtime quota objectives for European works. Also, the objectives are more flexible than rigorous as the Directive stipulates that they are to be met where practicable.\textsuperscript{164}

The EC Commission, in a statement requested by the U.K. and Germany, opined\textsuperscript{165} that articles 4 and 5 of the Directive are of political value and have limited legal scope. This opinion was further elaborated on in 1990 by the President of the Commission who stated that the pursuit of the objectives was subject to technical and political considerations. However, the President of the Commission stated that in spite of the ambiguity of the obligation (regarding airtime quotas for European works) occasioned by the very wide discretion allowed to Member States and the flexibility with regard to the obligation of meeting objectives, the Directive nonetheless represents a legal obligation. In the case of a dispute, the Court's role will admittedly be very difficult considering the language used in sections 4 and 5 of the Directive.

On second glance, it is important to note that, in practice, the definition of European work is strictly applied by Member States for the purposes of granting production funds to European producers. Co-production agreements with non EC member countries are provided for and in such cases, access to EC funds is proportional to the amount represented by European expenses in relation to the total cost; the foreign participation figures in the total production cost. In order for a co-production to be approved for EC and Canadian funding, for example, one of the two producers in a two party agreement must put up a minimum of 20\% of total production costs. There is no EC/USA co-production treaty, the US government is not involved in arranging co-production treaties with other countries. Some American companies have entered joint ventures or acquired participation in EC audiovisual production companies or projects. For example, the motion picture, The Fifth Element, by Luc Besson which opened at Cannes 1997, is a joint venture between Sony and Gaumont, France's largest movie company. NBC acquired SuperChannel, a pan European cable network.\textsuperscript{166} Time Warner

\textsuperscript{164} TV Without Frontiers Directive, Supra note 145 at section 4. Similar language also clothes the independent production incentive provisions whereby broadcasters where feasible contribute 10\% to the production budget of an independent producer or reserve 10\% of airtime to independent productions.
\textsuperscript{165} J.O.C.E. 4 January 1990, 97/22
\textsuperscript{166} Europe, however, is not an excessively cabled market compared to North America.
entered a joint venture with popular Canal Plus, a pay TV cable and broadcasting company.\textsuperscript{167} Large US media companies have and will continue to invest in European joint ventures and subsidiaries building cable networks, stations and production alliances.

On the whole, one can surmise from the language used that the airtime quotas for European works are meant to be politically\textsuperscript{168}, rather than legally, binding. In 1993, France, in the TNT affair, complained to no avail about the beaming of TNT and cartoon channels, MGM and Hanna Barbera American programming uplinked from the U.K. on SES's Astra satellite. Belgium also complained and decreed that cable operators could not carry those channels. At that time, over 100,000 French citizens had satellite dishes. The Commissioner for Audiovisual Policy, J. Pinheiro, formally notified Great Britain. It remained complacent. In fact, nearly all Member States received warnings by the Commission for not implementing the Directive. As explained above, the British were against EC imposed airtime quotas from the very start and do not enforce that part of the directive. This is not unrelated to T. Turner's and R. Murdoch's decisions to operate satellite channels broadcasted to all of Europe from Britain.

In October 1989, the USA formally challenged the Directive (section 4: quota system) before GATT's ruling council as contravening article I and III of GATT\textsuperscript{169} (the most favoured nation (MFN) and national treatment principles). In the context of the Uruguay Round of Negotiations, the issues were not adjudicated, and the questions are still being debated. During the Uruguay Round which commenced in 1986, as the GATT negotiations drew to a close in 1993, the negotiators failed to reach an agreement on the cultural exemption and the audiovisual service sector was not covered by the agreement.\textsuperscript{170} In exchange, the US kept the aerospace sector in GATT. The aerospace and entertainment sectors are top US export sectors. General GATS rules, nonetheless, apply to the audiovisual service sector. Thus, the EC did not attain its goal of having the Directive officially recognized by international trade law via an article XIV exemption to the principles of national treatment, most favored nation and market access. However, the very fact that the Directive is couched in such non legally binding terms for Member States under EC law and that, in fact, the Directive airtime quotas represent above all a

\textsuperscript{167} The venture has since been terminated. Its German investment in commercial local TV station PULS was withdrawn. After 4 years of operation, losses of 83 million USD were accumulated by the station.

\textsuperscript{168} EC, Response of Commissioner Bangemann to Kenneth Collins 4 January 1990. (1990) OJEC 97/22


\textsuperscript{170} General agreement on Tariffs and Trade: Multilateral Trade Negotiations Final Act Embodying the Results of the Uruguay Round of Trade Negotiations, April 15, 1994, 33 ILM 1125. XXIX (2) (b) excluding the audio-visual service sector which includes TV, motion pix, home video and music on new communications technologies (satellite, VOD, cable) as well as on existing media. GATS/EL/31 April 1994 (hereinafter, Uruguay Round)
political goal, make it very difficult to attack under GATT. In that sense, therefore, the EC considered the airtime quota for EC works to be maintained and protected.\textsuperscript{171}

However, as mentioned earlier, in the absence of political willpower in another Member State and in the absence of a straightforward enforcement against a quota violating Member State, the only alternative may be to regulate cable to exclude undesired programming and encourage one's population to use cable in preference to DTH satellite TV, for example, by taxing DTH receiving equipment. Such an alternative is illusory, even in France, where cable is losing ground to DTH TV and such a tax scheme could very well be a violation of the freedom of information right. As we have seen, present programs beamed in using uplinks from non EC or Convention member countries or from satellite space not under any EC or Convention Member's supervision, escape the Directive's and the Convention's scope. This would be the case, for example, of programs beamed from Intersputnik. However, in practice, most programs received via DTH TV are beamed from the Astra series of satellites whose uplink facilities and head office are based in Luxembourg, an EC member.

Following a Report on the Application of the Directive, a Proposal for amendment\textsuperscript{172} of the TV Without Frontiers Directive was adopted by the EC in 1995. The proposal was made following the May 1994 Convention on the elaboration of audio-visual policy during which clarification regarding the quotas was requested. The European Commission in 1994 adopted a Green Paper on Audio Visual Policy entitled "Strategic options to reinforce the program making industry in the context of the EU audio visual policy." It stipulates the aim of strengthening the single market in the audio visual industry and creating a European information space, proposes to advance the infrastructures technologically and liberalize their use assisted by cooperation between national authorities and transparency. The Green Paper states that even if the clauses in the TV without Frontiers Directive are flexible as regards quotas, a common interpretation should be sought before the European Court of Justice and the quota obligations clarified; less onerous but enforceable obligations are better than stringent obligations which remain unenforced; finally, it stresses the importance of applying Community law. The 1995 proposal aims to strengthen the implementation of the Directive, \textit{inter alia} by eliminating the "where practicable" clause which qualifies the measures for the promotion of domestic and European production.\textsuperscript{173} The proposed

\textsuperscript{171} "Les Européens gardent leur liberté pour l'audiovisuel" Le Monde (Paris) (16 December 1993) 6.

\textsuperscript{172} On the other hand, cultural goods are included in the GATT agreement, however, an MFN exemption applies between EC members

\textsuperscript{173} Commissioner Pinheiro opined that a choice should be made between the production and the airtime
amendment was turned down in 1996, but it may be presented anew. The new text also contains a clearer definition of the quality and characteristics necessary to obtain the European label.

In future, the debate between proponents of rigid "European works" production and air time quotas and the proponents of broadcasting freedom may be influenced by newly entered, Member States, such as Sweden, Finland and Austria for example. Though their position is not officially known, the entrance of these new members is likely to affect the balance of power. Finally, it should be noted that the Proposal specifies the limits of the Directive's scope in that it excludes interactive audiovisual products.\(^\text{174}\)

Significantly, the French market has traditionally represented the second largest market, outside the USA, for motion pictures. There is no doubt that the French are \textit{afficionados} of American feature films as they are of movies in general, since the Lumière brothers invention of cinema. The audiovisual business the French wish to target for protection is not the one of "cultural programs" (such as local interest documentaries and talk shows) \textit{per se}, which are often quite difficult to adapt to the liking of several cultures, but the business of feature films and TV series. France, in fact, wants to profit somehow from the particularly interesting market it represents for foreign (mostly American) producers, and thereby sustain its own industry which in the light of their public's taste for movie pictures and TV series, may well be key to its national identity.


In addition to the TV without Frontiers Directive which, as we have seen above, aims to ensure the freedom of movement and of reception of broadcasts originating in other Member States of the Community, the \textbf{Satellite Broadcasting and Cable Retransmission Directive of 1993}\(^\text{175}\) which deals with copyright issues, is instrumental

\(^{174}\) \textit{TV Without Frontiers Amendment Proposal}, \textit{Supra} note 172. The Proposal explains that such products, for example, video on demand, distance learning and teleshopping pose very different regulatory issues than those raised by TV broadcasting services. This approach reflects debates occurring during the 1995 Audiovisual Convention during which opposition to the application of quotas to such products was vigorous. Quotas are being applied to teleshopping.

in the establishment of a common single market. The goal of the Satellite and Cable Directive is to consolidate copyright protection thereby promoting the cross border transmission of programs with a view to achieving a single audio-visual area.

Two international copyright conventions establish minimum standards for copyright protection and provide reciprocity between ratifying states; these are the Berne Convention for the Protection of Literary and Artistic Works and the Universal Copyright Convention. All EC Member States are Signatories of the Berne Convention. This Convention constitutes a Union "for the protection of the rights of authors in their literary and artistic work." (article 1) Literary and artistic works are defined as including "every production in the literary, scientific and artistic domain, whatever may be the mode or form of expression." The Berne Convention provides for the minimum term of protection, protection for adaptations and translations and the rights of the author in relation to the work such as the author's moral rights. The Convention is a basic statement of principle, the detail of its implementation is up to its different Signatories. Also, many provisions such as, for example, the artist's resale right (droit de suite) are optional. The Berne Convention provides for: national treatment. that is, that

2. EC, Commission Green Paper on Copyright and the Challenge of Technology (1988) COM 172
3. EC, Commission Explanatory Memorandum (1991) COM 276 p.8 and

Satellite Broadcasting and Cable Directive, Ibid Recitals (3) and (12): (3) "whereas broadcasts transmitted across frontiers within the Community, in particular by satellite and cable, are one of the most important ways of pursuing these community objectives, which are at the same time, political, economic, social, cultural and legal;" (12) "whereas the legal framework for the creation of a single audio visual area laid down in Directive 89/522 EEC must therefore, be supplemented with reference to copyright."

The EU has endeavoured to harmonize copyright protection in 2 other key areas, computer programs and computer databases: it has adopted a Common Position Text. See respectively:


180 EC, Council Directive 93/98 of 24 November 1993 (1993) O.J.L. 290. Certain exceptions to national treatment are provided for such as, for example, the term of copyright and droit de suite. The EC Council Directive 93/98 on the harmonization of the term of copyright protection due for implementation by Member States by July 1, 1995 provides, at section 3, for the harmonization of
under any nation's laws, a foreign national benefits from no lesser rights and benefits than a citizen of that nation receives. (...)" the extent of the protection, as well as the means of redress afforded the author to protect his rights, shall be governed exclusively by the laws of the country where protection is claimed:" and " protection in the country of origin is governed by domestic law (...)."

Though all EU states are members of the Berne Convention, copyright law and protection varies considerably between member states. Traditionally, a gap has existed between the European concept of droit d'auteur and the common law concept of economic rights. Hence, the artist's resale right (droit de suite requiring that the author be paid a percentage of each resale of his or her work), for example, exists in Belgium, France, Germany, Italy and Luxembourg only. Though intellectual property rights are territorial by nature and their exercise entails the control and division of markets through license agreements, transnational activities using new media may require adjustment in the mode of application of traditional copyright principles.

The Berne Convention does not specifically provide protection for satellite, nor for digitally transmitted works. The exclusive broadcasting right (and related rights) granted to the author of literary and artistic works is described at article 11 bis and catches satellite broadcasts: i) "broadcasts of works or the communication thereof to the public by any other means of wireless diffusion of signs, sounds and images;" as well as cable retransmission: ii)" any communication to the public by wire or by rebroadcasting of the broadcast when the communication is made by an organization other than the original one."

The notion of broadcasting is not defined in the Convention. The World Intellectual Property Organization (WIPO) which administers the Berne Copyright Convention, describes broadcasting as a "matter of transmissions intended to be received directly by the general public."181 In December of 1996, WIPO adopted an agreement decreeing that 30 countries belonging to WIPO should amend their national laws to extend copyright to encompass new forms of digital distribution, rental and communication to the public as well as adopt legal remedies against the circumvention of technological measures and enforcement procedures and remedies.182

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the term of copyright: expiration of term occurs 50 years after the first transmission of a broadcast whether it is transmitted by wire or over the air including via cable or satellite.

The implementation date for the bringing into force of the laws, regulations and administrative provisions necessary to comply with the Satellite and Cable Directive\textsuperscript{183} is January 1, 1995. (section 14) The Directive will be subject to revision in January 2000 when the Commission will submit a report on the Directive's application in Member States to the European Parliament's Economic and Social Committee.

The Satellite Broadcasting and Cable Directive, in its recital, observes that there are many differences between national rules of copyright throughout EC Member States. "Holders of rights are therefore exposed to the threat of seeing works exploited without payment of remuneration or that the individual holders of exclusive rights in various Member States block the exploitation of their rights." Legal uncertainty also exists which poses a direct obstacle to the free circulation of programs.

The legal uncertainties listed in the preamble include whether all suppliers of cross border satellite broadcasts should be treated alike whether a DBS or a communications satellite is the transmission vehicle: uncertainty as to whether broadcasting by satellite affects rights in the country of transmission only, or in all countries of reception together, thus implying the cumulative application of several national laws to a single act of broadcasting; uncertainty as to how to deal with programs communicated by satellite from non Member States; the uncertainty as to the division of rights in the case of programs communicated by satellite under co-production agreements and uncertainty of holding proper authorization from every holder of rights in a program in the case of cable transmission from other Member States. The Directive therefore establishes minimum rules to guarantee free and uninterrupted cross border broadcasting by satellite and unaltered retransmission from other member States on a contractual basis.

It is important to note that the European Court of Justice recognized as early as 1980 in the Coditel\textsuperscript{184} case that the freedom to provide a service within the Community may, under certain circumstances be restricted for copyright reasons. Community law tempers the free movement of goods and services where it recognizes that market rules should not prejudice a Member State's system of property ownership. EC law thus recognizes intellectual property which is a form of property. The European Court of Justice\textsuperscript{185} has, with regard to parallel imports, decided that though exclusive rental rights granted to copyright holders under national law constitute a quantitative restriction where they represent a significant market and the only way to secure a share of revenue, an

\textsuperscript{183} The Satellite Broadcasting and Cable Directive. Supra note 175 -1
\textsuperscript{184} Coditel v. Ciné Vog Films (1980) ECR 881, in which, Belgian theatre operators brought suit against a Belgian Cable System which retransmitted television signals picked up from German TV broadcasts.
exclusive rental right under national copyright law is justified and it is not exhausted where the product is marketed in a Member State which does not grant an exclusive rental right.

The Directive's definition of "satellite" in section 1.1 as meaning "any satellite operating on frequency bands which, under telecommunications law, are reserved for the broadcast of signals of reception by the public or which are reserved for closed point-to-point communication," eliminates the copyright issues resulting from the ITU's distinction between broadcasting by communications satellite and broadcasting by direct (DBS) satellite. Under the ITU Convention, communications satellites transmit at low power over ITU approved frequencies and the public may not receive the signals. In reality, the development of medium powered satellites permits the public to directly receive programs on frequencies previously reserved for cable system head-ends. In the EU, transmissions over communications satellite, were not considered to have copyright implications. The situation is therefore rectified as long as "the circumstances in which individual reception of the signals takes place in a way comparable to signals over DBS."

The broadcasting right is defined at section 2 of the Directive whereby "Member States shall provide an exclusive right for the author to authorize communication to the public by satellite of copyright work (...)" The principal director of a cinematographic or audiovisual work and such other persons as Member States may provide for to be considered as co-authors are considered the work's author under the Directive. The Directive's approach in this matter whereby it does not seem to recognize the possibility of a juridical entity as a rightholder, is criticized by American entertainment companies who allege that such a limitation may lead to inefficiencies in making motion pictures available for satellite broadcasts.

The significant question to determine for copyright purposes with regard to DTH broadcasting is where the relevant act of broadcasting takes place. Several theories have emerged and we propose to examine these briefly prior to setting out the one prescribed in the Satellite and Cable Directive.

The most influential theory outside the one adopted by the Directive, is the "communication theory" developed by Dr. A. Bogsch, WIPO's director general. WIPO is currently working on a draft model of copyright law in the context of new communications technology which permits the transborder flow of intellectual property and, in particular, is integrating Dr. Bogsch's "communication theory". The theory aims to address DTH/TV satellite broadcasting's peculiarity with regard to conventional terrestrial broadcasting, that is, the fact that DTH/TV satellite broadcasts span several national territories. The "communication theory" advances that as a consequence of DTH/TV satellite broadcast's peculiarities, broadcasting must be thought of in a different
way and defined differently, namely: as a public communication with the public wherein the focus is on the act of reception and broadcasting takes place therefore in all the countries within the receiving area of the satellite. Accordingly, no broadcasting exists until consumers receive or can receive the signal. The relevant act of broadcasting for copyright purposes is public reception. The "communication theory" implies that the author receives protection and remuneration in every nation within the satellite's footprint and that the broadcaster must follow the copyright laws of each country where consumers may receive broadcasts and therefore must seek authorization from rights holders in the broadcasting country as well as in each receiving country. This raises the question of why the focus is put on reception for the purposes of the broadcasting definition when the person liable for copyright infringement of the relevant act of broadcasting is the broadcaster and consumers have no copyright liability in that regard. Application of the "communication theory" would also have the disadvantage of placing entire satellite transmissions at risk should satellite signals intended for reception by viewers within a licensed territory be also receivable by (one would imagine by a minimum number of) viewers outside the licensed territory and in another country. Nonetheless, the Bogsch or "communication theory" has garnered, and still enjoys, wide support.

Prior to the Satellite and Cable Directive, the traditional or emission (droit d'injection) theory was applied to DTH/TV satellite broadcasts. Under this theory, DBS broadcasts are treated no differently from conventional radio and TV broadcasts and are viewed as the single use of a work, notwithstanding the size of a "footprint's" potential viewership. The "emission theory" does not focus on reception at all but rather assumes that the transmitted signals on their way up to the satellite represent public communication. Thus, satellite signals are treated like any ordinary transmissions. Both this theory and the Bogsch "communication theory" suppose that the broadcaster is the entity liable for copyright purposes as the broadcaster is the entity which packages the final programming, transmits the program, beams signals and directs the transmission of signals. As opposed to the "communication theory", under the "emission theory", for copyright purposes, the author has only one right of remuneration from the original broadcaster and the author's choice of law is limited to the jurisdiction of the country from which the signal emanates. This means that the broadcasters can use that author's works without answering to the copyright laws of the country from which the broadcast was transmitted. Obviously, under the "emission theory", forum shopping by the broadcaster

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168 Turner-ARD (no. 1:93 -cv-1249 MHS Georgia also referred to as Degeto Film) An American court order enjoined the entire Astra 1B broadcast even though the Turner-licensed programs made up only a fraction of the total transmission.

187 Re Satellite Broadcasting, (1995) 73 F.S.R. a decision by the Austrian Supreme Court before Austria joined the EC is an example. The context of the December 1996 WIPO diplomatic conference is even more important.
is possible. Nonetheless, such a strategy does not preclude an author from having recourse against a broadcaster under contractual licence agreements if a breach is committed and the broadcast viewed in territories other than those granted in the licence. The unavailability of injunctive relief (and in some cases statutory damages) usually provided for under copyright law may, however, place rightholders under a licence agreement at a relative disadvantage.

Other theories have been put forward such as the "joint liability theory" which suggests combining the laws of the uplink and downlink countries in an effort to cover broadcasts originating from a non Berne Convention country. As this theory also supposes that the broadcaster is the entity liable with regard to copyright and the relevant act of broadcasting, it fails because where the broadcaster is in a non Berne Convention country, enforcement is extra territorial. Another theory, the "effective establishment" theory, based on the location of the broadcaster's effective establishment, was developed by Thomas Dreire of the Max Planck Institute for Foreign and International Patent, Copyright and Competition Law. The problem attacked, that is, forum shopping for the carriage uplinks, is not solved. In effect, just as broadcasters can change the location of uplinks, so to can they change the location of their places of effective establishment.

The Satellite Broadcasting and Cable Directive addresses the challenge of fitting satellite technology into definitions originally conceived for conventional terrestrial radio and TV. It must face on a regional level what the world faces on an international level: the proliferation of non uniform copyright laws. The Directive fully recognizes the transborder nature of communications and chooses to adopt a compromise position between the Bogsch "communication theory" requiring the clearance of rights in every jurisdiction located in the footprint and the traditional "emission (droit d'injection) theory" requiring clearance only in the jurisdiction where the point of insertion to the satellite is located.

First of all, the Directive recognizes that the successful harmonization of law within the E.C. requires that members agree to a common definition of broadcasting: "communication to the public by satellite means the act of introducing under the control and responsibility of the broadcasting organization, the programme-carrying signals intended for reception by the public into an uninterrupted chain of communication leading to the satellite and down towards the earth," and to the principle that the act of broadcasting for copyright purposes "occurs solely in the member state where under the control and responsibility of the broadcasting organization, the programme carrying signals are introduced into an uninterrupted chain of communication leading to the

188 Satellite Broadcasting and Cable Directive, Supra note 175-1 at s.2.2a
The Directive has adopted what is known as the country of origin/principle of introduction approach.

When the broadcast originates in a non-Community Member State, which does not provide similar broadcasting rights protection as the one specified in the Directive, if the uplink station for program signals is situated in a Member State then the broadcast is deemed to have occurred in that state and the rights are exercisable against the person operating the uplink station. On the other hand, if the uplink does not take place from a Member State but a broadcaster established in a Member State has commissioned the broadcast, the broadcast shall be deemed to have occurred in the Member State in which the broadcaster has its principal establishment and rights against the broadcaster are exercisable in that state.

This provision of the Directive aims to ensure that Community broadcasters do not attempt to get around the basic holder rights and broadcasting liabilities determined in the Directive, by having broadcasts transmitted from non-Member States. The author has one jurisdiction, the country of origin, in which to claim remuneration for copyright infringement. The jurisdiction is either that of the country where the uplink occurs if it is in the E.C. or, if it is not, that of the E.C. state where the broadcaster is established.

With regard to the retransmission by cable of broadcasts received from other Member States, the liability for cable retransmission falls on the cable operator, not on the original broadcaster according to the Directive which provides for the collective licensing (not compulsory or statutory) of cable retransmission rights.

By maintaining the original definition of broadcasting, the Directive does not make any adjustments for the significant spillover (across borders) feature typical of satellite broadcasting which feature does not characterize conventional terrestrial television broadcasting. The terrestrial nature of intellectual property rights is recognized in the Preamble where the Directive states that "authors are entitled to a bundle of

189 Ibid. at s. 2.2b
190 Ibid at s. 2.1d; The approach does not correspond exactly with the TV without Frontiers Directive
191 Ibid. at s.8
192 Ibid. at s.9, Note: the collective licensing/management of rights is an intermediate step between a non voluntary licensing system and independent contract negotiation. In collective licensing arrangements, authors and rightholders transfer rights to collecting societies who negotiate on the author's behalf. Collective licensing is generally well regarded by industry players. As for non voluntary licensing systems there are two types, the statutory system whereby the level of remuneration is set by the legislature and the compulsory licensing system whereby authors and broadcasters must negotiate a level of remuneration in case of infringement.
193 Ibid. at Preamble, s.13
territorially limited copyright in respect of all those countries where they enjoy protection." The Directive further states that users of protected works "must obtain a licence for use in each country where the work is to be used."

The Directive recognizes encryption technology which enables satellite broadcasters to open addressable converters in order that encoded programming can be received only in the member States or in other states authorized by the program owner. It states that the fact that signals are encrypted still constitutes "communication to the public by satellite on condition that the means of decrypting the broadcast are provided to the public by the broadcasting organization or with its consent." Nothing further regarding encryption is provided for in the Satellite and Cable Directive.

There is no doubt that encryption is the principal mechanism by which satellite broadcasters ensure control over reception and retransmission and that they are paid for the services provided. The ability to encrypt and limit the market of viewers is central to negotiations with rights holders. The matter was first confirmed in a Recommendation to Member States of the Council on the legal Protection of Encrypted Television Services adopted by the Committee of Ministers in 1991.

The Recommendation, by recognizing the need for encryption, makes room for new assumptions such as the one that broadcasters want their audience restricted; the opposite was the case in the past. The Recommendation explains that: Broadcasters have traditionally sought to reach the widest possible audience for their programs. However, following economic and technological developments in recent years in the broadcasting sector, especially since the advent of pay TV services, this is no longer invariably the case, and certain broadcasters now wish to ensure that their audience is restricted. This may be for various reasons; as regards pay TV services, the broadcaster seeks to restrict the access to its program solely to persons paying the required subscription and those fees are used to finance broadcasting activities. A broadcaster may also wish to restrict the audience of its program for other reasons. For example, it may wish to limit access to its broadcasts for reasons of copyright and neighboring rights.

The Recommendation cites two reasons for encrypting programming for which viewers are charged. The first reason is to ensure to the program owner correct payment

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194 Ibid. at s. 1.2 (2)
195 EC, Council of Ministers Recommendation No R9114 of 27 September 1991, 462nd meeting of Ministers, subsequently updated in January 1995 (hereinafter Encrypted Services Recommendations)
196 Encrypted Services Recommendation, Ibid. Preamble s.17 and 14 of the explanatory memorandum.
for license rights. In this regard, the Recommendation provides that "payments should take into account all aspects of the broadcast, such as the actual audience and language version." The measurement of actual audience without encryption and the use of converters to make programs available, is difficult. The measurement of potential audience is useful only where broadcasting is "in the clear", that is, not encrypted. Such measurements are of limited value in determining a license fee. The second reason for encrypting programming for which viewers are charged, is to make satellite broadcasts available on a territorial basis which is especially important in the case of motion pictures because for that product, the program/movie is licensed for satellite broadcasting after it has been exhibited and distributed in other media.\textsuperscript{197} As motion picture viewing preferences and habits vary from territory to territory, the timing of the different media "windows" for the motion picture varies considerably. In short, the date on which a motion picture is ready for satellite broadcasting varies considerably from one Member State to another. If the motion picture is available via satellite before the date planned in other Member States for its availability via satellite, such premature availability may conflict with licenses.

National laws are useful to discourage the circumvention of encryption technology.\textsuperscript{198} In the UK, for example, under the 1990 Broadcasting Act, it is a criminal offence to make, sell or rent unauthorized decoders including smart cards and decrypting devices which permit the viewing of programs without paying the fee which the person making the transmission charges. Transmission, according to the U.K. Broadcasting Act covers any programs (not data) included in a broadcast or cable programming service provided from a place in the U.K. Under the Act\textsuperscript{199} it is a criminal offence for individuals to dishonestly receive programming included in a broadcast or cable service provided from a place in the U.K. with the intent to avoid payment. This can be extended by the Secretary of State to programming received from abroad if reciprocal protection is offered by the other country or if the service affects U.K. broadcasting.

In the BBC and Hi-Tech Xtra Vision\textsuperscript{200} case, the House of Lords acknowledged that protection must have effect with regard to the reception by persons in other countries. The case involved the unauthorized reception of BBC Europe Service occurring outside the U.K. with Hi-Tech decoders sold to consumers at a cheaper price than BBC Sat-Tel decoders. The House of Lords confirmed that a "person who seeks to charge for programs or who sends encrypted TV transmission has a right not to have other persons

\textsuperscript{197} EC, \textit{Green Paper on the legal protection for encrypted services including pay-television and interactive tele-shopping}, March 1996
\textsuperscript{198} \textit{Broadcasting Act}, (U.K.), 1990 s. 179
\textsuperscript{199} \textit{Broadcasting Act}, (U.K.), 1988 s. 297
\textsuperscript{200} \textit{BBC Enterprises Ltd. v. Hi-Tech Xtra Vision} (1993) 3 All E.R. 257
making devices designed to be used by persons not authorized to receive the programming." Similar principles were applied in the British Sky Broadcasting and Lyons\textsuperscript{201} case in which Sky brought a claim against the sale of German made "smart cards" being sold in the U.K.

Though access to copyright enforcement in various states in accordance with the Bogsch "communication theory" would be advantageous to copyright holders, it would imply a different definition of the relevant act of broadcasting and it would pose a considerable burden on broadcasters and limit the free movement of goods and services envisaged under European Community law. Reliance on license agreements with broadcasters and on encryption technology supported by criminal and civil sanctions against manufacturers, retailers and consumers avoiding or carrying out unauthorized viewing are the current solution. This approach is confirmed in the 1996 Green paper mentioned below. It recommends harmonisation of pirate prosecution legislation and the introduction of criminal or civil sanctions in each state. A minimum level of protection would thereby be established. All activities related to the sale of devices for illegal reception are targeted.

If this approach proves to be satisfactory, the current mode of orchestrating the release of motion picture distribution in each window of the different media (theatrical, broadcasting, video) in each territory according to their cultural habits and preferences will not be affected. Revenues from the distribution of motion pictures in foreign markets is particularly important for the American audio visual industry as revenues from these markets represent more than 25% of total revenues and the product is a staple of European broadcast offerings, particularly so in France.

Following the 1996 Green Paper on Legal Protection for Encrypted Services including Pay-television and Interactive tele-shopping, the European Commission is currently\textsuperscript{202} finalizing a draft directive to ensure that the copyright holders of intellectual properties such as music and film receive full protection when distributed in digital form. This draft is the result of extensive lobbying by Europe's entertainment industry to secure legal protection when intellectual property is distributed over the Internet or other digital networks such as high speed cable and to secure measures to control access in order to ensure payment and protection against piracy. The Draft Directive will provide that all

\textsuperscript{201} British Sky Broadcasting v Lyons (1995) F.S.R. 357; since, the Commission announced that specific rules for the pay TV industry were under consideration in order to address an anti-competitive situation. In June 1996, the digital TV players in Germany agreed to a common interface decoder permitting compatibility with different conditional access systems.

\textsuperscript{202} A. Rawsthorn, E. Tucker, "Brussels Plans Copyright Rules for Digital Age" and Supra note 197, The (London) Financial Times (23 May 1997) 4
Member States extend copyright protection to cover digitally distributed material; it will introduce a distribution right to enable copyright holders to control where their work is distributed and it will allow copyright holders to develop technical means of controlling access to their material and detect unauthorized usage of it, for example, by encrypting and tattooing digital signals.

A question remains unanswered as yet, as to where the relevant act of broadcasting will be said to take place when broadcasts are made from space, that is from space stations, for example, which may, following the completion of Alpha, happen sooner rather than later.

The importance of competition law in ensuring effective liberalization

If liberalization and privatization are justified by the possibility of achieving economies and better efficiency for consumers and the maximum use of new broadcasting and telecom technology, it is essential to ensure that liberalization and privatization are not used by market players to construct dominant positions eventually leading to the same inefficiencies as those perceived to characterize state monopolies and closed markets. Also, with regard to the media, some aspects, such as guarding against media concentration are particularly important to guaranteeing pluralism which is seen, by many, to be a key public interest goal. International alliances across borders and across technologies as convergence (confluence) takes place and corporate positioning, natural consequences of market access, can circumvent existing national regulation. Hence, competition law plays a very important role with regard to the transborder reception and distribution of TV programs.

A survey of cases decided by the EC competition authorities illustrates the key role competition law is bound to play in the context of changing regulatory, broadcasting and media framework. In telecom (US & European), competition rules have been the spearhead for deregulation and liberalization. In broadcasting, competition rules are also likely to give added impetus to the liberalization resulting from the common single European audio visual market. Article 85 of the Treaty of Rome and the Merger

203 1. EC, Commission Follow-up on Consultation relating to the Green Paper on "Pluralism and Media Concentration in the Internal Market An Assesment of the Need for Community Action" (1994) COM 353
2. EC, European Parliament Resolution of 15 June 1995 (1995) O.J.C 166/1 calling for the harmonization of national legislations on media concentration as it may in some cases constitute a market obstacle.
204 EC, Treaty of Rome, Supra note 140
Regulations seek the same end: the safeguarding of competition in the EU. Under Article 85 of the Treaty of Rome agreements or concerted practices involving more than one party and having the effect of restraining competition in the relevant market and effect on interstate trade are prohibited. The Commission may, however, grant an exemption to agreements or concerted practices whose economic benefits outweigh their restrictive effects. Criteria for granting an exemption include, for example, the promotion of technology, product improvement and economic advantages beneficial to consumers, however, the restrictions created by the alliance must not eliminate competition and must be necessary to the attainment of these goals. Exemptions were granted to the BT-MCI agreement as well as to the France Telecom-Deutsche Telecom & US Sprint agreement as it was recognized that such agreements were necessary to serve multi-national corporate clients efficiently. On the other hand, under the Merger Regulations, the Commission can monitor all acquisitions and mergers above the prescribed threshold, regardless of whether the parties are actual or potential competitors. The goal is to prevent the creation or strengthening of a dominant market position and the choking of competition.

In the Aerospatiale Alcatel Espace\textsuperscript{205} case, the Commission stated that Europe must increase the size of its companies and pursue vertical integration through merger and large scale alliances in order to counter the USA's market which is comprised of a very limited number of very large and vertically integrated companies which dominate the market. The Commission, in the Aerospatiale case, therefore, saw the benefit of a large deregulated unified domestic market for the government space program. The commission reiterated there principles in the MSG and NSD media cases (briefly described below), however, the Commission's decisions and attitude towards strategic alliances in the media sector appears circumspect so far. The Commission is very concerned by the need to ensure that markets are not closed before they have had a chance to develop. This concern is demonstrated, for example, in two cases, MSG Media and Eurosport III decided under the merger regulations.\textsuperscript{206} In both cases, due to concern about potential restrictions on access to content, clearance was not granted.

\textsuperscript{205} EC, \textit{Aerospatiale Decision in the Matter of Aerospatiale Alcatel Espace} (1994) O J.C. 47/6 concerning a 19(3) notice.
\textsuperscript{206} 1. EC, \textit{Council Regulation No 4064/89} (1989) O J.L. 395/1
2. EC, \textit{Council Regulation No. 4064/89} (1990) O J.L. 257/13 (1990) wherein the Commission states that the basic test for concentrations with a Community dimension is whether it would "create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it."
In the MSG Media Services case, the merger was reviewed as a concentrative joint venture. The merger involved three German companies and the object was to provide administrative services for pay TV and other subscription type TV services (pay and cable networks) in Germany. The three companies were Bertelsmann AG, Taurus (a member of the Leo Kirch Group), the principal supplier of films and TV programming both of whom together with Canal Plus run Premiere, the only pay TV channel in Germany; the third company in the venture was to be Deutsche Bundespost Telekom, then holding a legal monopoly on providing cable infrastructure, as well as a monopoly on telephone networks in addition to being the owner of all cable TV networks and to owning a share in SES Astra, Europe's main privately-owned satellite operator.

The Commission found that the monopoly position of MSG as a service supplier (the object of the joint venture) would give the parent companies control over competitors in the pay TV market, continuing to secure, for example, Canal Plus' position in the German pay TV market. A dominant position would be created or aggravated for MSG and therefore the parent companies would consolidate dominant positions through MSG. Deutsche Bundespost Telekom's dominant position would also be strengthened by the proposed MSG venture and would cancel the effect of the liberalization of cable infrastructures. The Commission showed definite concern for the impact of the venture on future market evolution. The decision has the effect of exercising some control over the media and ensuring a degree of pluralism.

In Eurosport Mark III, a joint venture between the European Broadcasting Union and News International/Sky Channel notified under article 19 (3) to run a pan European channel entirely devoted to sports programming to be broadcasted by satellite and cable was prohibited because the Commission found that it had the effect of granting the proposed joint venture privileged access to sports events thereby foreclosing other satellite and cable services, from offering sports events coverage.

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207 EC, Commission Decision in the Matter of Media Services GmbH-MSG (1994) OJ L 364/1 In general, concentrative mergers are typical of relatively (the threshold for review is quite high, in turnover 250 ECU) smaller mergers and new market entrants with parent companies active in different sectors or in different states. Larger global alliances are seen to involve the risk of coordination and are reviewed as cooperative. The distinction may reflect different review approaches i.e. the freedom of action view wherein the focus is on an analysis of constraints and any constraint limiting freedom of action is seen as a restriction of competition; and the market impact view wherein the impact of the proposed agreement is analysed in relation to overall market structure.


209 Eurosport now operates under a new joint venture agreement between TF1, Canal Plus, ESPN and Générale d'Images; News International/Sky Channel having withdrawn.
From all this, it may be seen that the Commission is concerned about the foreclosure effects of exclusive relationships which restrict access to content. It has a similar concern with regard to access to space segment capacity. Since uplinking is gradually being liberalized in the EU, arrangements between telecom organizations as to the provision and use of uplinks may be examined under section 85. The bundling of uplink and space capacity is likely to limit competition without benefitting consumers.

In the BT Astra joint venture proposal, clearance was not granted and an exemption was refused. The Commission showed its concern to prevent foreclosure effects resulting from bundled agreements in new rapidly developing markets, especially in cases where less restrictive options are apparent.

The case involved British Telecom and Société Européenne des Satellites (SES) the Luxembourg-based private satellite operator of the Astra series. The joint venture proposed to offer broadcasters of UK TV programs a package service for uplink and transponder facilities on the Astra 1A satellite. The package was to be offered to programmers by British Telecom. Both services would be carried out by SES on its facilities in Luxembourg, though BT was to be responsible for the uplink.

SES, under the proposed agreement, was to be prevented from offering preferential terms to U.K. program providers for the use of its facilities. By bundling BT's uplink service to SES's transponder capacity, SES and other satellite providers were foreclosed from offering similar services. The Commission found that BT and SES were competitors in the market for transponder capacity as well as in the market for uplink services, BT as a member of Eutelsat and Intelsat and SES as the owner of Astra 1A. Even though Astra 1A was the only satellite capable of being DTH receivable, the Commission found that the two companies competed in the same market. In addition, purchasing and operating an Astra 1A type satellite was not beyond the financial means and technological capacity of BT. Both BT and SES, under the proposed venture, were foreclosed from independently offering transponder capacity to potential customers of the Astra 1A satellite.

Though the Astra 1A service would constitute a privately owned alternative to services offered by Eutelsat and Intelsat on their respective medium powered satellites, such an advantage did not result from the joint venture as such. Because the Commission found that the joint venture did not improve satellite services and that the restrictions envisaged by the joint venture were not indispensable to its operation, an article 85 (3) exemption was refused.

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Finally, we need to briefly examine the Nordic Satellite distribution (NSD)\textsuperscript{211} case in which the proposed joint venture would lead to a highly vertically integrated operation covering the production of TV programs, cable and satellite network operation and the retail distribution of pay TV services. TV programming would be provided on a DTH basis as well as to cable headends. The three parent companies were Norsk Telekom, Tele Danmark and Kinnevik. Norsk Telecom is the main cable operator in Norway as well as being, through an affiliate company, an important pay TV distributor. In addition, Norsk Telekom controls satellite capacity on one of the two Nordic satellites serving Nordic countries. Tele Danmark is also a large cable TV operator. It operates in Denmark where it benefits from a privileged position up until 1998 when the markets will be liberalized. Kinnevik is a Swedish conglomerate with interests in TV, newspaper, packaging, paper and telecom. It also has an interest in cable TV through its stake in Kablevision, and it is involved in pay TV. Kinnevik is the largest satellite pay TV distributor in Nordic countries. On the content side, Kinnevik is the most important provider of Nordic satellite TV programs and provides the most popular channels. Both Tele Danmark and Kinnevik, like Norsk Telekom in Norway, control most of the satellite transponders on the other Nordic satellite position.

The Commission, reviewing NSD as a concentrative joint venture, found that it would create or strengthen the dominant position of the three companies and effectively foreclose the market for satellite transponders to competitors, acting more or less as a gatekeeper to the market for this service. NSD would become the dominant player in the satellite transponder market for the Nordic region; Tele Danmark's dominant position in the operation of cable TV would be strengthened. NSD would have a dominant position in the market for the distribution of pay TV and other encrypted TV channels such as DTH TV. The Commission observed that the downstream activities of cable and pay TV would be reinforced by the upstream satellite capacity provision services and TV program provision services in such a vertically integrated joint venture. Once again, the Commission expressed its concern not to allow the market to be foreclosed during the transitional period of restructuring it is going through as a result of technological progress (digitalization), liberalization and convergence.

It is possible that the current trend in the Commission's analysis of media cases will continue. In contrast to the telecom sector, the Commission may see the growth potential in pay TV services as being more limited due to linguistic and cultural barriers, because of the fact that pay TV services are offered to private individuals thereby representing limited revenues in proportion to high entry infrastructure costs, and due to

the fact that dominance may stifle pluralism and lead to detrimental effects for democracy. The relatively limited growth potential apparently envisaged by the Commission may be seen as not conducive to the advent of big players capable of countering anti-competitive practices.

. The regulatory framework regarding technological aspects

The 1990 Green Paper on a Common Approach in the field of Satellite Communication in the EC \(^{212}\) examined what changes were needed to the sixties and seventies designed regulatory framework, in order to encompass the changing uses of satellite technology. In the sixties and seventies, satellite technology was principally used in Europe as an additional transmission path for telecom whereas in the eighties, its use for broadcasting purposes grew substantially. Due to political changes in Eastern and Central Europe, the market for telecom uses of satellite technology was also expanding. According to the ITU, Poland is Central Europe's largest satellite dish market. It is also a substantial purchaser of transponders from Eutelsat. The number of homes in Central and Eastern Europe receiving satellite TV is over 5 million and is growing fast. Those countries believe that satellite technology can accommodate all communication needs and they are not keen on developing terrestrial networks.

The 1992 deadline set for the completion of the EU internal market which supposes competition and the free movement of goods and services also motivated the proposals behind the Green Paper. A Europe-wide satellite service was the goal and the approach consisted in adapting the well developed new telecom policies to satellite services, allowing of course, for that industry's inherent peculiarities.

According to the EC Resolution of December 1991 on the Development of a Common Market for Satellite Communication Services and Equipment, this meant that the competition and liberalization principles adopted for telecom terminals and services would have to be extended to satellite earth stations and equipment and that free circulation and transborder use of transportable earth stations would have to be provided for. The harmonization of laws regarding the operation of earth stations and the provision of satellite services would be necessary in most regards and when appropriate, the mutual recognition of satellite service and satellite networks licenses would have to be introduced.

\(^{212}\) EC, Commission Green Paper of November 1990 (1990) COM 490
Overall, most regulatory changes proposed in the 1990 Green Paper on Satellite Communications and reaffirmed in the European Council Resolution, have been adopted and implementation has begun.

Regarding the space segment: the Resolution on the Provision of and Access to space Segment Capacity\textsuperscript{213} provides that effective management of orbital and related frequency resources by the state within the ITU framework remains necessary in order to ensure clear communications services. Also, the Resolution stipulates that in a competitive environment, transparent and non discriminatory access to space segment resources and capacity is essential for all providers and users. Finally, Eutelsat and Intelsat agreements are slowly being modified in order to reflect new assumptions and as liberalization in the Common Market progresses, comparable and effective access to non EU country markets should be established.

The Satellite Communications Directive\textsuperscript{214} of 1994 has as its goal the liberalization and harmonization of EU satellite service provision in such a way as to cancel the privileges enjoyed by incumbent providers who, with the exception of UK, still control the marketplace. National regulatory authorities have been reluctant to licence competitive satellite operators and to provide access to Intelsat and Eutelsat in which they are major shareholders. The Directive stipulates:

- that States must liberalize the market by withdrawing special rights\textsuperscript{215} which restrict progress and competition with government telecom operators. Private operators throughout the EU are to be allowed to offer satellite based services directly to consumers and users. Exclusive rights for the provision of DBS links must be abolished;

- the maintenance of State authorization procedures in order to ensure frequency coordination and the avoidance of harmful interference;

- the obligation for States to communicate the criteria for authorizing transmitting earth stations; and

- measures to stimulate competition for satellite ground equipment.

\textsuperscript{215} Rights granted by a Member State to a limited number of undertakings concerning the important connection service and the maintenance of telecom equipment
Implementation of the Directive in each Member State therefore depends on it being consistent with national legislation regarding equipment approval, telecom licensing, access to satellite capacity and radio frequency allocation.

The Satellite Licensing Proposal\(^2\) of 1994 provides for:

- EC wide licensing by removing the requirement for individual Member State satellite operator licenses; and

- the mutual recognition by Member States of national authorizations or other licenses for satellite services that do not require the harmonization of the laws applicable thereto.

The Mutual Recognition of National Authorizations for Satellite Communications Services\(^1\) Directive Proposal of 1994 stipulates that a national authorization granted in accord with the harmonized conditions will automatically allow the provision of the service in all Member States. This means regulatory one stop shopping for operators intending to operate a service in more than one State. Hopefully, the obligation of uplinking to the national satellite operator’s satellites, notwithstanding the useless character of the obligation for the broadcaster, will be abolished. Deutsche Telekom, for example, has long required satellite broadcasters from Member States to re-establish an up-link on its Kopernikus satellites, notwithstanding the redundancy of such an up-link.

Regarding the earth segment: the Satellite Earth Station Equipment Directive\(^2\) stipulates:

- the free movement in the EC market of satellite earth station equipment, that is, equipment that can be used for transmission alone, transmission and reception or reception only (including DTH/TV equipment) of radio signals via satellites or space based systems.\(^3\) As we have seen in a preceding section of this thesis, with regard to DTH/TV, the market has been opened definitively by the Satellite Broadcasting and Cable Retransmission Directive of 1993.\(^4\)

\(^4\) Excluding purpose built earth station equipment intended for use as part of the PSN
\(^5\) Satellite Broadcasting and Cable Directive, Supra note 175-1. Implementation date of the Directive: Jan. 1, 1995; see also 1994 OJC 321/4 proposing the principle of open access for all programmers to all networks, or in other words, a “must carry” obligation.
- harmonization of the EC Member States' equipment testing procedures; and
- harmonization of the EC Member States' requirements for sales of satellite earth station equipment.

Finally, as regards technical production standards and reception, the Standards Directive of 1992 prescribing the D2 MAC standard (for post 1994 broadcasts) is being reviewed\(^\text{221}\) because it excludes digital technology. In the Digital Standard Report,\(^\text{222}\) the Commission opines that digital video will transform the structure of the broadcasting industry and will accelerate the introduction of the information highway and multimedia convergence between broadcasting and telecom.

The European Union definitely wants to encourage standards, intensify R&D, look for common elements with the USA and Japan to ensure competition and consumer protection. The Commission recommends digital/analogue neutral transmission standards focussing on the 16/9 ratio for the screen and standard interface sockets in large (over 42cm) new TV receivers so that a decoder can be added when available. With a common interface, a single decoder (with different access codes) would suffice.

THE PROMISE OF DTH SATELLITE TV TECHNOLOGY FOR REGIONAL TV

Regional TV and the quota regime in the face of GATS and digitalization

The issues raised in the points discussed above relating to national level licensing, pay TV in the digital environment, cross media ownership restrictions and the implementation of the TV Without Frontiers Directive as regards advertising and programming origin for the purposes of airtime and production quotas, have not been fully resolved. It is quite possible that in the long term, the quota regime will prove difficult to maintain.\(^\text{223}\) As noted, the quotas have not been enforced in all Member States, and the

\(^{221}\) Standards, Supra note 66. The MAC/packet system was previously required for broadcasting via high powered satellites


"where practicable and by appropriate means" expression relevant to the obligation of reserving a majority of broadcast time to European works has received divergent interpretations. Sooner or later this quota is bound to disappear, though production quotas and subsidies may remain in place somewhat longer.

Deemed useless by some, these policies may, in fact, have contributed to containing the expansion of significantly cheaper US production aired on national channels. American TV networks now cover only two thirds of their production costs in their local market. The production costs vary between a half to a million dollars per episode. France, for its part, has interpreted the TV Without Frontiers Directive strictly: TV channels must broadcast no more than a limited number of films per week, of these 100 or so per year, 50% must be French speaking and 60% European produced. Channels invest 15% of their turnover in French language fiction, documentaries and animation and 3% in co-productions. Canal Plus, the pay TV service, must invest 20% of its turnover in films, half of which must be French speaking and specified amounts must be spent on French TV and documentary productions.

In 1995, the WTO observed that it is generally recognized in the European Community that the characteristics of audio-visual services are different and more complex than those of other services. This, according to the WTO, is due to the intrinsic nature of the service itself whose content is a mixture of commercial, technological, cultural and political (freedom of information) parameters and specificities. As regards the access of third country audio-visual products or services in the field of theatrical distribution, no measures exist at community level and the foreign share is still high and rising. In the field of TV broadcasting services, access is limited by the quantitative restrictions of the TV Without Frontiers Directive, however, the general share of foreign audio-visual products broadcasted in the European Community is still growing slightly. As noted earlier, in the Uruguay Round, the EC did not make any market access or national treatment commitments in the audio-visual sector, but rather several article II

224 As discussed, some countries such as the UK are wary of quotas; in other countries, such as Germany, the legality of the Directive has been called into question. The German Constitutional Court opined that the Federal Government had not, in signing the Directive, sufficiently protected the rights of the Länder (Handelsblatt, 23 March 1995). The Länder claimed the quotas violate their constitutional competence in cultural matters.
225 France's share of European films has, however, declined from 55% to 45% in 1993.
227 WTO Trade Policy Review European Union, (Geneva, November 1995) Vol II at 57, more recently, however, on July 1997, the appeals panel of the WTO dismissed Canada's appeal in the Sports Illustrated (Time Warner) case stripping down measures intended to protect the domestic magazine industry including postal subsidies for Canadian magazines and the ban on imports of magazines containing ads directed to Canadians thus treating magazines like any other product.
most favored nation exemptions in order to legitimize its preferences for European works.²²⁸

Film production subsidies, including the pan European Media programming fund,²²⁹ as well as the TV Without Frontiers Directive, have contributed to the positioning of the European audio-visual industry prior to the implementation of the global information highway and the implementation of the principles outlined in the G-7's conference on the Information Society. The development of a common audio-visual market has certainly been very beneficial for European companies involved in that industry.

It is admittedly very difficult for smaller populations with distinct languages to compete in a US dominated marketplace. US Exports to the E.U. in 1993 amounted to 4 billion dollars worth of film, TV and videotape products. European distribution for American audio visual products is particularly well organized by UIP in Europe. EU exports to the US barely totalled 250 million dollars. Only 1% of French films reach the US market. Those products (unlike the wine) don't travel well. Because of the language barrier, French films require subtitles or dubbing, both of which are not well accepted by viewers and in the case of dubbing, costly. Industry practice has consisted mostly in the sale of remake rights. This was the case, for example, for the movie "Three Men and a Baby", originally "Trois Hommes et un Couffin". As mentioned, France represents the second and most profitable film industry in the world with box office attendance surpassing 100 million persons. The share of domestic films shown on its own film market has declined despite subsidies of approximatively 250 million dollars per annum taken from the 11% tax on cinema tickets, the 5 1/2% TV levy and the 2% tax on recorded videotape sales. US production companies depend on box office for 40% of their profits and US demand has plateaued.

As we have seen, subsidies have not, up to now, been a GATT concern. The air time quotas, however, are contrary to the national treatment principle. Though the French enjoy US made films, they supported their government in its decision to exclude the audio-visual sector from the GATT. The insistence by Canada on a cultural exemption clause in NAFTA was strongly supported by the Interfrancophonie, an association of francophone countries. Under GATT rules, treatment of the audio-visual industry must be re-opened for consideration within 5 years of its adoption.

²²⁸ Uruguay Round, Supra note 170
²²⁹ WTO, Supra note 223 at 147. The Media program assists activities related to film production activities such as training and scriptwriting, for example. Media II is funded with ECU 400 million for the period of 1996-2000 and is estimated by the European Commission to be less than 5% of the support provided at the national level.
By then, it definitely will be necessary to take a new factor into account, that of digitalization. For example, the 51% air time quota stipulated in the TV Without Frontiers Directive will be more difficult to meet. Presently, the French film industry produces approximatively 135 films per year. The number of programming hours is expected to increase by at least 30% by 1998.

Nonetheless, satellite TV networks and co-productions are two elements which are likely to continue to strengthen the European industry whose consumer market is as large and as wealthy (higher per capita GDP) as the American market. For the time being, because the regulatory framework for rights and licensing has not been fully worked out and implemented, the reduced cost benefits from exploiting a pan-European potential are not fully realized and it is still necessary to transmit from several platforms to obtain the maximum audience.

Digitalization with the vastly increased number of channels it permits, will in addition to changing the equation for the airtime quotas, engender fierce competition within the broadcasting industry. These channels are likely to be financed in large part by subscriptions. This is because the advertising pie, especially in Europe, as opposed to the USA, is not elastic. Also, traditionally in Europe, TV advertising has been used much less extensively than in the US and has focussed especially on the sponsorship of sports events per se, many of which are aired on TV. Limited European TV advertising budgets can only support a few pan European free channels. These channels, such as BBC World, MTV, NBC Superchannel, CNN and Eurosport are already well established.

Digitalization offers better image quality and more choice. Will consumers take up the cost? Cost of digital decoders is approximatively two to two and a half times that of analogue decoders first of all, because the decoder must include silicon chips to accomplish decompression and multiplexing functions and second of all, because these are not yet being truly mass produced. Third, boxes such as B Sky B’s decoder box, for example, will include a modem thereby permitting interactivity via the phone line. Finally, encryption and compression software must be included. B Sky B in collaboration with BT and the manufacturer, Matsushita, are subsidizing costs for the purchase of the decoders by consumers. On the other hand, if Canal Satellite Numérique is any indication, consumers are interested; its offering in April 1996 quickly generated 200,000 subscribers.

DTH satellite technology's competitive advantage in a digital world

Satellite delivery is presently the only significant commercially operational service offering digital TV broadcasting. Digital cable TV is still in its development stage.
Whereas in the past, satellite technology was an ally for cable TV, the development of DTH consumer receiving equipment for use with medium powered satellites may render cable obsolete, especially in countries which have not yet invested heavily in cable networks and considering the latest Ku-Ka band satellite generation which permits interactive communications.

Most installed cabled infrastructure is narrow band thereby limited to 20 or so channel capacity in analogue transmission mode. According to UK studies, setting up new cable infrastructures and upgrading currently installed cable infrastructures to accommodate digital services is more expensive to carry out than to use DTH satellite TV platforms.\footnote{WDTR, Supra note 73. Cost would be 9 billion$ for satellite and 50 billion$ for cable. Of course, the UK is not heavily cabled.} In general, because of the cable industry's level of indebtedness, at least in the heavily cabled North American market, such huge investments in cable are unlikely unless that industry can capture the telephony market or attract cross-sector investors such as has recently been the case with Microsoft's Bill Gates' acquisition of an almost 15% stake in Comcast (the 4th largest US cable player with 4.3 million subscribers) for 1 billion dollars.\footnote{L. Kehoe, "Microsoft take $1bn stake in cable" The (London) Financial Times, (10 June 1997). Microsoft has a high stake in becoming the leading supplier of software for interactive multimedia services and seeks to influence the technical standards for digital TV in a way that favours Microsoft products.}

There is no doubt that the combination of the broadband path satellite technology with the Internet and interactive services leads to exciting new applications which will involve the linking of satellite broadcasting to the home PC either through the Local Area Network (LAN) or through a smart card interface/data broadcasting circuit board installed in the PC.\footnote{Such a product, DirecPC, has been developed by Hughes, the satellite manufacturer and DirecTV satellite operator. Hughes Communications' 5.1 billion dollars Spaceway project, involves a system permitting mass (geared to 5 million customers) interactive video conferencing, telephony and data interchange via 20 geostationary Ka-band satellites. The Teledesic MSS project initiated by C. McCaw and Bill Gates, involves 840 Low Earth Orbiting (LEO) satellites or a lesser number (200 range) depending on the launch facilities used and the orbit height of the satellites. It has received FCC approval notwithstanding the physical dangers it poses on account of the probable "cascade effect" which can result from space debris colliding in low orbit. Also, approval has not been generally sought for the use of the mobile earth stations in other countries, although ITU frequency coordination is being carried out. Obviously, in countries where telephone monopolies are still in place, the use of parallel (bypass) services such as Teledesic's would be illegal. On the other hand, ICO Global Communications of the UK (an offshoot of Inmarsat) is promoting a similar project, though more modest in cost (2.6 billion $ of which half has been raised) and involving a lesser number of satellites (15) which are not in low orbit.}

\footnote{1997}
Though interactivity is certainly very important for business uses, there is no conclusive proof yet that consumers find it essential for entertainment such as TV. In fact it is well known that TV is successful precisely because it is effortless for the viewer. TV penetration is much higher than PC penetration and no conclusive evidence exists that television should be systematically tied to the PC, a medium associated more with work and effort and narrow casting than with entertainment and broadcasting.

At the end of 1995, satellite TV with 260 channels in 24 different languages served 120 million households across Europe out of a total of approximately 257 million TV households. 31% of these households received signals over DTH equipment and this represents well over 20 million households in Western Europe and approximately 6 million households at least in Central and Eastern Europe. DTH is an important reception mode in Europe as compared to North America where it represents a mere 5 to 6 million households, though this consumer base is set to grow to as high as 40 million within the next 5 years according to American DBS companies.

The American satellite broadcasting industry has apparently suffered a setback with Rupert Murdoch's "retreat" from the business as announced on June 12, 1997. In a billion dollar deal, Mr. Murdoch agreed, in exchange for a 30% non voting stake and airtime for News Corp's cable programming channels (the recently acquired Family Channel (67 million subscribers), Fox Sports, Fox News and FX, the newly launched entertainment service), to sell his satellite assets: 2 high power satellites and the last available federal license for US wide coverage, to Primestar, the second largest US satellite broadcaster with close to 2 million subscribers. The Primestar satellite business is owned by a consortium of the largest US cable operators. Prior to the deal, Primestar used medium powered satellites. In theory, it will be better positioned relatively to number one DTH satellite broadcast operator, GM Hughes' DirecTV. Since the 1996 Telecommunication Act, US authorities are more anxious than ever to ensure competition and are now stricter with the cable industry. Regulatory approval may therefore be subject to conditions such as the surrender of satellite capacity.

Apparently, as gone over in detail in the first Part of this thesis, the market definitely sees and has proved to a considerable extent, DTH's competitive advantages. It is appropriate to recall here a few of the most salient market figures.

233 *Merrill Lynch Report, Supra* note 7-1 at 82 and 113
Broadcasting services account for most of the revenues of the European satellite operator, SES, the world's most profitable, achieving 91.1% in terms of profitability mainly due to its "hot bird" positioning (at 19.2 degree E) in the video market which commands high per transponder prices. According to Merrill Lynch analysts, this sector is set to grow considerably. Satellite operators between 1993 and 1996 have completed public offerings worth 3.4 billion dollars. Based on past growth rates, orders and plans for new satellites, expanding economies in the Far East and additional demand expected as an effect of digitalization, the value of the world commercial market for satellite services (excluding manufacturing and launch services) is projected at between 200 and 278 billion dollars over the 10 year period between now and 2006 averaging 24 billion dollars per year. The largest revenue stream is expected to come from geostationary satellites and the provision of broadcasting services therefrom.

Video transmission services will be the principal service provided by satellites. Whilst in developing countries, satellites are mostly used for providing telecom services, in North America and Europe, telephony is mature and satellites are used for broadcasting. In rapidly expanding nations such as South East Asia, satellite technology will be the technology of choice to offer quick means of achieving teledensity.

Satellite technology is ideal for TV broadcasting, it is ubiquitous and the DTH satellite mode of transmission is an efficient use of the frequency spectrum because it does not use precious terrestrial radio spectrum necessary for new terrestrial narrow band wireless services. Up to now, broadcasters have not been paying for the huge (broad band) portions of the spectrum they use. Eight new broadcasting satellite launches (before 1998) are planned by SES and by Eutelsat (which also has a "hot bird" position (at 13 degrees E)) and these are firmly booked. Most of the newest and planned satellites have DTH platforms. In Western Europe, the most developed DTH TV penetrations are in Germany (5.3 million households), Austria (close to 1 million households), Scandinavia (about 1 million households) and the UK (3.6 million households).

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235 In terms of efficiency of revenue generation. DirecTV leads the pack if one includes its retail services. Operators focusing on videobroadcasting have been the most profitable in terms of per transponder revenue.

236 Merrill Lynch Report, Supra note 7-1 at 5
237 Merrill Lynch Report, ibid. at 87

238 The biggest European satellite operator and third largest worldwide.
239 "hot birds" have operational advantages such as the co-orbital slot location of multiple satellites thereby enabling many channels in the same orbital placement to be accessible to an installed consumer base.

240 Germany and the UK are also Europe's largest cable markets. In the UK, under the Duopoly Review Act of 1991, cable companies were authorized to offer both TV and telephone services. In Germany, there are several free to air stations and in the Netherlands, DTH has been discouraged by legislation.
. World TV content on satellite offerings

At this point, it is useful to take a glance at a sample of the clients of the principal operators. Among Intelsat's clients are the Discovery Channel, BBC Prime, Muslim TV, Italia 1, Canale 5, Iran TV all of which broadcast in the clear and the encrypted TNT/The Cartoon network. Nethold (now affiliated with Canal Plus) is a multiplex pay per view client on Intelsat's digital service satellite.

Eutelsat carries many national TV stations in the clear such as Serbia's, Emirates Dubai (Hot Bird 2), Croatia's, Morocco's, Egypt's, Romania's, Algeria's, Tunisia's, Deutsche Welle, Rai Uno, Due and Tre (Hot Bird 1) as well as BBC World, NBC Europe, Eurosport (Hot Bird 1), TV5 (Hot Bird 1), MTV (encrypted) and Canal Plus (encrypted). Viacom is also a multiplex (includes MTV) client on Eutelsat's digital service. TPS of France is also a multiplex (including CNN(GB), BBC World & Prime) client on Eutelsat's digital service. Clients of SES/Astra offering programs available to consumers DTH include, of course, ASkyB. ASkyB operates many pay TV (encrypted) channels such as Sky Sports, Sky Movies, Sky Soap, Sky Travel. Other clients also offering encrypted channels are Granada Plus, Fox Kids, Première, the Movie Channel, UK Gold, The Disney Channel, Nickelodeon (UK), The Family Channel, Discovery Channel, Playboy, Paramount Channel, The Warner Channel, The Chinese Channel and Zee TV. Home Order TV, MTV, Nickelodeon (Scandinavia and Germany) Sky News, TNT are other clients which broadcast in the clear.

Clients of SES/Astra's digital service are the Kirch Group, a multiplex client which carries encrypted: NBC MTV (Germany) and The Discovery Channel. Canal Plus is also a multiplex client which carries the encrypted channels CNN and TNT; its affiliate, Nethold, a multiplex client as well, carries the popular "Veronica" Channel and the encrypted NBC channel. Première is also a multiplex client of SES/Astra and offers pay per view.

In contrast, if one looks at the programming offered by DirecTV in the US, (Hughes Corporation's satellite broadcasting arm) out of 200 or so channels offered, few are foreign. Hughes has also made it clear that it will use its state-of-the-art HS601 digital technology, conceived for high powered satellites to beam DTH into all Asia, South America and European markets.

European regional TV faces obstacles, which the North American industry does not face to the same degree, such as different languages, different viewing habits and different national consumer profiles for advertising and marketing purposes. These challenges are being met. Obviously, due to language barriers, programs with sports,
musical content, international news or documentaries are the best suited for pan European audiences. Different viewing hours are addressed by having a mix of the same programming available on different channels that accommodate each culture. For example, movies are shown very early in the evening (5 or 6 pm in Germany and Holland). Movies are subtitled in the language of the principal audience expected at the time of the airing.

Top European pay TV cable operators' multi-channel strategy

As explained previously, and in accord with Merrill Lynch estimates, broadcasting revenues from Pay TV are set to surpass advertising revenues. Let us take a closer look at European pay TV and European free to air TV to better appreciate the implications for regional TV. Pay TV with its over 16 million subscribers, is a slow starter in Europe in comparison to the USA where it has achieved 65% penetration. The key elements of success in European pay TV are the same as in the US and revolve around the airing of live sports and blockbuster films. European consumers, however, as is well known, are more circumspect and less consumption prone than Americans.

Canal Plus, indirectly owned by large French waterworks companies, is by far the top (Revenue 1.9 Billion dollars, earnings 125 million dollars) pay TV operator in Europe by number of subscribers. Formed in 1984 under the direction of François Rousselet, a close friend of then President François Mitterand, it grew from 200,000 subscribers to 10 million subscribers (with the recent acquisition of NetHold, the Dutch cable group). Canal Plus adapts different ownership structures in accordance to the requirements posed by the various countries in which it operates and works with local partners. Canal Plus basically offers one channel which is distributed across France, Spain, Germany, Belgium, Poland and Africa (as well as Italy, Benelux, Scandinavia, Greece and Central Europe since the acquisition of NetHold) via terrestrial, satellite delivered DTH or cable TV platforms. As Canal Plus goes digital with the digital service it launched last year,

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241 Merrill Lynch Report, Supra note 7-1 at 116. in 1996, TV revenues come 38% from advertising, 32% from subscription pay TV and 28% from nationally collected license fees.

242 The highest European Pay TV penetration rates are in Ireland, the UK, France and Spain. Though Germany has a low pay TV penetration it represents a relatively important number of subscribers (as high as Spain) because at 37 million it is the market with the highest number of TV households in Europe, followed by France, Spain and Italy each in a 20 million range of TV households.

243 In Europe, cable first developed in the Low countries which depended heavily on foreign transmitted programs. Dependence on foreign programs was not the case, for example, in the UK and France. The use of cable in those countries was related to achieving better signal clarity. However, the population in most regions adopted the solution of installing large roof top aerials. In Germany, cable penetration at 48% of households is high, however, cable is used to achieved better signal clarity of the free to air TV. In Germany, cable is provided for at a nominal fee and not as a pay TV vehicle.
which garnered 200,000 subscribers in the first eight months of operation, the number of channels will increase. Canal Plus provides decoders to its clients on a rental basis and charges an additional eleven dollars approximatively for digital services. New channels will focus on niche markets offering parliamentary news, wildlife and history programs, for example. Advertising represents only 5% of Canal Plus' revenues. The digital bouquet launched in co-ownership with Pathé is Canal Satellite Numérique in France and it is beamed from Astra 1, as is NetHold's FilmNet for Benelux viewers and Sogecable for Spanish viewers. Canal Plus may benefit from the recently elected French Premier (Lionel Jospin) and his team’s disagreement with France 2 and France 3’s exclusive deal with TPS (Télévison Par Satellite) in which both public broadcasters are large shareholders along with CLT/UFA. In addition to the digital bouquets already launched, three other digital launches are planned in 1997: Première, in association with Bertelsmann on the Astra 1 satellite, canal TVCF and Canal Plus on the Astra 1e/f satellites for Belgium and the Netherlands.

Canal Plus has a film library catalog which is second only to the Kirch Group's catalog, however, Canal Plus' covers more territories. French, American and European programming products are represented in roughly equal proportion in Canal Plus' catalog. The number of feature film titles in its catalog, 4,800, rivals Time Warner's 4,400 titles. Canal Plus possesses valuable titles since its acquisitions of Carolco's (Rambo, Terminator) and Dino De Laurentis' (classics such as The Graduate, King Kong) catalogs. The Canal Plus catalog also includes 2,480 hours of drama series, 330 hours of animation and 420 hours of documentaries including National Geographic and Turner specials. Canal Plus has broadcasting, distribution and film and TV production interests. The focus of Canal Plus is on establishing agreements with independent producers thereby ensuring access to product: on acquiring rights to TV drama and on acquiring TV rights to feature films.

The other important pay TV group is BSkyB. Forty percent owned by Newscorp, BSkyB has 6 million subscribers. Advertising represents only 11% of its revenues. It is highly profitable with operating profit, excluding Ireland, of 315 million

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244 Canal Plus puts up minimum guarantees for rights. For example, in exchange for the acquisition of theatre and video rights to 4 blockbusters a year from M. Medavoy's Phoenix Pictures, Canal Plus puts up minimum guarantees.

245 For example, Le Studio Canal Plus has co-production agreements with Bridge UK and its partner Sony, to produce high end English films. Canal Plus documentary production groups are Ellipse and Doc Star, the latter has a joint venture with National Geographic.

246 Other pay TV operators such as Telenor, HBO Central Europe (Time Warner), Kirch's Tele Club, Kinnevik's TV 1000 and Lyonnaises' Multivision PPV subscriber bases vary between 100,000 and 300,000.
pounds on total revenues of 1.1 billion pounds.\textsuperscript{247} Formed in 1990,\textsuperscript{248} BSkyB, is owned by News Corp. (40%), Pathé (16.9%) and Granada (11%). It has 28 channels and is focused especially on sports. A digital pay TV channel is planned this year over the UK on Astra 2A. It is expected that following pressure from the British industry regulator, the Independent Television Commission (ITC), BSkyB will sell its 33% stake in British Digital Broadcasting (BDB) to the group's other two partners Carlton Communications PLC and the Granada Group PLC if BDB obtains the licenses. The ITC is concerned with preventing one company from holding too much power in the industry. In any event BSkyB would retain its program supply agreement with BDB and BSkyB is involved in another consortium (BT, Midland Bank & Matsushita Electric) for the introduction of digital TV services.

In Germany, pay TV penetration is small at 4% (1.4 million subscribers approximatively). UFA's\textsuperscript{249} Première is the only pay TV channel. It is owned by Canal Plus (37.5%), Bertelsmann (37.5%) and Kirch (25%).\textsuperscript{250} It is expected that Canal Plus will give up its holding in Première allowing Kirch and CLT-UFA to each raise their respective stakes in Première to 50% and Première to have access to Kirch's catalog. Première and the Kirch Group will share the same decoder, that is, the one developed by the Kirch Group. Seventy percent of Première's programming is delivered via cable and 30% via DTH. The channel offers sports and films. A digital bouquet is offered by DF1 which belongs to Kirch and B SkyB but the programming does not match Première's.

Kirch's year old DF-1 TV channel at 40,000 subscribers has failed to garner the projected objective of 300,000 subscribers. This considerably dampens Kirch's ambition of gaining control of the potentially huge digital TV sector in Germany. As noted above, a digital pay TV launch is planned by Première this summer on Astra 1. Première's part owners, CLT/UFA (Bertelsmann) have recently launched a terrestrial channel, channel 5 in the UK. CLT/UFA with Lyonnaise des Eaux own TPS, the digital subsidiary of M6 (music). TPS garnered 100,000 subscribers in the first three months of operation. It carries movie and thematic, including women's and sports programming, Arab services on an optional

\textsuperscript{248} BSky B is the result of a merger brokered by then Prime Minister of England, Margaret Thatcher, following a protracted fight between Sky and BSB. The deal was concluded following the realisation that the market could not support two pay TV operators.
\textsuperscript{249} UFA, the TV division of the German entertainment giant Bertelsmann and the leading German TV production group with 4 free TV channels, including Germany's RTL, the market leader, merged this May with CLT (Compagnie Luxembourgeoise de Telediffusion) parented by Audiofina, a French, Belgium and Luxembourg holding company and Groupe Bruxelles Lambert. (CLT/UFA revenue: 3 billion $, earnings: 105 million $) CLT has been crossing borders as early as in the 1930's to launch stations in Germany, France, Belgium and in the UK.
\textsuperscript{250} Kirch has reportedly spent 6 billion $ to tie up pay TV rights.
basis, as well as French networks TF1, France 2, France 3, Arte 2 and M6. TPS is carried on an Eutelsat satellite.

The use of DTH-TV's pan regional reach by non-pay broadcasters

Germany's leading free to air TV channel, RTL, which presently belongs to the CLT/UFA group, has dealt with the challenge of gaining access to reasonably priced TV product by producing its own programs (talk shows, game shows, erotica and sports). Today, it is well supplied with TV production output deals with American majors such as MCA/Universal, Columbia Tri Star, Warners and Buena Vista. However, half of its production is domestically produced and access to such less expensive product is key to achieving profitability. UFA's strong production facilities, and favourable co-production agreement with Paramount, are part of CLT/UFA's strategy to obtain programs for prices midway between in-house and licensed TV productions. Acodi, which handles the productions destined to French viewers, has established co-production agreements with UK's Cloud Nine and Keystone (Disney) whereby, in exchange for putting up half the finance, CLT obtains rights to the European market. Apart from RTL, Pro Sieben (controlled by Leo Kirch's son) is another important (though relatively underperforming revenue wise) broadcasting heavyweight in Germany. Unlike RTL, Pro Sieben focuses on presenting Hollywood movie packages. The initial public offering of Pro Sieben in July 1997 of 17.5 million non-voting preference shares (72DM) was 50 times oversubscribed. As of July 9, 1997, shares closed at 94 DM (54$).

A brief survey of the principal non-pay pan European satellite delivered TV channels reveals that most of these have relatively small numbers of viewers, but substantial reach across the region as a whole. Three French language channels, Eurosport (owned by TF1, Canal Plus and ESPN) with an audience of 67 million households in 43 European countries, Euronews (owned by Alcatel and public service broadcasters) with an audience of 82 million homes in 38 European countries and Mediterranean countries and TV5 with an audience reach of 46.2 million homes in 29 European countries (in addition to 12 million homes in North America, 3 million in Latin America and 1.5 million in Africa) and 3 English language channels: NBC Superchannel UK, MTV Europe UK and CNN International, allows them to dominate the market.

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251 The Discovery Channel, TNT/The Cartoon Network, EBN (European Business Channel) TCC (Children's channel) are also present along with a few others such as ETI, RIK and RTM which serve the purpose of linking scattered minorities such as the Greeks and Chypriots living in the UK and the Moroccans living in France. Deutsche Welle Fernsehen, on a more modest scale than BBC world which promotes English culture worldwide, is available in Eastern Europe and aims to promote German culture. NHK, through its regional satellite broadcast aims to promote Japanese culture in Asia. Turksat serves to extend Turkey's influence in Central Asia and in the Balkans.
BBC World Television, accessible on 5 continents since 1993, and reaching 23 million European households, should obviously also be included. MTV Europe is based on the MTV global network owned by Viacom and reaches 250 million households worldwide, 41 million of which are in Europe. CNN, owned by Turner Broadcasting, now part of Time Warner, reaches 170 million households worldwide (but the number is declining), 75 million of which are in Europe. The service is now broadcast in Spanish, Japanese and Scandinavian languages. Finally, NBC Superchannel UK is owned by Shoelanco and Virgin Management and reaches over 60 million households in Europe. Its business news channel reaches over 10 million European households.

All of these non pay regional broadcast channels use satellite transmission. Reception is either via DTH/SMATV or cable. Like CNN, the two top French language channels are broadcast in different languages, Eurosport in eleven different languages and Euronews in five different languages. Whereas the Eurosport channel is dependent on advertising for funding, Euronews is subsidized by public organizations such as local bodies, European governments and the European parliament. The other top French language channel, TV5, is funded by Francophone government sources with a view to promoting Francophone culture.

In the context of this paper, TV5 (over 50 million homes worldwide) merits special attention because of its ownership structure, content and world reach. Paris-based TV5 Europe is an association of francophone TV networks which includes RTBF of Belgium, SSR of Switzerland, France 2, France 3, INA, Sofirad and the Montréal-based consortium Québec-Canada which includes the principal Québec and Canadian broadcasters as well as the European members of TV5 Europe. The program schedule is composed of its members' best productions. Emphasis is on information, 15 newscasts a day are presented, on education and recreation as well as on constituting a North/South window. This latter focus is a particular challenge as third world programming is still weak. Programming is broadcast 24 hours a day and is available in 100 countries thanks to 4 satellites. In the province of Québec, TV5 has obtained a market penetration of approximatively 4%.

Satellite technology can also be used as a political tool. For example, Arabsat brings Arab and non-Arab muslims together across the Middle East and in Africa as far south as Zaire.

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252 Europe and North Africa are served via Eutelsat II F1, Africa and the Middle East via Statsionnair, Latin America and the Caribbean via PanAm Sat and North America via Anik E1
It certainly appears from all of the above that Europe has consolidated and fully controls its audiovisual industry. Policies put into place by Margaret Thatcher and François Mitterand, for example, reflected their inclination to perceive new technology as an opportunity, rather than as a threat. As a result, the UK and France are not extensively cabled and can now benefit more rapidly and at less cost from the advantages of a technology which is ideal for broadcasting and regional TV.

The promise of DTH in other regions of the world

The promise of DTH TV also holds true for other regions of the world as well and satellite broadcasters make accommodations for language and cultural differences as well as for monopolies and restrictions on uplinking by doing deals with domestic partners. News Corp's STAR TV (HK), for example, which broadcasts from Asiasat's satellite has, over the past two years, adopted a narrowcasting strategy whereby specialty programming is destined to niche markets. Over 150 satellite TV channels are available. For the most part, these are offered in roughly equal proportion in English, Japanese and Chinese.

India and the rest of Southern Asia represent a population of approximatively 1 billion people. Over 500,000 households are DTH TV equipped. Most of the less than 100 channels are offered in Hindi and Urdu. NewsCorp's STAR TV is launching news channels in cooperation with Zee TV, India's first and largest private broadcaster. NewsCorp is backing another satellite broadcasting project there, ISkyB. Doordarshan, by far India's largest TV broadcasting player with 75% of the TV viewing market, carries several American networks such as CNN, ESPN, Discovery Channel and HBO. These networks are working on projects to offer pay TV in collaboration with Doordarshan.

In Latin America, Hughes DirecTV, in order to circumvent local uplinking restrictions, is involved with local partners. Its partnership, Galaxy Latin America, sees a potential for over 25 million DTH satellite viewers. The understandably largely undeveloped Pay TV market representing only a small part of an approximatively 70 million TV households market, has so far adopted DTH TV in preference to cable.

In Eastern and Central Europe, DTH TV households represent approximatively 10 million households. Russia accounts for most of the region's 80 million TV households and it is heavily regulated. In Central Europe half of the region's less than 50 satellite TV channels are offered in Russian and the Russian Satellite Communications company carries many of the channels. Eutelsat with 3 channels nonetheless retains a presence over the region.

There is no doubt that the concept of regional and world TV is taking hold.
PART III: The influence of global corporate strategies and of politics on the regulatory environment and on the outcome of the race for a controlling share of world TV

THE INFLUENCE OF INTERNATIONAL POLITICS ON THE DOMESTIC AND INTERNATIONAL REGULATORY ENVIRONMENT

The crumbling of the wall between telecom and broadcasting; the advent of global competition as a *sine qua non*

Policies and principles advanced under international trade agreements are obviously very influential on domestic policies and the regulatory framework, especially in the countries having a stake and seeing an advantage in playing by the rules developed, in large part, by the USA. Once adopted, international trade agreements imply the reform of the domestic regulatory environment and out and out lobbying is rendered somewhat less effective.

Though not presently covering broadcasting and the cultural industries, the General Agreement on Trade in Services (GATS) agreement on basic telecom253 concluded in February 1997 by 60 countries representing 90% of the world telecom market involves254 deregulation, competition and market access. In the context of the Global Information Infrastructure (GII), which provides for a seamless interactive global information network carrying images and messages including entertainment, broadcasting, especially pay TV, is bound to be affected. Another agreement, the Information Technology Pact255 to be concluded under the WTO auspices will give added impetus to the GATS telecom

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253 *GATS Basic Telecom, Supra* note 67  GATS also includes the 1994 Annex on Telecom which like NAFTA covers enhanced telecommunication services. The essence of a "basic" telecom service is that the message is carried through the communications network without being changed. GATS Annex on services and 2. *North American Free Trade Agreement, NAFTA*, 22 december 1991 available in Lexis Library, Extra File s.1310.

254 *I. Supra*, note 67 at s.XXXVIII. Major suppliers must not engage in anti-competitive practices and the owners of essential facilities must offer interconnection at non-discriminatory cost-oriented rates. The term suppliers includes all legal entities whether privately owned or governmentally owned, including any corporation of GATS definitions of "service supplier" and "person". 2. *The Canadian Telecommunications Act*, s.c. 1993c. 38 is to the same effect.

255 *The (Toronto) Globe and Mail*, (26 March 1997) B.10.3 The current global IT market is evaluated at 500 billion dollars. Duties in most of the 40 participating countries, for fibre optic cable and telecom equipment would end by the year 2000.
agreements by lowering the costs for consumer telecom hardware and software equipment. The current regulatory approach is technology neutral. Technology permits borderless circulation of messages and images over different medium i.e. cable, wireless, fibre, satellite DTH. The traditional wall which existed in many countries between telecom and broadcasting is crumbling. These sectors, and especially pay TV operators, not only must compete globally with one another, but face competition from telecom companies and other information highway service providers. There is apparently no turning back considering that technology is there and that it is already being put to use.

The concept of a Global Information Infrastructure was given official credence in March 1994 by US vice-president Al Gore at the first World Telecommunication Development Conference of the ITU. It was defined by Gore as a "planetary information network that transmits messages and images with the speed of light from the largest city to the smallest village on every continent." Five principles were said to underly the implementation of the concept: private investment, competition, flexible regulation, non-discriminatory access and universal service.

In the context of the Information Society, in which information has gained an importance equal to land, labour and capital as a factor of economic output, and in the context of technological developments in computer network applications and their widespread use by banks and large manufacturers, for example, and by consumers to a lesser degree and especially in the USA, Switzerland and Australia where PC penetration is the highest, the birth of such a concept is not surprising. At a meeting of the G7 countries, in February 1995, a Ministerial Conference on the Information Society embraced the concept of a global information infrastructure. Eleven programmes and eight principles were agreed upon. These were endorsed in June 1995 at the Halifax summit of Head of States. The principles reflect those stated by vice-president Gore except that universal and non-discriminatory access is referred to as open access and new principles are added providing that the first four (private investment, competition, flexible regulation, open access) are to be applied whilst ensuring universal provision and access to services, promoting diversity of content and realizing the need for worldwide cooperation with particular attention to developing countries. The GII concept has been embraced by non-G7 countries such as Korea, for example. In practice, Korea has set objectives such as having fibre to the office in major organizations in large cities by 1997, fibre to the curb by the year 2002 and fibre to the home by the year 2005.

In many countries, governments have elaborated further on the G7's, GII policy and eventually intend to regulate when the systems being developed by private enterprise take

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256 Over 2.3 trillion dollars worth of financial transactions travel electronically over one network daily.
on a more definite shape. Precise time objectives for implementation have been set out in some of the G7 countries. Japan, for example, intends to have the network completed by the year 2010 and 100% of its population covered. Many incentives have been established to encourage the the 300 to 500 billion dollar network, with underground installations requiring an additional 400 billion dollars. The US aims to have all schools, hospitals, clinics and libraries connected by the year 2000. In accordance with the technology neutral approach, networks may be optical fibre, coaxial cable, satellite or copper wire. Access will be provided through smart televisions, portable wireless computers and other devices. The 1996, US Telecommunications Act opened competition in local, long distance and TV markets and lifted restrictions in cross-ownership. Experience so far in the US demonstrates that domestic competition (even managed) and deregulation are not easy goals to achieve, or to encourage. Also, jurisdictional issues sometimes compound difficulties. In Europe, the approach has been via the launching of pilot projects. An important goal there is the creation of a broadband infrastructure interconnecting telecom, cable and satellite networks. France Télécom, with its Minitel interactive video text service, may very well be a pioneer in the offering of enhanced telecom services to the consumer. Canada's plans are indefinite though ambitious: Its goal is to build the "highest quality low cost information network in the world" and its policy is that competing carriers should have full access to each others services, other than capacity used for carrying broadcast signals. It is gradually opening competition in the telco and TV program distribution markets. One of the policy objectives stated in the Canadian Information Highway Report of April 1994 is the reinforcement of Canadian sovereignty and cultural identity.

Most countries recognize the need for a global set of rules applicable by governments. The USA has taken the lead in that regard, but it appears that Europe, particularly under Germany's leadership, has also been developing a GII code establishing important principles such as the responsibility of the service provider. The code is expected to be the model in the EC. Given the GII's global nature, most participants understand the need for a global code.

Notwithstanding marketing strategies and the politicians' clear wish to see a GII or network of networks, the fact remains that it will ultimately be up to consumers to decide. Though presently TV remains separate and telco's are limited to offering video on demand

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257 P. Morton, "US Phone Deregulation Set-Back", The (Toronto) Financial Post (19 July 1997) For example, an 8th Court of Appeals ruling (St. Louis) ruled in mid-August that the FCC had over reached its jurisdiction in attempting to develop national pricing rules on telecom because the regulation of telephone falls under state control.
(VOD), this may evolve as regulatory restrictions on content diminish and telco's obtain broadcast licenses. TV is part and parcel of the GII concept as it now stands.

The erosion of national sovereignty; the shift in the mandate and operating mode of established international organizations.

As Hudson Janisch suggests, "participation in an international trade regime clearly does derogate from national control, and to some considerable extent."258 Also,259 "We have to start thinking about the large scale implementation of international principles in what we have up to now been domestic policy forums." According to the EC, this should apply to the US as well.260 However, the US's draft rules aimed at enshrining the February WTO telecom agreement, are according to the EC, inconsistent with the WTO pact.

National sovereignty is being eroded somewhat in the face of trade rules and technology. Concurrently, as discussed earlier in this thesis, international organizations: the ITU,261 Intelsat and Eutelsat and the regulatory framework as we know them are in a state of flux as these adapt to new international agreements and trends. As for space law and COPUOS, Francis Lyall states the issues clearly and starkly:

What will be International Space Law? I come from a small jurisdiction, Scotland—where the law and the legal system have suffered through having a large, insular and introspective neighbour. More recently, Scots law has been swamped with English and American concepts


259 H.N. Janisch, "Domestic Impact of International Developments" (Address to the 1997 Telecom, Cable and Wireless Summit. Insight Conference. 19-20 February 1997 Toronto) overhead #27

260 "EU slams proposed US telecom laws.“ The (Toronto) Financial Post (6 August 1997) 11. The EU is concerned with the FCC's draft (July 1997) text on foreign participation in domestic telecommunications because it maintains broad and unclear public service factor in licensing decisions and allows factors like law enforcement, foreign policy or trade concerns to play as well as the "very high risk to competition" as reason for licence refusal. Also "EU Warns US on Telecom Satellite rules", The (London) Financial Times (6 September 1997) 4. The US rules would allow the US to deny access to foreign operators to sell digital satellite services on vague "public interest" grounds or if they represent an ill-defined very high risk to competition. Foreign operators would be allowed access only if their home countries pass a reciprocal access test.

261 ITU Report on Trade, Supra note 107. It is advanced that frequency spectrum allotments and standards setting at the supra national level may well become trade issues and eventually be submitted to the WTO's Dispute Settlement Understanding (DSU) procedure implying eventual trade relation which gives GATS a degree of enforceability. Recently, by unilaterally establishing benchmark rates, the FCC has shown some impatient with the ITU's multilateral framework.

regarding the exploration of the North Sea oil fields (...) I note that the Law of England as applied to maritime matters through the Admiralty Court had significant impact, and became for most purposes international maritime law because of the dominance of the English forms of contract and of English courts and arbitral procedure in settling maritime disputes. (...) History therefore leads me to suspect that US Law may become the International Space law - unless we foreigners are very careful and determined. (...) By reason of its technical skills, its domestic market and its entrepreneurial attitudes, the USA is a major leader in space matters. That lead may result in much US Law becoming the language in which problems are discussed and solved. The US is pressing ahead with developing legal concepts that can deal with the problems which emerge in space.262
The FCC has certainly put this doctrine in play when it releases policies regarding these issues as we will examine later on in more detail in the next part of this thesis.

. Increasing numbers of mergers and alliances may threaten pluralism in the media; a shift away from demand management affects regulators

Finally, as we have seen, competition authorities are trying to guard against concentration of the media in order to guarantee pluralism. In the past, pluralism in the media was somewhat constrained by the scarcity of frequency channels. This necessarily limited the number of broadcasting licensees (and other spectrum users) and this justified the regulator's jurisdiction over content. New approaches to the way services are regulated need to be developed. As we have noted, the limit, with the advent of digitalization and DTH TV technology, is disappearing and attention is shifting to demand stimulation, rather than demand management. Hence, shifts in marketing and tariffation approaches are also under way. So far, in Europe, the EC competition authorities have been circumspect in the appreciation of mergers and alliances in the broadcasting industry as compared with decisions relating to telecom.

. THE INFLUENCE OF DOMESTIC POLITICS ON MAXIMIZING ACCESS TO A CONTROLLING SHARE OF THE REGIONAL OR WORLD TV MARKET

. "deregulating regulators" (not industry) are initiating change to implement national strategy

Globalization, largely a consequence of the application of competition principles, deregulation and market access, is the current trend. Is industry pushing regulators or are "deregulating" regulators pushing industry? Though the two forces undoubtedly act in

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262 Law and Space Telecommunications, Supra note 62 at 419.
synergy, it is interesting to note that economics, trade and peace are the current driving principles of US politics. The American negotiators of the World Trade Organization (WTO)\(^{263}\) at a recent session in Washington, affirmed\(^{264}\) that "they have succeeded in exporting American values, especially a commitment to the undoubted virtues of competition." This is echoed by acting USTR Charlene Barshefsky's comments\(^{265}\) in February 1997 following the successful conclusion of the GATS agreement concerning basic telecom. GATS principles underlying the trade in services regime, such as transparency, progressive liberalization of laws, national treatment, most favored nation and market access are challenging even the strongest telecom companies.

Undoubtedly, increased competition, and hence globalization, is rendered possible by technological developments in telecom, particularly since the application of computer technology (digitalization and switching) to that sector. Telecom represents a 880 billion CDN dollar\(^{266}\) market worldwide. As a whole, the information communication industry (which includes the telecom, computing and audio visual sector) represents 6% of the world GDP and is growing at 2 times the rate of the rest of the economy. According to the WTO's Director General, ending government and private telecom monopolies will add up to 1 trillion dollars to the world economy over the next 10 years.\(^{267}\)

The telecom sector is seen as the modern trade route for goods and services.

Satellites, the ideal platform for regional and world TV, are an essential element of US and European strategy in the ongoing space race which is dependent on satellites for communications. Since the end of the Cold War, we are seeing a trend towards aerospace and defense mergers such as Boeing/McDonnell Douglas which was approved in the US has finally also passed EC review. These companies must derive funds from commercial applications of space technology to partially finance current expensive space R&D projects which are critical to maintaining a competitive advantage in the world economy, to retaining high tech jobs and to evolution.

President Clinton, after his re-election in November 1996, stipulated that "China is the main issue of my second term."\(^{268}\) No doubt, DTH TV technology will be on the agenda at some point in the trade talks preliminary to China joining the WTO.

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\(^{263}\) The WTO organization formed in 1995 under the Marrakesh Final Act, April 15 1994, includes 110 member countries (not yet China). Its mission is to administer GATT and GATS

\(^{264}\) \textit{Era of Globalization, Supra} note 258

\(^{265}\) \textit{The New York Times,} 17 February 1997

\(^{266}\) Industry Canada, News Release, "Canada Welcomes Telecom Deal" 1 (15 February 1997)

\(^{267}\) \textit{The (New York) Wall Street,} (18 February 1991) B1

\(^{268}\) "China Survey" \textit{The (London) Economist,} (8 March 1997) 22
A dwarf compared to telecom, the broadcasting cultural industry's "special treatment" is at risk.

The Administration in the White House wants the issue of cultural exclusion and exemption lifted out of GATS and the North American Free Trade Agreement 1992/ Free Trade Agreement between Canada and the United States of America 1989 (NAFTA/FTA) sections XXIX(2), 2101 and 2005 respectively. This would maximize access to Canadian and other GATS member markets. In its view, programming should be assimilated to other types of products and services. The matter was a sticky issue between France and the USA. The late President Mitterand and Jacques Delors, EC President, made sure the cultural exclusion remained in place in the GATT agreements. The late President Mitterand stated that "a society which abandons the means of depicting itself would soon be an enslaved society". As far back as 1984, an EC directive was issued entitled "Television without Frontiers: Green Paper on the Establishment of the Common Market for Broadcasting especially Satellite and Cable" in which the organization refers (p.33) to the "steps to be taken to counterbalance the dominance of the big American media corporations."

This may not be a case of "Vive la différence". While the US view on copyright is concerned with free speech based on economic theory with a view to supporting a strong entertainment industry (publishers, producers, distributors), the French approach is focused on the individual, the author and is more property based. Nonetheless, the Europeans, as we have noted earlier, have with the development of regional TV supported by satellite technology and by the TV Without Frontiers Directive, positioned their cultural (broadcasting, audiovisual) industry for the likely event that exemptions or exclusions from the trade agreements, will for the most part, disappear for that sector. Politicians in France and in the UK, in the eighties, did not overly favour cable TV technology and this has facilitated the European audiovisual/broadcasting industry's successful consolidation and adaptation to change. In strict economic terms, the cultural/broadcasting industry is small in comparison to telecom, IT and space & aerospace.

269 In the meantime, the USA has taken an MFN exemption regarding broadcasting which means that it can conclude bilateral agreements without violating the GATS MFN principle (artII) which stipulates that if a WTO country agrees to give a certain country (whether or not a WTO member) a particular treatment, the WTO country is obligated to give no less favorable treatment to all other signatories of the Marrakesh Agreement.
THE INFLUENCE OF CORPORATE STRATEGY ON THE REGULATORY ENVIRONMENT

Technology, not lobbying, is the major force

The USTR claims that it developed world free trade and competition rules, the deregulation of telecom and priorities relating to satellite technology and the information highway. Even though in some countries such as in the USA, the lobbying impact of major corporations is effective, these new trends have not been brought about only by corporate initiative. \(270\) Even major corporations are not sure which strategies to take to benefit from these shifts.\(271\) Major lobbies can only delay the regulatory implementation of policies especially when these are made in an international context and under international agreements.

The technology presently being used in various countries affects regulators which are not insensitive to the financial investments already made by corporate players. In that sense, therefore the choice of technology is largely in corporate hands and depends to a large extent on existing infrastructures.

In fact, if one considers technology and consumer acceptance to be the child of corporate endeavours, this fact is in my view very influential.

DTH technology is striking because like the Internet, it is truly borderless and it apparently promotes freedom of information which may very well become a world trend.\(272\) The Internet has achieved sustained growth rates\(273\) in excess of 100% for each

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\(270\) P. Cowhey, "The WTO and Telecom: Transition to Competition", (Address to the American Enterprise Institute for Public Policy Research, Washington DC, 21 March 1997)
\(271\) AT&T's 1997 1st quarter results reporting big profit drops because of pricing pressures, decline in long distance rates and the costs of entering new business; Nortel's record profits for 1997 1st quarter results from it taking advantage of growth in private networks and wireless
\(272\) Declaration of Rights, Supra note 127 s 19, adopted without dissent by the general assembly proclaims "Everyone has the right to freedom of opinion and expression; this right includes the freedom to hold opinion without interference and to seek, receive and to impart information and ideas through any media regardless of frontiers." Because it did not require signature or ratification, strictly speaking, the Declaration may not be a legal instrument though it certainly can serve as a starting point to the
of the past 10 years. Also very significantly, DTH technology eliminates an intermediary between the broadcaster and the consumer or TV household and therefore, in principle, is more cost efficient. In fact, DTH technology is, in that regard, closer to traditional over the air broadcasting than is cable TV.

Though over the air TV forms the largest market worldwide with an estimated one billion TV sets, it cannot accommodate a substantial increase of channels unless these can be delivered in digital form. Also, it is not the best suited medium for interactivity. Currently, the most popular and major medium for interactivity is telecom.

DTH satellite technology permits a more efficient and profitable use of spectrum

The practice of transmitting TV signals by terrestrial means will slowly fade out as cable TV and DTH satellite TV become more available. Radio frequency spectrum will be better used for the narrow band spectrum required by new wireless services. Spectrum value including DBS orbital slots raises several billion dollars for the US government. Up until now, broadcasting has used a lot of spectrum space as it requires broadband, and broadcasters have not been paying for analog spectrum use. A bill discussed this summer by members of the U.S. House and Senate Commerce Committees discussing plans to allow broadcasters to borrow billions of dollars worth of spectrum for free suggests that the transition to digital TV should be completed by 2006, though the FCC would be authorized to grant TV stations an extension if less than 85% of a market's population is not able to receive digital signal (a very likely event). In the meantime, analog spectrum would continue to be used.

It seems clear that all the merits of DTH technology have been recognized by US authorities and that satellite operators such as Hughes DirecTV will make effective use of DTH technology.

advent of customary international law.

273 WDTR, Supra note 73. According to the ITU World Telecommunication Indicators database, Internet Society, there are well over 27 million users and two thirds of these are in the USA.
The game is on for world television

It is apparent from earlier sections of this thesis that, notwithstanding the politically and economically motivated production and airtime quotas and exclusions/exemptions from GATS (and NAFTA) of the cultural sector and of broadcasting in particular, the game is on for World TV. This game is not limited only to the support medium permitting worldwide or regional TV reach such as the satellites operated by Hughes, PanAmSat and SES/Astra, for example, but includes the distribution of similar TV products worldwide by companies such as News Corp, Time Warner, BBC (World), and to a lesser extent Canal Plus, Première and the TV5 Consortium to name but a few. Broadcasting, like other sectors, cannot resist the forces of globalization and of technological progress which make it possible.

Emerging markets, especially in the Far East as well as in Central Europe, are likely to provide in the not too distant future a market of relatively well-off consumers for TV and entertainment products. The American market for entertainment products is mature and pay TV needs to be developed more in the European market which already possesses the necessary satellite infrastructures. DTH/TV via satellite is already very popular there thanks to some of their politicians' foresight.

Digitalization is not a positive reinforcement factor for the audio-visual industry overall

Globalization, combined with the implementation of digital technology which with regard to broadcasting permits a significant multiplication of channels and more efficient use of the spectrum, appears to present an opportunity for broadcasters and content providers. It may, in fact, be an opportunity only for large organizations with substantial production and marketing budgets. Consider, as explained earlier, that popular TV content consists first of blockbuster films, sports and news; second, local TV and third,
American style TV shows known as fill-ins. Blockbuster costs on occasion surpass the 200 million dollar range and in addition often require half the amount for marketing expenditures. Obviously, studios depend on foreign markets to recoup costs and foreign rights fetch high prices.

An analogy to further illustrate the point is the publishing industry. Globalization and world trade phenomena necessarily mean access to a larger number of consumers but these, though a larger selection of titles is available, do not overall consume, to any substantial degree, a much higher number of titles than in the past when the number of titles was less. On the other hand, roughly the same number of heavily marketed blockbuster titles as in the past sell well world wide. (In that regard, Disney and Universal have scaled down their production by 30% in order to allow more space in the market for their blockbusters). With regard to broadcasting, a relative need for new titles or TV programs is created, however, on the whole, such material as, for example, American style "fill-in" TV series, which are sold by the foot, is not that profitable to produce in the first place (except children's cartoon programming) and any advantages gained by expanding markets is offset by increased marketing expenses and possibly new competitors, such as film studios which can readily absorb added costs within their existing marketing department budgets. It is extremely important to note that more jobs will be created to produce more content, but the audio-visual industry, in general, will not necessarily be reinforced.

On the other hand, the multiplication of channels will bring about the need to increase pay TV's share of the market. This is because, unfortunately for broadcasters, corporate advertising budgets, especially outside the USA, are far less elastic than channel supply.

The entertainment industry in the US, at first very enthusiastic about the Information Highway, has more recently become more circumspect. In addition to culture clashes with telcos, digitalization poses huge copyright enforcement problems especially in a borderless context and in the privacy of the home environment. Bell Atlantic's TELE-TV venture set up in 1994 to provide traditional and interactive entertainment, information and educational programs over its and Nynex (now due to merge with Bell Atlantic) and Pacific Telesis's (since bought by SBC) networks, had a relationship with Michael Ovitz and the CAA talent management agency. It cut back operations drastically last April. The experience has not been conclusive nor has Time Warner's/US West's pilot project in Orlando.

Time Warner, one of the largest entertainment conglomerates (owner of HBO, the largest pay TV service, owner of Warner, the largest grossing movie studio, owner of Warner Cable, the second largest cable TV network in the US) entered into a
joint venture with a telco, US West and Toshiba, a consumer electronics manufacturer to provide programming, cable TV and voice telephony over an interactive electronic highway. Recently, Americast, the 100 million dollars a year venture started up in 1996 by Disney and 4 telcos including SBC has eliminated its programming and marketing departments. These will shift to Disney's televentures division and to programming and marketing departments of each telco partner. Time Warner and Americast claimed they had an advantage over TELETV because their ventures included a content partner. Some telco's such as Bell's Media Linx have been going it alone trying to develop content and interactive services in-house. Despite the efforts and means deployed the operation is also inconclusive and disappointing for Bell.

The motion pix industry sees problems with digitalization *per se*. Recently, for example, it complained\(^{275}\) that film previews were being copied by screening attendees with the help of lap held mini camcorders.

For cable and PTO's in general, TV not PC is the access device to the information highway. The IT industry of course thinks the contrary, though its position has recently been watered down with Microsoft's purchase of a stake in cable (Comcast). Hughes is involved in both the TV and the PC with DirecTV and the DirecPC Spaceway project.

. The scramble to offer multi-channel digital quality TV; DTH satellite TV operators v. cable co's v. telco's

The telecom and cable TV industry (and the computer industry) are not as commercially ready as DTH TV providers are to offer multi-channel digital quality TV services and they are currently experimenting with tying the success of that product i.e. TV, for which there is a proven market (1 billion sets worldwide) to other services such as Internet and interactive video services. MCI, recently launched "Real Network"\(^{276}\), which will for the first time deliver live and on demand audio and video over the Internet to audiences of 50,000 and more. MCI's high speed backbone network may create opportunities for the Internet as a broadcast medium. ABC news and ESPN may be among the first users.

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Cable has the higher bandwidth co-axial networks necessary to permit the carriage of broadband video. Co-axial cable has more capacity than the twisted pair used for telecom. It can carry voice telephony, by definition interactive, however, its weakness lies in that it lacks high performance switching capability. This is because the network is based around tree and branch type structures. Telecom, on the other hand, has a switched network architecture permitting access to subscribers in the wider as well as local areas. However, telecom has narrowband networks which are insufficient to provide video services. With digitalization, the distinction between broadband and narrowband is diminishing. The goal is to own an infrastructure capable of carrying broadband and narrowband. The Vidéotron network in Montréal is capable of switching and broadband capacity. Cable has a credibility gap with regard to interactivity and digital service. The industry, notably TCI, raised expectations in the 80's and raised rates. TCI, however, failed to deliver in the 90's. Billions of dollars are needed to upgrade the system which is already heavily indebted. Rogers Wave system (3,500 subscribers) is faster than the 28.8 dial-up modems and 128Kps ISDN offered by telcos, however, because of cable's tree and branch structure, as more people on the block use it, connections slow down. Video quality is low. Moreover, the Wave is slower than the ADSL system telcos such as Bell plan to introduce. In the end, the critical factor will be user interface and price.

In many countries, telecom and broadcasting have traditionally been barred from entering each other's markets. This has helped cable meet competition from the increasing success of DTH satellite TV which also offers a wide selection of channels. In Europe, some PTO's are already players in cable TV. Deutsche Telekom, Telstra (Sweden), PTT Netherlands and France Télécom are notable examples. Where PTO's provide cable TV, there is less pressure for them to provide alternative entertainment. Companies such as BT, which is prohibited from offering video entertainment before the year 2001, have been providing multimedia, testing VOD and have been selling satellite dishes. In order to ensure a source of revenues, France Telecom has insisted during VOD trials that cable co's use its telecom lines, even though the use of phone lines is not technologically necessary. VOD service is appealing to telco's because it is not considered a broadcasting service and therefore not subject to broadcasting's stringent regulatory regime with respect to content. VOD may well represent a huge market if one considers that the VCR market counts for approximately 250 million VCR machines worldwide. VCR's are very popular in Europe and Asia.

As deregulation occurs, cable and telecom will be allowed into each others markets. In the UK, cable has been allowed to provide voice communications since 1987. The telecom market is interesting because it is much larger than cable and more profitable once the basic infrastructure is in place. Cable is gearing up to provide telephone service in many countries such as the Low Countries and Hong Kong, for example. In the US where "cable telco cross ownership" has traditionally been banned by the FCC, telco's
banned from offering cable TV in telephone service areas and limited to VOD (the latter two of which have been contested in Court under the 1st Amendment) and cable and telcos remain regulated at the state as well as at the federal level, entry into each other’s sectors, though encouraged by the 1996 Telecommunication Act, has been very slow and the two industries are not, to the regulator’s dismay, invading each others turf. Cable co’s such as US Continental Cablevision co., one of the largest Internet service providers, launched the first commercial access to the Internet over cable in 1994, have allied with computer co’s to offer broadband Internet services via cable.

In some countries, such as China and India, for example, there is currently no wide selection of channels, in some cases only one and these are usually government operated. In response, private enterprise has in some countries set up cable networks which have proven popular. Some US cable companies have global activities. Continental CableVision for example, has a joint venture in Singapore and in Mexico where it has an alliance with Telmex. In other countries, such as Thailand where cable was illegal, the cable co now works in cooperation with the telco and uses its lines. In Asia, STARTV’s (Asiasat) programming service is popular and counts over 200 million viewers, though in many cases not over DTH as it is often expensive and like the Internet, illegal in some countries.

There has been a high failure rate among merger and acquisition alliances (Time Warner, TCI & Bell Atlantic; SBC & Cox) and technology sharing in the US. There is no doubt that TV is more mature than interactive information highway services.

There are twice as many TV sets around the world as telephone lines. Consumers are interested in TV and most in having a variety of channels to choose from. DTH TV satellite technology is the only significant commercially ready technology capable of offering a wide selection of digital quality channels.

In addition, DTH satellite technology is now capable of offering interactive TV services and spot beams targetting specific geographical areas to a certain degree.

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277 This is changing - China this June, for the first time allowed a film and television company to go public. This may imply a loosening of the tight government grip on the media in favor of some shareholder power in deciding what China’s 1.2 billion people watch on TV. Partners in Wuxi Zhongshi are all subsidiaries of China Central TV (CCTV) which plans to become a world class TV power by the year 2000.

278 The Indian government’s recent ban on DTH is being challenged by ISkyB based on the allegation that the government exceeded its regulatory role and violated the constitutionally guarantee freedom of expression right by prohibiting a mode of transmission, "India’s TV Curb is Challenged", World News Section, The (New York) Wall Street Journal, (23 July 1997) A14.
If Cable TV somehow fits into telecom's gameplan, it may eventually be subsumed therein. US West's merger with Continental Cable Vision in November made the Baby Bell the largest cable company in the U.S. It assumed 5.5 billion dollars of Continental Cablevision's debt thereby providing capital for the six year 1.35 billion dollars upgrade. Telco's are cash rich but must quickly adapt to global deregulation and competition which means adapting to charging lower prices for basic telecom use. In order to maintain current revenue and profit levels, telecom co's are not only establishing global alliances to attract customers and/or serve global companies worldwide, these companies are also examining what enhanced or non-basic telecom services can be offered with their existing infrastructure and in the USA, where cable penetration is high, whether or not cable can complement their infrastructure and fit in their gameplan. US West has easy access to customers of Nynex, Americatech Corp. Pacific Telesis Group and Bell South Corp. where Cablevision has systems.

This has to be cable's main attraction as though growth in that industry in the US is relatively brisk\(^{279}\) for a mature industry, performance is poor and prices have been regulated by the FCC since 1993. Cable was last year's worst performing industry in Standard & Poor's 500. To maintain growth and to justify higher prices, cable co's in the US have been offering premium channels and pay per view. Sweden and the Netherlands have a well established cable network. The same is not true of France, Germany (relatively speaking as it is home to a leading cable operator worldwide with over 14 million subscribers) Italy, the UK, Austria, Finland, Norway and Denmark, nor of Hong Kong, Japan, Korea and Australia though all these countries have well established telecom networks. The EC Commission is encouraging other European networks to use national cable TV as a basis for communication infrastructures including telecom. Elsewhere, Chile's PTO has bought cable TV interests.

\[\text{Overview of the US communications regulatory framework and the domestic debate on DBS services}\]

The Federal Communications Commision (FCC) was created by the Communications Act in 1934 and given the task of regulating interstate and foreign commerce to ensure rapid and efficient nation-wide and world-wide wire and radiocommunication services with adequate facilities and reasonable charges. As an independent agency, the FCC reports to Congress, not to the President. The FCC carries

\(^{279}\) Compared to 1995, cable's share of the nonbroadcast market declined only 2 points from 89% to 91% in 1996. Two million new subscribers were added, nearly as many as new DTH subscribers signed up in the same period.
out a judicial (settling complaints between and against communications service providers) and a regulatory role. Its judicial role is subject to review by the federal courts. The Commissioners are named by the President and confirmed by Congress. Complaints are heard and the FCC's decisions are enforced by its appropriate operating bureaus of which there are 6, namely: Field Operations, Wireless Telecom, Mass Media (Broadcasting), International Bureau, Cable Service and Common Carrier. Other prominent players include the US Department of Justice-Antitrust division, telecommunication section whose scope extends to activities likely to have an effect on US consumers or companies exporting from the US. The Federal Trade Commission receives notices filed on competitive issues. International commerce and intellectual property comes under the ambit of the department of State's bureau of international commerce and intellectual property. State Regulatory Commissions have authority over telco rate issues and local governments have authority over issuing franchises for the use of public rights of way.

With regard to broadcasting, the FCC has the authority to issue licences in the "public interest, convenience and necessity". Public interest at the outset was associated with the avoidance of harmful interference between communication services and the basis for the FCC's exercise of control was that of spectrum scarcity. The First Amendment of the US Constitution forbids any regulation of program content.

Broadcasters like satellite carriers (and unlike cable and telco's) are regulated at the federal level only. As broadcasters are not common carriers, they are not obliged to guarantee access to their services or required to sell or give time to all who seek to go on the air, nor are they subject to rate regulation. Programming is the sole responsibility of broadcasting licensees. Hence, the conundrum between the public interest associated with spectrum scarcity and the broadcaster's right to freedom of speech.

Broadcasting is regulated as commercial or non commercial, that is, funded by government or viewer donations as per the Public Broadcasting Act of 1967. No commercial station in the US is owned by the government. Commercial free TV is funded by advertisers. Under the Prime Time Access Rules, TV stations in the 50 largest markets owned or affiliated with national networks can broadcast no more than 3 hours of network entertainment during prime time hours. At least half of all commercial stations are affiliated with the four national networks. Affiliates carry network programs and advertising spots, however, the national networks leave slots open in their feeds in which affiliates can insert local advertising. Local ads airing during network shows are said to represent 40% of affiliates' revenues.

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280 Common carriers are not defined in the 1934 Communications Act. The common law definition implies the non discriminatory offering of a service to the public at large.
The FCC concerns itself with ownership requirements and applying concentration of ownership (newspapers and cable interests with overlapping service areas) rules. Section 310 b(3) and (4) of the 1934 Communications Act provides benchmarks for the consideration of foreign acquisitions of broadcasters (and common carriers). These limits (25% foreign ownership limit on the licensee's parent company) can be waived if approval is in the public interest. Public interest factors can be related to competition. Public interest factors evolve. For example, in the BT/MCI common carrier acquisition (still under review by BT), reciprocal market interest and foreign market opportunities for US firms were taken into consideration. This has apparently not yet been applied to the broadcasting sector. It is very present, however, in the proposed Domestic and International Satellite Consolidation Order which provides that non-US-licensed satellite systems (common carriers) will generally be able to provide satellite services to, from or within the United States to the extent that foreign markets allow effective competitive opportunities for US satellite systems to provide analogous services.

We need now to take a look now at the domestic debate on DBS services. As we have noted earlier in this paper, the US since the early sixties was very much behind the creation of international global satellite services. COMSAT acted as the US signatory to Intelsat. As explained earlier, the US was also actively involved in the international discussions taking place in the ITU forum with regard to the use of the geostationary orbit, the possible regulation of foreign content and planning for the satellite broadcasting service over its region in the early eighties.

It wasn't until 1979-80 that domestic DBS was brought to the forefront in the US. In preparation for the 1983 RARC, COMSAT's Satellite Television Corporation announced its plan for a commercial domestic direct broadcasting system to offer pay TV and supplementary TV services.

This period coincided with moves towards deregulation and competition initiated under the Reagan administration. From the outset, the broadcasting industry was fiercely opposed to DBS because it feared that DBS would destroy the economics of TV stations which provide local service. Since affiliates, according to broadcasting lobbyists, obtain approximately 40% of their revenue from local ads airing during network shows, DBS's ability to offer distant signals means that viewers won't see local ads and cannot, therefore, be counted in the local domestic audience. This may impact broadcasters.

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282 COMSAT Act, Supra note 22
283 DBS Rulemaking, Infra note 285
revenues as advertisers will insist on paying lower rates for spots. The very heart of the network system appears thus to be in jeopardy. The FCC's chairman, Charles Ferris, responded that the FCC's responsibility in addition to "protecting the economic interests of those it regulates, extends to ensuring that the public obtains the maximum service available through the existing technology as well." 284

In the autumn of 1980, the FCC concluded that DBS was not a technical problem and that it should not be regulated either as to content or ownership and a public inquiry was launched by notice. 285 A bid for the first DBS licence for offering 3 pay TV channels was made at the end of 1980 by Satellite Television Corp. and placed the following Spring in the FCC's docket. 286 The FCC issued a Notice of Proposed Policy Statement and Rulemaking, accepted Satellite Television Corporation's application and invited applications for other DBS licences. In the summer of 1982, the FCC unanimously adopted the Report and Order setting out policies and rules for interim DBS. 287 Throughout this time, in addition to the FCC's Chairman, Charles Ferris concern for ensuring maximum service for the public, the FCC was encouraged by the Reagan administration to adopt a deregulatory approach to DBS.

Meanwhile, the broadcasting industry which in the US, 288 as opposed to the European broadcasting industry, is profitable and has closer ties with the studios, had no success in convincing Congress or the FCC on its point of view. In addition to its argument on the threat DBS poses to the economics of the TV industry, it asked Congress to consider that local TV is in the public interest 289 and that the networks had a better use, such as HDTV, for the 12GHz spectrum to be reserved for DBS. Though prior to the hearing, the argument that local TV is in the public interest stirred some positive reactions, the hearing itself was a failure and Congress did not take the matter further.

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284 "ABC and Ferris fence over DBS", Broadcasting (25 August 1980) at 33
285 FCC, Notice of Inquiry, Inquiry into the Development of Regulatory Policy in Regard to Direct Broadcasting by Satellite for the period following the 1983 RARC, No 80-603 (29 October 1980) (hereinafter DBS rulemaking)
286 FCC, Order in the Matter of Satellite Television Corp., GD 80-603 (3 April 1981)
288 The motor of the industry are the four networks: ABC which belongs to Disney Co., NBC, a General Electric Co. unit, it remains the country's top rated network even though viewership of NBC has slid by 10% in the last season, CBS a unit of Westinghouse Electric and finally, Fox Broadcasting Corp., a News Corp. unit.
Ultimately, broadcasters were simply seen as trying to prevent a potential new source of competitive video programming.

Since that time, the broadcasting industry has had no choice but to take its complaints to court. In 1984, the National Association of Broadcasters filed a petition\(^{290}\) with the US Court of Appeals for the District of Columbia Circuit to review the FCC's DBS Report and Order. In essence, the Court confirmed all the FCC's decisions\(^{291}\) except its decision to not apply to DBS the same regulatory restrictions as those applied to broadcasters. The Court affirmed that DBS clearly fits into the definition of broadcasting under the Communications Act of 1934 and therefore should be subject to the same regulatory restrictions.

Consequently, Congress passed the 1988 Satellite Home Viewer Act (set to expire in 1999) which permits satellite operators to offer customers network programs in exchange for royalties. Service was however limited to households unserved by cable or who couldn't get a clear signal via rooftop antenna. Interpretation of "clear signal" is linked to the strength of the antenna signal measured against the FCC standard. The Act was amended in 1994 because DTH was very popular and was in fact serving viewers who in an objective sense already had access to clear signals. However, consumers applied a subjective standard thus making the 1988 Act difficult to enforce. The 1994 amendment provided that the burden of proving that customers are legal, fell on satellite carriers. Since, ABC, NBC, CBS and Fox as well as local affiliates have filed\(^{292}\) lawsuits in North Carolina, Florida and Texas against Prime Time 24, the biggest satellite provider of network signals, accusing Prime Time 24 of illegally sending out of market network signals to subscribers. Other satellite providers of network signals belonging to TCI and Prime Star have not been sued. Prime Time 24 captures network signals from the East and West coasts via satellite and sells the signals thru DirecTV and Echostar to dish owners.

Political pressure is on to foster competition. To be fully competitive with cable and terrestrial broadcasters, DBS needs to be able to offer network programming. On the other hand, the network affiliate system is at the heart of the American broadcasting industry. This is the issue which will be in Congress' hands. Elements of a solution can perhaps be found in technology. If, as Echostar alleges, it is possible to beam local

\(^{290}\) National Association of Broadcasters v. FCC, 740 F.d 1190 (1984)

\(^{291}\) i.e. regarding the FCC's power to approve DBS even if it is non-local broadcasting, the FCC's power to not impose ownership restrictions, the FCC's power to reserve 12GHz bands for DBS and the FCC's power to approve the Satellite Television Corp's DBS licence application

stations according to zip codes, the DBS industry could work with the broadcasting industry along the same lines as the cable industry whereby local stations have a right to the exclusivity of the network signal entering the market. DBS channel capacity could not, however, accommodate the more than a thousand broadcasting stations operating in the US. Depending on Telesat's satellite specifications, this impediment could perhaps be overcome with help from Canada.

In addition to being a concern of the broadcasting industry, the issue is important to DBS operators' marketing strategy as local TV in the US is popular. Prime Time 24 is lobbying for legislation that would authorize the delivery of network signals to wider audiences and proposes to legitimize a subjective clarity of signal standard for consumers; this would of course take the teeth out of the Satellite Home Viewers Act to the detriment of broadcasters as such a standard is unenforceable.

_Cable co's situation in the US is affecting DTH satellite growth there_

The cable industry is regulated at the local, state and federal level. Local licensing requirements for gaining access to poles and rights vary widely. State and local authorities have jurisdiction over basic service rates, the granting of franchises to public rights of way and the imposition of customer service requirements. Regulation at the federal level was the result of pressure from the broadcasting industry.

In 1962, the FCC claimed authority over cable based on its ancillary impact over broadcasting which as noted above is under its jurisdiction by virtue of the Communications Act of 1934. The FCC's jurisdiction over cable was confirmed by the Supreme Court in 1968. The FCC imposed cable TV and broadcasting cross-ownership rules and must carry (local broadcast station) rules. Developed over time, the Syndex rules prohibit cable from importing channels by satellite or microwave for which the local area broadcaster has purchased rights. The local broadcaster can compel a cable carrier to delete programs for which rights are locally held.

Despite the growth of cable and its evolution from a service provider to homes having difficulty receiving signals to a successful provider of pay TV such as Home Box Office (HBO) service and local broadcasting signals, the broadcasting industry flourished. Hence, rules granting local broadcasting stations exclusivity to protect them against the retransmission of syndicated programming via cable were abolished in 1980. In 1984, the Cable Act deregulated basic cable rates and encouraged cable growth. Congress assumed there would be competitive alternatives to cable such as DBS and MMDS, but these were only nascent.
In 1992, cable was re-regulated under the 1992 *Cable TV Consumer Protection* and *Competition Act* in order to stimulate competition on multi-channel video-programming and in order to put consumer protection mechanisms in place through the establishment of rates. Congress was most displeased with TCI (the US's largest cable operator) because it had created incentives for cable programmers to refuse access to programming by other delivery systems such as DBS, for example. The must carry (local broadcast station) rules were codified pursuant to a federal appeals court decision in 1985 which had overturned the rules on constitutional grounds, and tied to retransmission consent whereby a station can opt for a mandatory carriage or make carriage subject to its express consent. This leaves the door open to negotiate compensation in lieu of copyright licence payments. Overturned in part in 1994,293 the "must carry" broadcast rules were upheld on March 30, 1997 in a 5-4 decision by the US Supreme Court thus ending a 13 year battle by the cable industry. It was against rules which force cable operators to carry channels they don't want to carry such as small channels, start-ups, and specialty programmers on their cable boxes which are strained for space. Most have not yet come up with the hefty investments needed to go digital and thus offer only a limited number of channels. Justice Breyer wrote: "I do not deny that the (law) extracts a serious First Amendment price." However, Justice Breyer and the other members of the majority appeared to be swayed by the fact that Congress had thousands of pages of evidence to support its decision to enact the rules.

In the light of the above, it is easy to understand that in contrast with the broadcasting industry which was against DBS technology altogether, the cable industry did not oppose the deregulatory approach during the domestic DBS debate. Though DBS is definitely nowadays a competitor, cable, as can be seen from the preceding paragraphs, has always been pro-deregulatory and it could not therefore very well suggest a different medicine for a competitor. Most probably, however, the cable industry in the FCC forum will insist that the "must carry" rules also apply to competitors such as DBS systems. Hence, though the "must carry" decision (in the current mostly non-digital context) is "bad" for cable, it may turn out to provide short term protection against a massive market invasion by DBS systems. DBS' technology for carrying local stations is as yet unproven. In the medium term, rapidly developing DBS technology is bound to solve difficulties in fulfilling the "must carry" rule (i.e. spot beaming by zip code). In any event, with the inevitable advent of digitalization, the inconvenience for cable of the "must carry" rule which in some ways is similar to Cancom, will no longer exist, surpassed by technology.

293 The case was sent by the Supreme Court back to a lower court for review of Congress' justification for enacting the "must carry" rules: the 1992 Act was seen to be content based regulation of video speech and economic findings may be insufficient to nullify cable operators First Amendment right as programmer/distributors.
We need next to consider how DTH growth in the US has been affected by the situation of its cable industry.

Hughes Corp's introduction of the DTH TV product in North America in the early nineties was a huge success though fraught with difficulty. Success occurred after the second false start to introduce that technology was incurred by a consortium composed of NBC, News Corp., Cable Systems and Hughes. Failure was largely due to the partners clashing strategies. Hughes, the largest maker of commercial application satellites, held a license to a high powered DBS orbital slot. In the early nineties, the company obtained the green light from its owner's (GM) board to persevere in bringing DTH services to the market, and, if possible, to find a partner for that venture. The business in itself seemed lucrative enough in comparison to cable as only a few million customers were needed to break even. The technological goal set by Hughes was to marry a tiny dish-compatible satellite designed for the US Navy with digital compression technology capable of compressing material by ten times its size. USSB (US Satellite Broadcasting Inc., a unit of Hubbard Broadcasting, paid 125 million dollars for 5 transponders (electronic device on the satellite that sends and receives signals). Breakdown for the initial investment of 1 billion dollars was as follows: 750 M$ for the satellite, 150 M$ from USSB (including payment for the transponder space) and 100 M$ from Thompson (RCA) which was to develop the consumer set-up technology in return for a manufacturing contract for the first million units. Three million subscribers were required to break even.

Notwithstanding the introductory success, it is unlikely that DTH will become the generalized mode of receiving TV in North America before the millenium. This is because most of the market is cabled and substantial amounts of institutional and private funds are tied up in cable companies which are indebted and not cash rich. The same situation existed at the origin of DTH-TV technology's first false start in the eighties when CBS Communications and Western Union let their DTH licences lapse after having spent millions. At the same time, cable companies had 35 million households lined up and the industry was highly leveraged. When the financial situation of cable will evolve one way or the other, DTH-TV may take off in the US. Resolution of the cable industry's financial situation could occur in the event, for example, that telecom companies were to purchase cable co's.

Ted Turner, vice-chairman of Time Warner the TV and entertainment empire (12 million cable subscribers), founder of CNN, sold Turner Broadcasting systems to Time Warner for 7.5 billion dollars last year. At a conference in Toronto in May 1997, he advised: "We may have to sell out to telephone companies in the future if they give us
too much trouble, so we want to maintain good relations with them (...) you can probably sell to the phone co if the going gets rough and my advice is do it early."[294]

Four recent deals may be conducive to an improvement in cable's US situation and help it to finally deliver an array of digital services. CableVision, the sixth largest US cable operator (now 2.5 million subscribers and owner of Madison Square Gardens, the New York Rangers and the Knicks), bought TCI's lucrative NY area 10 cable systems paying with 1.21 billion dollars worth of CableVision stock thus giving TCI (14 million subscribers) a 33 1/3% stake. This swap of assets cuts the TCI group's massive debt (14 billion $) by 669 million dollars and strengthens CableVision's grip on the New York market. CableVision has been reducing its 4 billion dollars debt by bringing in equity partners, Rainbow Media Holdings 25% owned by GE's NBC, and selling cable systems to focus on the New York, Boston and Cleveland markets. The strategy of regrouping broad contiguous groups of cable subscribers will enable new services to be offered at lower costs. TCI will also focus efforts on serving local customers via three regional divisions. Operating efficiency and profits may therefore improve.

TCI/News Corp. have in addition agreed to buy a 40% stake in CableVision's sport business for 850 million dollars, a combined chain of 17 channels reaching 55 million homes. This implies meaningful competition for Disney's sports channel ESPN (71 million subscribers). TCI/News Corp./CableVision will control rights to 24 major league baseball teams, 22 national basketball teams and 16 national hockey teams. This definitely is an interesting leverage for national advertising sales.

These two deals are important because they demonstrate industry rationalization/consolidation of operations and shedding of debt, which may, in addition to strengthening revenues, better enable entry into interactive services which TCI and James Dolan of CableVision see as critically important: "cable is the most efficient platform for TV and computer services period." CableVision wants to offer over 100 channels of video on demand, new titles, high speed modems and an interactive selection and metro activity guide.

A third deal, Microsoft's 1 billion dollar investment for a 15% stake in Philadelphia based Comcast (4.3 million US subscribers, 4th largest US cable company) to help it build a TV/PC futuristic services network, also apparently boosts cable's outlook. The investment will surely accelerate the development of broadband networks for which Mr. Gates believes demand is deeply underestimated and which is essential to convergence of PC/TV and the Internet. Microsoft's intent is to extend its empire from computers to

TV. This determination is beneficial to Comcast. In exchange, Comcast may succeed in influencing standards for digital TV to Microsoft's advantage. So far the broadcasting and TV manufacturing industry have not been receptive. Where the computer industry sees change as normal, the TV industry does not; the same basic set has been manufactured for 20 years. Computer groups want to build momentum for the convergence of technology. Microsoft's vice-president of consumer platforms stated in June. we are not telling people the only place you can watch TV is on PC. What we are saying is that the PC in some way must fight its way into these intelligent appliances (such as TV sets). There is no other place to find the computer technology needed to provide advanced capabilities." Major computer companies Intel, Compaq and Microsoft have formed a group, DTV. DTV is lobbying in Europe to spread the message that PC technology can deliver better quality images for TV. A top of the range Compaq PC with full multi-media capacity and a 36" digital display screen is being marketed in the US (5,000$) and scheduled to be launched in Europe next year.

Fourth, Mr. Murdoch of News Corp. realized that his proposed ASkyB/EchoStar deal involving 1 billion dollars in cash assets and 683 million dollars worth of DTH licenses (owned by MCI) in exchange for 50% of EchoStar was starting a fight against the very people he needed in order to get Fox News and his other cable channels distributed in the US, News Corp's, the last DBS frontier. The cable industry represents annual income of 28 billion dollars and over 65 million subscribers in the US as opposed to DTH's approximatley 6 million (DirecTV 2.4; PrimeStar 1.8; USSB 1.5 and EchoStar 500,000) subscribers. The inability to gain the support from the cable and broadcasting industries to get US copyright law changed in order to not have to pay for the rebroadcasting of local TV station broadcasting signals was probably also a mitigating factor.

When operational, the ASkyB/EchoStar venture, with Fox programming and 100 or more crystal clear channels, could have been a strong competitor to cable. Instead, Rupert Murdoch abandoned his bid to compete and sold his ASkyB (80% owned by News Corp; 20% owned by MCI Communication Corp.) to PrimeStar (1.8 million subscribers) a medium powered satellite operator owned by a consortium of cable co's (Comcast 10%, Time Warner 30%, US Wests' Media Group: Media One 10%, Cox Communications Inc

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295 Microsoft has a minority stake in Progressive Networks, specializing in audio and video software and in August acquired Vxtreme, a developer of video technology for the Internet. Broadcasting sites are popular on the Internet which is accessed by a minority of homes in North America but the high bandwidth requirements have so far limited its use. This may change as telcos develop highspeed backbone networks.

9%. Telecommunications TCI Satellite Entertainment 37% and GE American Communications 4%). PrimeStar plans to roll up TCI Satellite Entertainment Inc. in a public company spin off. The new company will then merge with ASkyB. News Corp will have a 30% non-voting stake valued at 1.1 billion dollars, TCI and Time Warner a 20% each stake and the others less than 10%. The ASkyB operation includes 2 high power satellites currently under construction and due to enter service in Spring 1998 as well as a federal licence purchased last year by MCI for 682 million dollars. The 30% stake worth 1.1 billion dollars, is approximatively equivalent to the amount spent so far by News Corp. and MCI in ASkyB. A distribution agreement with PrimeStar for Fox Sports and Fox News implying access to 8 million subscribers was also concluded. Regulatory approval and conditions remain to be seen.

With Sky's satellites, PrimeStar will be able to compete in the small dish market when so inclined. Presently, its medium powered DTH satellite precludes the use of small dishes, it thus can only serve rural areas. Time Warner was very much opposed to the deal with the capable Rupert Murdoch, founder of Fox TV, a major new US network. In the end, Mr Murdoch's business relations with TCI (Fox/Liberty Sports network) were helpful and Time Warner benefits from the deal. Time Warner benefits include Fox agreeing to retransmission consent for Time Warner cable systems in cities where Fox has TV stations; Fox agrees not to place barriers to Turner's transformation of his TBS superstation into basic cable network thus accessing 100 million dollars per year in license fees from the cable operator. Fox Sports and ESPN own the national cable rights to major league baseball broadcasts essential to Turner's superstation going basic.297 Finally, News Corp. bought via Fox Kids Worldwide unit, the International Family Entertainment cable programming company (IFE) owned by evangelist Pat Robertson for 1.7 billion dollars. IFE owns the Family Channel cable network (67 million subscribers; 100 million dollars plus cash flow) the 9th most watched US channel. Acquisition of the channel, means News Corp can vie with Viacom's Nickelodeon and Time Warner's cartoon network. Though Rupert Murdoch cleverly still has a foot in US DTH, he has demonstrated a vote (at least a temporary one) of confidence in cable and as always, focuses on content and access for his channels (Fox Sports 46 million subscribers, Fox News 21 million, Fox cable network 31 million) in addition to his recent acquisitions.

297 Basic channels (i.e. ESPN, USA, CNN networks) as opposed to pay channels (HBO, Showtime or the Disney Channel networks) are services for which the viewer is not billed directly. Typically the cable operator pays a program supplier a monthly fee per subscriber which it builds in the monthly subscription fees shared to subscribers. Some slots in which ads can be sold are sometimes provided for. The other types of cablesystem program channels are retransmitted signals from conventional or distant (superstations) broadcast TV stations for which in most cases the cable operator pays a fee, and locally originated programming produced for the cable system such as local news or government proceeding and for which in general the cable system receives no payment or advertising revenue.
Cable is definitely still an important access vehicle in his eyes with regard to the US market where his broadcasting business challenges NBC, ABC and CBS.

Cable co's and broadcasters have an extremely strong US lobby and in the US, consumer groups have little influence in the short term.\(^{298}\) Obviously this augurs well for the cable TV industries' immediate future there.

Representatives of the listening public as parties in interest with regard to the formulation of broadcasting policy have had legal standing since 1966.\(^{299}\) Of course, such groups do not have the means necessary to employ hordes of registered lobbyists such as the broadcasters' trade association does (174 lobbyists during the recent spectrum auction discussions) nor do they have the means to make substantial donations to federal campaign and party committees. In addition, access to information is more difficult to come by for non-insiders. To top it off, the media covers communication policy from a business angle and this is the angle which influences the broadcasting process.

In the TCI/Telquest Telesat application before the FCC in 1996, Ralph Nader intervened to oppose the access to DTH by cable quasi-monopolies such as TCI. With regard to the policy process on domestic DTH in the early eighties, community groups, public broadcasters and educational groups, in contrast to the broadcasting industry, welcomed the new technology but were against the deregulatory approach based on the premise of leaving matters in the hands of the marketplace. These groups argued\(^{300}\) that the "public interest, convenience or necessity" was best guaranteed by the FCC's regulation of the market place for the benefit of all people in the US. These groups see mass communication in social-cultural terms and not only in terms of economic efficiency.

On the other hand, DTH, the most cost efficient method of digital TV delivery, is being stalled domestically to the advantage of broadcasting and cable interests. Also, broadcasters which, it is true, must invest heavily to meet the FCC's digital roll-out schedule, are being given free valuable digital spectrum that belong to the public. And it comes as no surprise that here have been no major televised discussions of the issue!

The failure to push DTH further forward is not due to cultural sensibilities. DTH will undoubtedly, however, see its market share grow and continue to serve households

\(^{298}\) W. Safire, "The Great Airwave Heist: A Not-Made-for-TV Tale", The International Herald Tribune (Paris), (25 July 1997) 9
\(^{300}\) FCC, Inquiry Comments of Citizen Communications, GD 80-603 (31 March 1981)
not served by cable. For the time being, PanAmSat/Hughes particularly active in South America, will focus on revenues from abroad thereby achieving independence from the relatively slow growing US market. DTH-TV is there to stay as US authorities consider it an important element in the stimulation of competition which is so necessary to keeping cable in line. Chief of the FCC's cable bureau, Meredith Jones, on January 6th, 1997 said at the occasion of the FCC report to Congress\textsuperscript{301} on deregulation and competition: "Cable still clearly dominates the market and while competitors are making inroads, they aren't coming close to catching up. This means we have to work much harder to bring new entrants to the market to provide new competition to cable, to keep programming access open and nurture new technologies to compete with cable." DTH is facing some difficulty in meeting the same rules as cable with regard to "local TV must carry" obligations. At the instigation of broadcasting co's, cases have been brought to court seeking to prevent the general public from owning DTH satellite dishes unless the quality of reception is poor. In the last resort, faced with the choice of TV over cable, MMDS, LCMS or DTH satellite or tied with other services, the choice is in the hands of the consumers to a large degree and this "judgment" is mainly dependent on the price/desired programming ratio.

The traditional (over-the-air) broadcasting industry dependent on advertising revenue is on a downward spiral with 1.7 million fewer homes (preliminary ratings from Nielsen Media Research) watching the big four networks as it loose users to cable, DTH, computers and home video. Its survival depends largely on the franchises. DTH is not the big 4 networks' only foe - Turner Broadcasting for example which has access to cable subscriber fees is also a fiercely competitive bidder.

. Policies conducive to developing a strong national/regional audio-visual industry: substantial space programs; strong space and high technology manufacturers and regional agreements

If one considers that DTH satellite technology is the best platform for digital multi-channel World TV, obviously space technology is of importance. In Europe, the role of the European Space Agency, European manufacturers, Eutelsat (Europe's response to Intelsat) and Ariane, the world's premiere satellite launcher have not been unrelated to Europe's successful development of regional TV via DTH technology nor to the strengthening of its domestic audio-visual industry thanks to increased revenues stemming from wider reach and lower capital and operating costs.

In the US, the satellite manufacturing side is particularly strong as opposed to the launching side (since the Challenger disaster) though this may change as Boeing develops a floating launch pad in the Pacific. Hughes Electronic satellites are sold and used worldwide. The US choice of satellite and space technology as one of its key strategies, its past role with regard to the creation of Intelsat as a global telecommunication monopoly and its current support of world competition, deregulation and market access in the WTO forum are in harmony with successfully meeting the global aspirations of the American entertainment industry.

In both the EC and in the US, the implementation of these policies has favored the regional and/or international expansion of domestic corporations. In both the EC and the US, a somewhat protectionist approach to broadcasting has favored the consolidation and strengthening of their respective audio-visual industries.

Key players' winning strategies in the ongoing World TV game: content, access, use of new technology, worldwide presence

Content is now more and more seen as a commodity and essential part of a winning strategy. For example, News Corp., the Kirch Group, Bertelsmann, Canal Plus, Time Warner and Microsoft\(^302\) have focused on getting access to content by purchasing huge libraries/catalogues and/or producing content. European non-pay broadcasters have focused on in-house productions and on co-producing with US companies in order to minimize contents acquisition costs and maximize distribution potential.

It is useful to take a closer look at News Corp's strategy with regard to what content exactly is most valuable. According to New Yorker columnist, Ken Auletta, author of a number of Rupert Murdoch profiles: "Murdoch has always believed that a couple of things are surefire sellers. People are always interested in sports and the other thing is they are always interested in sex."

Two categories that have fuelled ASkyB's growth are Sky Sports and Sky Movies. This is serving News Corp well as even though BSkyB will probably have to sell its stake in British Digital (if licensed by the ITC to enter service next year) to Carlton TV and Granada TV, News Corp's enhanced program agreement ensures that it will still profit from the expected success of the digital network. It is by locking up movie and sports

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\(^302\) In 1995 Microsoft formed an alliance with NBC in order to gain access to its entertainment library thus enhancing the Microsoft network.
rights that in Britain, a relatively complacent broadcasting market, News Corp’s BSkyB quickly signed up millions of subscribers.

The second part of the winning strategy consists in securing access for one's content on global or regional networks. Time Warner, News Corp, The Kirch Group, Bertelsmann, Canal Plus and Hughes/PanAmSat, for example, are definitely attuned to the necessity of providing and/or making use of DTH technology to ensure global or regional access. Japan SkyB, a co-venture of Fuji TV (owned by Nippon Broadcasting), Sony Corp, Softbank and News Corp plan a full 150 channel full service digital TV launch in 1998. News Corp launched a DTH venture this year in Mexico with Grupo Televisa SA a troubled quasi state monopoly and Latin America's largest media concern, TCI and Brazil Global. In China, News Corp has blundered and STAR TV (HK) which represents a 2 billion dollar investment has been black listed in the PRC ever since Rupert Murdoch made a rather undiplomatic statement in London in 1993: "technology is a threat to totalitarian regimes everywhere." More recently, an on-line service developed by News Corp in conjunction with the People's Daily renders it more likely that China will eventually permit STAR's programming to be broadcasted on China's rapidly growing cable system.

Another key strategy is the emphasis put by satellite operators on marketing and new technologies. SES/Astra with its "hot bird" strategy, cultivation of major clients and aggressive marketing has attained high levels of profitability. Hughes Electronics, the satellite manufacturer, through Hughes DirecTV, is involved in the US in retail operations and it aggressively promotes its services and programming in conjunction with USSB with whom it shares the same satellite. Involvement by Hughes in retail is perhaps motivated by cable and broadcasting's resistance towards DTH technology. SES/Astra, Eutelsat and Hughes are very attentive to using the latest technology involving high-powered spot beams and the use of bands which permit interactive services.

Finally, notwithstanding the WTO, key corporate players are sensitive to the need to accommodate national sensibilities and particular needs and sensitive to convergence, a recurring theme during the first part of the present decade. These players have the means not to have to hedge bets exclusively on any one technology or mix thereof. Hughes, for example, is involved in the 5 billion dollars DirecPC Spaceway project: Microsoft in the Teledesic PCN (LEO) satellite project, in PC broadcasting and with Comcast in cable in order to secure a link between the PC and TV. Spain's telco, Telefonica, has this July

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303 Microsoft has leased satellite transponders and broadcasted promotional material directly to PC's linked to satellite dishes; Microsoft also has a joint venture with NBC TV's unit, MSN BC which distributes news over cable TV and Internet. Microsoft has also purchased Web TV for 425 million dollars. It is a manufacturer of devices allowing TV access to the Internet.
bought the top rated TV channel. Antenna 3. Telcos also have stakes in cable and TV. BT which faces more stringent regulatory constraints has teamed up with BSkyB, HSBC Holdings (Midland Bank) and Matsushita Electric to introduce digital TV services in Britain.

In addition to newspapers, media and merchandising enterprises, tabloids in Britain, sports teams, broadcasting, film, cable interests, the US online and Internet access provider, Delphi, News Corp, the pioneer of DTH satellite TV in Britain has long term commitments with satellite operators and stakes therein. Moreover, News Corp (expected earnings fiscal year end July 1997: 1.1 billion dollars on revenue of 11.2 billion) has an alliance with MCI. News Corp's strategic alliance in 1995 with MCI (telecom interexchange operator which only recently has entered the local telephone market in the NY area) to enhance distribution capabilities for content-based products involved a 2.2 billion dollar investment by MCI for a 13% stake in News Corp and an investment of 200 million dollars by both companies in a joint venture. MCI owns the ASkyB satellites now being sold to Primestar. In Rupert Murdoch's view, the alliance with MCI opens great opportunities. "Until today, no one has put together the right building blocks - programming, network, intelligence, distribution and merchandising - to offer media services on a global scale." The most profitable operations are the ones in the UK. BSkyB, for example, has year-over-year revenue growth of 26%.

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304 J. Hopewell, "Spain telco picks up (25%) Antenna 3TV in surprise", Variety (July 28 - August 3, 1997) p.32. Telefonica thereby becomes a key film and TV player in Spain with interests in free to air broadcasting, digital satellite delivery (a 15% stake and a 35% stake in the two satellite platforms serving the country), film production, cable, an MSO in 1998 and a 50% stake in a sports rights broker the other half of which is owned by Sogecable (Prisa-Canal Plus), the owners of Canal Satellite Digital. According to its President "Telefonica aims to be a global service provider. It has to participate in the content industry (...)" Canal Satellite Digital has lodged a complaint for abuse of dominant position in Brussels and Telefonica has been warned by the Commission on August 14, 1997, that it would not accept being faced with a fait accompli.

305 WDTR, Supra note 73
PART IV: Case study of a broadcasting regulatory regime (Canada's) under pressure

HOW CANADA LOST ITS COMPETITIVE EDGE

. The irony

In 1982, the first commercial DTH satellite was launched. It was the Canadian satellite Anik-C developed in 1976 by Canadian engineers supported by government funds and manufactured and designed by Canadian manufacturers. Tilted south, its first commercial customers were in the USA.

In 1997, it seems that Spar Aerospace may put ComStream Corp., the California based provider of digital transmission products for consumer applications and services over DBS, bought in 1992, on the block alleging unprofitability and missed sales targets. Com Stream is a world leader in digital compression technology (proprietary ASIC's VLSI chips) ensuring authenticity of received signals which plays a vital role in DBS systems. Though the division represents close to 40% of Spar's first quarter revenues of 121 million dollars, ComStream has not been profitable and needs to reduce the cost of its subsystem without sacrificing performance. In 1994, Com Stream fulfilled all of Thomson/RCA's requirements and maintained its franchise and 100% share of Thomson/RCA business despite an unexpected doubling (350,000 to 600,000) in the number of satellite modem units requested from it that year. Other potential clients have emerged such as DirecTV, as well as competitors such as Sony. In April 1996, Com Stream announced an agreement with Matsushita UK to develop and produce a new generation of TV set-top products to support demand for digital TV products. Com Stream would focus on engineering and design, Matsushita on mass-production. Spar which is involved to a relatively small degree in the international space station, Alpha, like other such companies formed in a military milieu, now has less defence contracts. In general, Spar, with operating income falling to 3.1 million dollars from 4.9 million dollars last year is not performing well and is the object of a 135 million dollar law suit brought against it by the insurers of American Mobile Satellite Corp.for having knowingly delivered a defective product.

307 Spar News Bulletin, (Missisauga, April 15, 1996)
Technological evolution is having a profound impact on television and its new markets. Audio-visual communications have always, by nature, been highly linked and sensitive to technology. As communications technology evolves towards the use of space, it provides easy access to TV worldwide. Clearly, broadcasters cannot ignore space (satellite) transmission methods and consider instead limiting transmission to local markets and terrestrial methods. Any global strategy requires taking a close look at the key elements (satellite manufacturers, launchers and operators) and users (DTH satellite providers) of space communications technology. Let us highlight in the comparative chart hereunder, the major European and North American participants in these sectors.
## Key Elements on DTH

### Manufacturers of Satellites

<table>
<thead>
<tr>
<th>(%) Global Market Share</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>29%</td>
<td>Hughes Aircraft Co</td>
</tr>
<tr>
<td>24</td>
<td>Lockheed Martin (GE RCA)</td>
</tr>
<tr>
<td>14</td>
<td>Loral Space Systems</td>
</tr>
<tr>
<td>13</td>
<td>Matra Marconi</td>
</tr>
<tr>
<td>10</td>
<td>Aerospatiale DASA</td>
</tr>
</tbody>
</table>

Hughes SPR have no share: the share was 5% in '80-'85 and 2% in '85-'95.

### Launch Operators

<table>
<thead>
<tr>
<th>(%)</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>59%</td>
<td>McDonnell Douglas &amp; Lockheed Martin</td>
</tr>
<tr>
<td>28</td>
<td>Arranespace</td>
</tr>
</tbody>
</table>

### Satellite Operators

<table>
<thead>
<tr>
<th>(Revenue in MS derived from broadcasting)</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>340</td>
<td>GE Americom</td>
</tr>
<tr>
<td>299</td>
<td>SES Astra</td>
</tr>
<tr>
<td>247</td>
<td>Eutelsat</td>
</tr>
<tr>
<td>227</td>
<td>DirecTV</td>
</tr>
<tr>
<td>143*</td>
<td>Eutelsat</td>
</tr>
</tbody>
</table>

* minimal revenues from DTH limited to Cancom which serves 31,000 subscribers

### DTH Services Penetration

<table>
<thead>
<tr>
<th>(%)</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>5.4 in Germany; 3.6 in the UK with large potential for growth in other countries PayTV</td>
</tr>
<tr>
<td>6.3</td>
<td>DirecTV: 3M PrimeStar: 1.5M DSS (CSSB): 1.4M EchoStar: 400,000</td>
</tr>
<tr>
<td></td>
<td>300,000 grey market</td>
</tr>
</tbody>
</table>

* insignificant number thru Cancom, ExpressVu, & Home Star: Star Choice
As previously explained, other key factors for success in achieving global TV market are content (new & catalogue) and market access to efficient delivery systems, as well as vertical or horizontal consolidation. We have seen that Time Warner, Sony, Disney, Fox and other US majors, as well as Kirch/Bertelsmann and Canal Plus, are notable achievers.

With regard to the Information Highway and access to the benefits it promises, Canada has many success stories in IT and telecom, equipment manufacturing software (Nortel, DMR, Soft Image, Corel & many others) and its population is very highly served by telecom, cable and TV. However, currently, Canada is not yet significantly positioned on the World TV game board with respect to any of the above named strategic elements critical to having weight and deriving substantial profit from the space based global reach technology favoured by the TV industry of the future. DTH technological and manufacturing strength is no longer there, at this stage, it is difficult to improvise oneself as a major communications satellite manufacturer especially since the restructuring of the American and world aerospace industry. The same goes for the launch operations. Without access to a larger market than Canada's and less regional regulatory restrictions (which implies less domestic restrictions) it is quite a challenge especially at this "late" stage to be a profitable DTH operator. Content, even new content, without global or regional market access is not enough.

The reasons

In addition to having lost the DTH technological edge on the manufacturing side, Canada's geography and demography, for the purposes of achieving the critical elements, appear to engender a series of handicaps. These are that Canada's population is small to even support a strong domestic market; that there is no substantial backing from large corporations (except the inconclusive backing of Express Vu by BCE), nor from financial (except to Rogers) or merchant banking or global financial institutions because the market is not big enough and the regulatory regime is stifling; that no regional agreement such as TV Without Frontiers Directive is in place. In the meantime, the US Domestic and International Satellite Consolidation Order (DISCO, Supra note 281) applies. It provides for the Economic Opportunity Test (ECO). Without offering reciprocity to American broadcasters, it is highly unlikely that the test can be met to the FCC's (and the USTR's) satisfaction by Canadian DTH TV providers or satellite operators. Finally, the population and economic size of Canada's neighbor in comparison to its own size does not favour meaningful bargaining power for Canada.

Only the absence of a regional agreement, a man-made handicap, can be acted upon and in these days of global trade negotiations critical to the US economy, Canada as
the US's neighbor may have meaningful bargaining power. Geography, as we will see in the next section, has also played a positive role with regard to TV production.

Before taking a closer look at whether or not and what Canada should negotiate as a regional agreement with the US, it is important to examine the interests Canada has at stake that is Canada's achievements and the extent of the experience acquired by its corporate citizens with regard to global broadcasting and distribution.

. The achievements

Thanks to the government's cultural policy as a consequence of which TV production subsidies, tax incentives and the airtime quota regime have been established, as well as to Canada's geography whereby production firms south of the border find it convenient to shoot in Canada where production economics and quality of life are appealing, Canada has achieved the rank of second highest (after the US) exporter of TV programs. Some of these programs have met with tremendous success abroad such as producer Kevin Sullivan's TV series inspired from Lucy Maud Montgomery's novels and character Ann of Green Gables, and The Boys of St Vincent, a highly acclaimed program on a very sensitive issue avoided by commercial television.

Due South, aired on CTV is the highest rated Canadian show. It is also aired in the US on CBS Fridays at 8pm. Children's programs such as Theodore Tugboat broadcast by the Disney Channel and Dudley The Dragon on 300 PBS stations are successful. Million Dollar Babies which was sold in more than 90 countries achieved 40% market share in France.

Another contributing factor to Canada's rank as a TV program exporter has been the astute strategy chosen by civil servants implementing the subsidies and quotas regime, as well as by private industry to favour TV production over film. As noted earlier, not only are films more expensive and speculative to produce, the crucial distribution side is difficult to access and build up. Canadian distributors of independent Canadian and foreign produced films work in a domestic market dominated by American distribution majors. Were it not for subsidies, major Canadian distributors (heavily involved in TV production) most probably could not profitably survive.\(^{308}\) In that context, a global theatrical presence beneficial to "Canadian" films is, at this stage, and under current conditions a difficult challenge for Canadian distributors to meet.

\(^{308}\) Alliance Communications Corporation. "Prospectus. Class B Non-Voting Shares". (1 August 1996) Donaldson, Luftkin Jenrette p.11
With regard to global TV broadcasting and production experience, we might highlight first, CanWest Global's (Ivy Asper) lucrative Australian experience. Network Ten, of which CanWest holds 76% in equity (which it may have to reduce to meet Australian regulatory requirements) and 15% in voting rights, contributed 259 million dollars of CanWest's 628 million dollars 1996 revenues, representing 91 million dollars of its earnings before interest, tax, depreciation and amortization. CanWest is awaiting final approval to take control of TV3, Ireland's first commercial network. CanWest Global also has a stake in New Zealand TV.

Let us note, second, in conjunction, the CBC and Power. North American Television Inc's (joint venture between the CBC and Power Broadcasting Inc.) has established a long term distribution agreement with DirecTV to carry two services: Newsworld (24 hours news channel carrying Newsworld programming, The National, The Lead and foreign programs from China, Germany, Japan, India and Europe) and TRIO (drama series, documentaries and movies produced by the CBC and Canadian production companies i.e. The Fifth Estate, the Nature of Things, ENG (licensed from Baton Broadcasting), Flight path (Discovery) documentary series). Northbridge Programming, the program acquisition arm of the joint venture, has purchased 2,200 hours of Canadian production. This programming is included in DirecTV's 30 dollars Total Choice package. In 1995, a survey showed that 50% of viewers said they chose Newsworld International as a regular source of news.\(^{309}\)

On the other hand, Power's European strategy has been to act strictly as an investor and deliberately not get involved in the management side which Power has left to its partner in Pargesa, Mr. Albert Frère and his son. Pargesa which represents 12% of Power corp of Canada's portfolio, owns a significant piece of Audiofina, a Belgian conglomerate which has a sizeable stake in CLT/UFA. Lately, Paul Desmarais jr. declared that Power's policy of not intervening in the management of the corporation the group owns in Europe, might change. This remains to be seen, as it has not been the style of Paul Desmarais sr. who throughout his career, has preferred Power to remain a corporate investor, as opposed to involving itself in corporate management. Furthermore, the idea of any start-up is anathema to Power's corporate culture.

Third, Telescene Corp, presided by Robin Spry is also something of a pioneer. Robin Spry is, in a different context, heeding his father, Graham Spry's words: "The question is, the State or the United States!"\(^{310}\) Telescene's primary focus is on television

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\(^{309}\) H. Enchin, "CBC's offspring signs $200M distribution deal", *The (Toronto) Globe and Mail* (9 June 1997)

\(^{310}\) Plaunt, quoted in Margaret Prang "The Origins of Public Broadcasting in Canada" *(Canadian Historical Review*, (1965) 9 46 No 1. Graham Spry was the spokesman of the Canadian Radio League
production. The group focuses its development activities on high quality family, dramatic and action/adventure programming for the North American and worldwide markets. Its approach to achieving worldwide marketability is to develop them specifically for the US and Canadian market. In its view, market acceptance of TV programs and feature films in the US is critical to international sales. Telescene has produced and developed television programs for and sold television programs to CBS, Fox, PBS, HBO, Show Time, USA Network, TNT, A&E, Sci-Fi Channel, CBC, CTV and CanWest Global.

Telescene has with the other principals of the Action Adventure Network, entered an agreement with DirecTV to provide up to 176 hours of action/adventure programming to be broadcasted by DirecTV commencing in 1998 on a pay-per-view basis. The agreement with DirecTV provides the Action Adventure Network with access to airtime and guarantees that the Action Adventure Network will have a preview window in the US for its programs without precluding subsequent broadcasts on cable or syndication. Finance is currently being negotiated with various European broadcasters and distributors in exchange for European exploitation rights. Distribution via the latest technology for a large volume of production can thus be ensured.

Finally, it should be noted that though other Canadian corporate players have important global experience such as Universal and BCE, their focus is, for the time being at least, not on potential opportunities for Canadian TV. Seagram which owns Universal is considered a Canadian company. Universal has a big TV division, however, it is not truly a Canadian player and key entertainment executives are American. Seagram through its liquor business has long adopted a worldwide approach and Canada's cultural policy is of little interest to its board. In fact, the sale of its stake in Dupont to purchase Universal has so far proved to be disappointing. BCE (revenue over 28 billion, profits over 1.2 billion), is fighting to regain some of the 25-30% market share of long distance customers lost by Bell Canada since the end of its monopoly in 1992 and to consolidate Nortel's strong results and is nurturing new ventures (particularly in wireless) abroad.

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which in the 30's rallied public support for public broadcasting with its slogan "Britannia rules the waves - shall Columbia rule the wave lengths."

311 Telescene Film Group Inc., "Preliminary Prospectus Class B Subordinate Voting Shares" (Montréal, Marleau Lemire, 12 May 1997) at 8

312 Vidéotron certainly has important global experience with its successful foray in the UK where it has recently sold its interests to Bell Cablemedia PLC. Its efforts there, however, were mostly concentrated on offering telephony. Stateside, it owns (84%) of Optel Inc., a cable service provider to multi-dwelling buildings.
CANADA'S REGULATORY FRAMEWORK

. The Broadcasting Act\(^{313}\), a cultural mandate for the regulator

The Canadian Radio-television and Telecommunications Commission (CRTC) is the regulatory body charged (section 5) with regulating and supervising\(^{314}\) all aspects of the Canadian broadcasting system with a view to implementing the "broadcasting policy" set out in section 3 of the relatively recent Broadcasting Act of 1991. The CRTC reports to Parliament through the Minister of Canadian Heritage. Section 3 sets out the policy in considerable detail:

a) the Canadian broadcasting system shall be effectively owned and controlled by Canadians;

b) the Canadian broadcasting system (...) makes use of radio frequencies that are public property and provides through its programming a public service essential to the maintenance and enhancement of national identity and cultural sovereignty;

(...) 

d) the Canadian broadcasting system should:
   i) serve to safeguard, enrich and strengthen the cultural, political, social and economic fabric of Canada.

   ii) encourage the development of Canadian expression by providing a wide range of programming that reflects Canadian attitudes, opinions, ideas, values and artistic creativity by displaying Canadian talent in entertainment programming and by offering information and analysis concerning Canada and other countries from a Canadian point of view;

(...) 

e) each element of the Canadian broadcasting system shall contribute in an appropriate manner to the creation and presentation of Canadian programming;

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\(^{313}\) *Broadcasting Act, Supra* note 72

\(^{314}\) Subject to the power of the Governor in Council to issue directives on broad policy matters (section 7 (1)) and to its power in section 28 to set aside or refer decisions back to CRTC on the issue of the amendment, issue or renewal of licences
f) each broadcasting undertaking shall make maximum use, and in no case less than predominant use, of Canadian creative and other resources in the creation and presentation of programming (...);

h) all persons who are licensed to carry on broadcasting undertakings have a responsibility for the programs they broadcast.

(...) 

t) distribution undertakings should give priority to the carriage of Canadian programming and, in particular, to the carriage of local Canadian stations.

3.2 (...) the broadcasting policy set out in subsection (1) can best be achieved by providing for the regulation and the supervision of the Canadian broadcasting system by a single independent authority.

Section 4. (2) This Act applies in respect of broadcasting undertakings carried on in whole or in part within Canada or on board (...)

b) any space craft that is under the direction or control of
   i) Her Majesty in right of Canada or a province;
   ii) a citizen or resident of Canada, or
   iii) a corporation incorporated or resident in Canada (...)

(...) 

The principal instruments used by the CRTC for implementing the policy are the use of licensing powers (section 9) and the authority to make regulations for the furtherance of its objects (section 10) including namely, respecting the proportion of time to be devoted to Canadian programs, the definition of what constitutes a Canadian program and the carriage of foreign services by distribution undertakings. CRTC decisions are readily enforceable via mandatory orders which can be made orders by the Federal court or of any Superior Court (section 13). There is no question that under the Broadcasting Act, the CRTC has a well-defined mandate to carry out. The Canadian public on the other hand has demonstrated from the very outset its belief that access to American signals should be available to all Canadians not only to those residing by the US border. As the outset, cable and satellite technologies were used mainly to service that need. The CRTC had no choice but to allow the US networks on cable and to

315 CRTC, Public Announcement, "Regulations respecting Broadcasting Receiving Undertakings (cable television)" (26 November 1975) Statutory Orders and Regulations 75-665, Canada Gazette, Part II, 3103. This regulation established basic rules for cable TV including mandatory services such as CBC and local stations and substitution of local channels for distant signal if same program is being carried;
eventually allow American specialty services and pay TV, though on linkage to Canadian services conditions. Since, the number of channels has grown considerably. In 1995 between 35 to 40 Canadian channels were available to most households out of a total of 50 to 60 channels.316

A prerequisite to carrying out the CRTC's mandate is the existence and relative health of regulatees (private broadcasters). These are sensitive to increases in the number of broadcasters317, decreases in advertising revenues and increases in the costs of essential sports rights.

Broadcasters have been supported by income tax rules which limit the deduction of advertising expenses for commercials targeted to Canadians, to commercials broadcast on domestic stations. In conjunction with the CRTC's simulcast rules, this constitutes a powerful incentive for advertisers to broadcast on domestic stations and hence support the financial health of the local broadcasters. The costs of buying more expensive Canadian programs has been addressed by subsidizing through government and government/industry funds and Federal and Provincial tax credits, the production of Canadian programs318, (770 hours of new English language programming in 1996). Specific conditions of license requirements319 implying Canadian content, were used in the eighties and have proved quite successful in ensuring the respect of quotas by broadcasters320 which in the early days was lax. The CRTC has also intervened to ensure the viability of the industry by attempting to avoid multiple licences, barring cable

and the deletion of distant commercials
317 As of March 31 1996, there are 137 originating licensed television stations, 1,341 rebroadcasting stations, 2,011 cable and television systems and 375 networks and other broadcasting undertakings. In total, as of August 31, 1991, revenues totalled 3.7 billion dollars. Estimates, Ibid. at 26.
318 In 1995, Canadian TV licensees spent close to 2.5 million dollars on script development and private TV licensees spent 70 million dollars in acquiring Canadian independent programs. In total, public broadcasters, conventional broadcasters and specialty and pay broadcasters paid $129 million dollars worth of licenses in 1996. The Cable Production Fund which tops up the broadcast licences paid by Canada's broadcasters collected 39 million dollars (80 million dollars in '96) from cable companies in 1995 and is expected to receive 300 million dollars over a 5 year period. Ibid. 2. Canada Television and Cable Production Fund Licence Fee Program. Annual Report (Toronto, 1996-97) at 11
319 CTV Television Network Ltd v Canada (CRTC) (1982) S.C.R. 530 the Supreme Court confirmed that the CRTC's conditions of licence strategy whereby it had required CTV in 1979 to produce 26 hours of original Canadian programming was within the CRTC's jurisdiction
320 CRTC, Public Notice 1995-48 (1995) introducing an option whereby private English language TV stations with more than 10 million dollars in advertising revenues could choose between that condition of licence approach (i.e. CTV's) or the one of exhibiting Canadian programming during prime time.
operators from obtaining TV licences in their territories and reviewing transfer of shares and controlling rights.

Courts\textsuperscript{321} have established federal jurisdiction over telecommunications, radiocommunications and broadcasting, but have not had to pronounce themselves directly as to whether or not broadcasting is a national concern by virtue of being essential to the maintenance of national identity and cultural sovereignty both of which are stipulated in the Broadcasting and Telecommunications Acts\textsuperscript{322} respectively at sections 31b and 7 as well as in the government of Canada's policy statements on the information highway. Affirmations in the Acts are insufficient to validate these statements with regard to the Constitution.

The Canadian Broadcasting Corporation (CBC), Canada's public broadcaster was founded in 1936 as a Federal Corporation. It operates under the 1991 Broadcasting Act. From the origin, its function was to construct a national television network in unpopulated Canada. Program services are distributed via satellite with microwave and landline, and feed 89 CBC owned stations, 1,160 CBC rebroadcasters, 31 private affiliates and 292 affiliated or community rebroadcasters.\textsuperscript{323} Future perspectives for the CBC in the context of its current cultural mandate, budget cuts and world television phenomena are discussed below in the last section of this part.

. The Information Highway implies potential convergence and competition in order to meet international obligations and technological realities

The 1997 international agreement regarding basic telecom to which Canada is a party implies \textit{inter alia} market access, deregulation and competition. Corporate activity is to be market regulated. The Information Highway, its global breadth and the technology underlying it imply convergence of the different support media on which entertainment is delivered to consumers. This in turn implies increasing convergence of domestic legal regimes with regard to broadcasting and telecom which up to now have been distinct. Hence, broadcasting is certainly not immune to competition.

\textsuperscript{321} Re Regulation and Control of Radio Communications in Canada (1932) A.C. 304, (1932) W.W.R. 563 (P.C) where the Privy Council determined that the Federal government has jurisdiction to regulate and control radio communication by Hertzian waves; and Capital Cities Inc v. Canada (CRTC) (1977) 81 D.L.R. (3d) 609 wherein the Supreme Court ruled that the Federal government has jurisdiction over interconnection undertakings.
\textsuperscript{322} Telecommunications Act, Supra note 254-2.
\textsuperscript{323} CBC-SRC, Annual Report, (Ottawa 1995-96) at 2
In 1994, the Minister of Industry, the Honourable John Manley, created the Information Highway Advisory Council (IHAC) in order for it to advise on key issues relative to the government's commitment (1994 Speech from the Throne) to develop a strategy for the information highway. Five principles were set out by the government to guide deliberations, one is competition in facilities, products and services.\(^{324}\)

The IHAC report endorsed by the Federal government's August 1996 Convergence Policy Statement, contains some 300 recommendations to guide the development of the government's action plan. The action plan\(^{325}\) with regard to competition contains an important caveat: "competition must, however, be sustainable and must be consistent with those cultural and social goals that are central to the Canadian experience." In other words, competition is managed or contrived and must not lead to the disappearance of a sector such as cable, for example.

In March 1997, following Public Notice 1996-69 which initiated the CRTC's development of a new regulatory framework, the CRTC issued Public Notice 1997-25 which describes in detail the rules which will apply to all broadcasting distribution undertakings (BDU's) in a competitive environment.

Telco market trials on cable's turf

The regulations are expected to come into force by January 1998 and clear the way for telco/cable to enter into each other's core businesses. In the May 19, 1995, Report to the Government, Competition and Culture on Canada's Information Highway (the Convergence Report) the CRTC endorsed competition for cable but stressed the need for transitional protection for cable due to the market power of telephone companies facilitating their head start in packaging telephony and entertainment. Consequently, telco's shall not be licensed to enter cable's core business until rules removing regulatory barriers to competition in local telephony will have been removed. The expected date is January 1, 1998.\(^{326}\)

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\(^{325}\) Building the Information Society, Moving Canada into the the 21st Century, (Ottawa:Minister of Supply and Services Canada, 1996) at 5 (hereinafter 21st Century)

\(^{326}\) CRTC, Public Notice 1997-49, "Applications by Telephone Companies to Carry on Broadcasting Undertakings", (1 May 1997) par.15
In the meantime, Bell Canada and Telus have been granted in May 1997 broadcast distribution licences to begin technology and market trials of BDU's. These trials, free from linkage rules, will offer (bundled) subscription high speed access to the Internet in addition to cable TV. Bell and Telus applied for an experimental market trial basis to at least 10,400 consumers (7 million households are cabled in Canada) and plan to invest heavily, in Bell's case, 70 million dollars.  

. The new BDU rules, a technology neutral environment

The goal of the BDU regulatory framework, expected to enter into force January 1, 1998, is to create a technology neutral context in which new incumbents and new entrants compete to the benefit of consumers. BDU's include not only licensed Cable TV service providers but licensed wireline, DTH TV providers, Multi-point Distribution Services (MDS) and Local Multi-point Communication Services (LMCS). Any licensed BDU that provides a broadcasting subscription-based service similar to that provided by cable TV undertakings must conform to the new regulatory framework. In order to prepare the advent of competition from telco's, all BDU's can apply for regional licences and thus serve several market areas. The playing field is deliberately not completely level between incumbents and new entrants, between terrestrial and DTH BDU's and between the different classes of BDU's. 

For example, only incumbent Class 1 BDU's are subject to rate regulation for basic service, have the obligation to serve subscribers within the area of the licence and are subject to restrictions on the length of the term that can be negotiated with multi-unit dwellings. Also, only incumbent Class 1 and 2 analog using BDU's are prohibited from distributing US superstations in the specialty service tier unless the Canadian specialty tier is distributed via digital technology.

Class 3 BDU's are not subject to signal carriage of licenced Canadian specialty and pay TV in priority to foreign services not distributed as of May 1996 and prescribed signals and programming contributions of 5% of gross annual broadcasting revenue to the Canadian TV and cable Production Fund and Class 3 BDU's are not subject to access and simulcast rules. Class 2 and 3 BDU's may be free from requirements imposed on regional or national BDU's licensees.

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327 K. Léger, "Cable Assails Phone Invasion", The (Toronto) Financial Post (5 February 1997) 1.2
328 Class 1: more than 6000 subscribers; Class 2: between 2000 and 6000 subscribers; Class 3: less than 2000 subscribers.
329 These will be eventually deregulated when the incumbent's basic subscribers base will have decreased by 5% in the competition's favour and 30% of the market has access to the basic service of one or more licenced BDU's.
Also, no change is made to the requirement that DTH undertakings are only
required to distribute as part of their basic service the programming signals of the 3
national networks. The uplinking of local and regional signals of conventional
broadcasters would be too expensive. Finally, DTH BDU's can carry any US 4 (US
networks) and 1 (US superstation) signals whereas other BDU's need specific
authorization from the CRTC for the source of the 4+1 signals. On the other hand, if
maintained\(^{330}\) for DTH BDU's as well, signal deletion and substitution obligations will be
more onerous for this type of BDU.

Existing principles such as the preponderance of Canadian programming\(^{331}\), prior
CRTC approval of transfer of ownership and control and the use of local advertising will
apply to all BDU's. All BDU's will be permitted to offer pay-per-view, video on demand
(VOD) or exempt programming services without requiring subscribers to purchase the
basic service. Purchase of basic would be required only to have access to the
discretionary tiers, Canadian specialty or Canadian pay TV. All BDU's including cable
will now be able to distribute 4+1 US network signals as part of the basic service and can
designate 1 US superstation for carriage in the discretionary tier with a Canadian digitally
receivable specialty channel.

The Competition Act\(^{332}\) creates a specialized tribunal charged with preventing price
fixing conspiracies abuse of dominant position and tiered selling, however, most of these
questions when raised by private parties are resolved within the CRTC forum.

The development of the Information Highway must\(^{333}\) according to government
policy established in the Spring of 1994 to guide IHAC, meet the two strategic objectives
of creating jobs and reinforcing Canadian strength and cultural identity, in addition to
ensuring universal access at reasonable cost.

. The wide scope of broadcasting's definition

In the face of converging technology, a technology neutral approach has been
adopted. To accomplish its mandate the government is preoccupied with including all
mass media services which are comparable to conventional broadcasting services.
Broadcasting is defined at section 2 of the Act in terms of content and programming and

\(^{330}\) DTH licencees have applied for amendments to this requirement. CRTC, Public Notice 1997-60 (16
May 1997)
\(^{331}\) except class 3 BDU's using only basic band channels
\(^{332}\) Competition Act, R.S.C. 1985, C 34 and R.S.C. 1985 (2nd Supp.) C-19
\(^{333}\) 21st Century, Supra note 325 at 4
the government asserts jurisdiction over undertakings that do not make use of the radio waves. Only visual images of alpha numeric text and services using audio or video tailored for the individual and not intended as a substitute for TV are excluded.

The definitions of program and broadcasting are interpreted by the CRTC and the wide definition causes uncertainty which hampers investment. IHAC has recommended that the definition of program be amended to be narrower.\textsuperscript{334} Presently the CRTC is proceeding by exemptions.

There is no doubt that for all companies whether regulated by the Telecommunications Act or the Broadcasting Act, competitive forces are increasing. However, as telecom and broadcasting converge, the \textit{Broadcasting Act} overshadows the \textit{Telecommunications Act} and new competitors are expected to meet Canadian content requirements.

The wide definition referred to above is an issue in the context of Canada's trade commitments wherein broadcasting is defined in a manner similar to the narrower definition which preceded the 1991 Act. This definition is important in the context of the cultural exemption clause which includes broadcasting.\textsuperscript{335}

Obviously, the way of implementing the cultural mandate needs to be adapted to the fact that the possibility of exercising domestic control can no longer be depended upon. This is true not only with regard to international trade agreements in the face of converging technology but also with regard to new technology such as DTH TV.

1. **Can DTH TV technology in Canada be thought of in a strictly domestic framework?**

An overview of the licensing of DTH TV providers and the proposal to lease space on Telesat's satellite to American corporations for the purposes of beaming programming to the US confirms that this relatively new technology cannot be thought about in a strictly domestic framework.

The CRTC ruling\textsuperscript{336} in 1994 on the proposed exclusive (except during periods of emergency) use of Canadian satellite facilities for the provision of DTH services in effect

\textsuperscript{334} \textit{IHAC}, Supra note 324 at 98
\textsuperscript{335} 1. \textit{NAFTA}, Supra note 253-2. at Appendix 2106 and s. 2107
2. \textit{FTA}, Supra note 274-3. at s. 2005

The definition of cultural industry specifically mentions satellite broadcasting.
\textsuperscript{336} \textit{CRTC}, Public Notice 1994-111, "Exemption order respecting DTH satellite distribution
barred a DTH applicant, Power DirecTV, from offering DTH services in Canada because the US content it proposed to offer would be beamed off DirecTV's two US satellites. A satellite consortium, known by the end of 1994 as Express Vu\textsuperscript{337} was exempted from the licensing requirements.

As the CRTC's exemption order was not subject to Cabinet review under sections 9(4) and 28(1) of the Act, the Ministers used the Governor in Council's powers of direction (sections 5, 7 and 8) and a public review of government policy regarding DTH distribution commenced.\textsuperscript{338} The three member advisory panel reviewing the CRTC's DTH policy reported to the Federal Ministers in April 1995.\textsuperscript{339} The panel was harsh on the CRTC's use of an exemption order for developments of such a potential consequence as DTH and found that such orders should not be substituted for regulation. The panel concluded that Canadian originated programming should be delivered to Canadians via Canadian facilities with no objection to US content being delivered through US satellites.

In order to gain time, the two Federal ministers suggested that the CRTC respond directly to the government's proposed Direction Orders in lieu of initiating the prescribed procedure calling for the time consuming formalities of the parliamentary process. The procedure requires notice of policy directive in the Gazette and 40 days of parliamentary scrutiny, the goal of the procedure being to demonstrate the arms length relationship between the CRTC and politicians.

The CRTC decided to reject the government's request for informality. The two ministers had no choice but to rush the cabinet directive to Parliament. The CRTC highlighted to the Minister of Canadian Heritage that, in its view, the policy directive was retrospective and too specific in that it might prevent the only DTH operator covered by the exemption from opening business in the Fall. Moreover, certain provisions of the

undertakings" (30 August 1994) criterion 3 and App s.3
\textsuperscript{337} 1. \textit{The (Toronto) Financial Post} (30 September 1994) 8 Then composed of BCE, WIC Western Communications, Cancom and Tee Comm. BCE is a part owner of Telesat with Alouette Communication, a regroupment of 9 Stentor companies and Spar Aerospace (small share). At the origin, cable co's were involved in the consortium which was apparently formed with the encouragement of the CRTC in order to extend the monopoly to DTH and counter the grey market, and

2. Letter of A. Darlington, CRTC Secretary General, to J. Logan (17 August 1994), and

\textsuperscript{338} Government of Canada, Press Release, P-09-98 (12 September 1994) and Canada Gazette, Par. 1 Volume 128, Notice, November 1994
The proposed order could be interpreted as directing the Commission on how to implement broadcasting and regulation. The order might thus be open to legal challenge.\textsuperscript{340}

The directive was tabled by the Government in Parliament\textsuperscript{341} notwithstanding the opinions of two law firms\textsuperscript{342} and the CRTC's voiceful criticism as expressed by Keith Spicer, then CRTC Chairman, that "the government's power of direction under the Broadcasting Act was never meant to usurp the Commission's exclusive role in implementing broadcasting policy for Canada." The Cabinet justified itself stating that its members were acting in the defence of consumers against monopoly and for competition: the Government's role being to determine broadcast and communications policy, the CRTC's to implement it. The Standing Senate Committee recognized the interests of the Canadian consumer above all\textsuperscript{343} and the necessity of ensuring a competitive marketplace.

Before the Parliamentary Committee, Keith Spicer stated that the CRTC did not by its exemption create a monopoly; the exemption applied if the pro-Canadian criteria were met, if not, a licence could be applied for. He mentioned that Express Vu was not specifically authorized that, in fact, any firm meeting the all-Canadian criteria, could offer the DTH service without a license.\textsuperscript{344}

The Senate and House Committee reported confirming the Cabinet decision. The government directive called for licences to be issued no later than November (CRTC, PN 1995 - 114). Though the CRTC, by using an exemption order attempted to circumvent Cabinet review, in the end, the CRTC was made to be responsive to the concerns of the government in power. This raises the issue of whether the CRTC is truly an independent regulator. It also raises the issue of a certain degree of conflict between Heritage Canada and Industry Canada though as Hudson Janisch points out the new CRTC chairperson seems to be getting better working relations with those two Ministers.

The episode also demonstrates that the CRTC naturally depends on domestic control. The CRTC's exemption order aimed to avoid the use of US technical standards and ensure the possibility of local advertising. The CRTC is still concerned with preventing a situation where consumers could easily access unlicensed US DTH services by adapting equipment provided by licensed Canadian DTH service suppliers.

\textsuperscript{340} The (Toronto) Globe and Mail, (7 June 1995) B1.1
\textsuperscript{341} Report of the Standing Senate Committee on Transport and Communications, Senator D.H. Oliver, Chair (Ottawa: Transport #30327, 7 June 1995) 1520 (hereinafter, Senate Transport Committee)
\textsuperscript{342} Senate Transport Committee, Ibid. pp. 14 & 15 summarizing the opinions of McCarthy, Tetrault and of StikemanElliot which conclude that the order proposed by the Governor in Council is ultra vires.
\textsuperscript{343} Ibid. at 18, 38.
\textsuperscript{344} The (Toronto) Globe and Mail, (17 June 1995) D1.2.
In another episode, Telesat's Anik E-1 satellite was subjected, in March 1996, to technical difficulties caused by a solar storm. Telesat proposed to ease shortage by purchasing two constructed satellites from TCI of Englewood USA for 800 million dollars and parking the two satellites in Canada's slots. Some of the capacity would be leased back to TCI (PrimeStar) and to TelQuest Ventures, two American corporations, as well as to Express Vu. At the time, the two American companies were unable to obtain space on American satellites. The Industry Canada Minister, responsible for the use of Canada's orbital slots, approved the proposal in principle but the deal also needed to meet the Federal Communications Commission's (FCC) approval as TCI/TelQuest's transmitting stations are located in the US. As expected, TCI's American competitors, AT&T and MCI, DirecTV, EchoStar & USSB lobbied intensively arguing essentially that the arrangement would create a competitive imbalance in the American DTH business. They claimed they still needed additional capacity and threatened asking the ITU for a redistribution of orbital slots. On account of technical specifications, if granted, this could prevent Telesat from beaming signals into the US market. In the event MCI's request (presented to the ITU on its behalf by the FCC) was to be approved by the ITU, the new slots would probably be auctioned to the highest bidder, a procedure which could take a few years. Telesat found some comfort in the fact that its application to use slots for total North American coverage had been filed at the ITU since quite some time.

As a proposal for cross-border policy came under review in Washington, the Administration wrote to the FCC asking it to defer its decision even though the proposal to the FCC predated the Administration's policy review. The Administration complained about Ottawa's discrimination through content and licensing restrictions. The cross-border policy under review stipulated that applications by foreign companies for access to the US market would be contingent on US companies having reciprocal rights.

The FCC dismissed the TelQuest/TCI applications on procedural grounds i.e. that earth station applications may only be filed if and when the space stations with which

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345 Federal Communications Commission. Info Sheet, "Direct Broadcast Service Questions and Answers" (January 1996). DBS is not limited to being cable competitors for programming only. FCC rules say that the use of half the transponders for non DBS uses is permitted. Hughes DirecTV, for example, downloads huge data files from the Internet via satellite; also large Earth stations can be serviced for retransmission.

346 The (Toronto) Financial Post, (8 October 1996) 4

347 Letter from the Department of State Office of the US Trade Representative Department of Commerce, Department of Justice to Reed E. Hundt, FCC Chairman (1 July 1996)

348 FCC, Decision in the matter of applications of TelQuest ventures and Western Telecommunications DA96-1128 F(15 July 1996) confirmed on appeal.
they intend to communicate are licenced. Hence, no substantive issues raised by the Executive Branch were addressed.

The FCC's decision begs the question of whether our limited (population wise) universe can support DTH companies at the sole service of Canadians. On the other hand, the extra Canadian satellite space offered at a lower price might interest alternative and competing services to large cable companies which, ever since the conclusion of a deal with NewsCorp/MCI, have gained access to a prime US orbital slot.

In the meantime, Telesat was awarded in April the prime 91WL orbital slot and the launching of a new satellite is planned for 1998. Apparently, a 32 transponder satellite with more than 200 channel capacity is being constructed by Lockheed Martin and affiliated Spar Aerospace. ComDev of Cambridge, Ontario is also involved. Construction and launching (Russia) costs for the satellite total 350 million dollars. Seventeen transponders are to be acquired by Express Vu. Industry Minister John Manley, in early March, in a speech insisted that "a Canadian DTH service is needed to maintain a vibrant culture. Without a Canadian DTH broadcasting direct-to-home programming made in Canada, a generation of Canadians will grow up with a new medium without any Canadian message." In order to deal adequately with changing assumptions, and in particular that of a seamless/borderless communications environment, traditional modes of implementing the cultural mandate are being shed, reviewed and will eventually all be replaced by more adapted ones.

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349 "ExpressVu Moving to Direct-broadcast Satellite", *The (Toronto) Globe and Mail* (2 May, 1997)
- A REGIME UNDER PRESSURE

. Confusion reigns with regard to borderless DTH TV technology

Hughes' DirecTV, though unapproved and unlicensed by the CRTC, is received directly by 300,000 to 400,000 Canadians. This "grey market" represents a substantial portion of the relatively small Canadian TV market. TV image and sound quality is far superior and a wide selection of channels is available. No other comparable service is presently being offered to Canadians by DTH or cable TV operators and finance is difficult for domestic companies considering DirecTV's substantial (though unofficial) headstart in the market.

A widely circulated brochure "Direct-to-home satellite TV",352 put out in 1996 by Industry Canada aims to control, to some extent, the public's propensity to access American DTH via the grey market. The public is told that American service providers have in the past occasionally cut off their signals to viewers in territories where they do not hold programming distribution rights. The brochure thereby implies that the consumer is making a calculated risk when he or she pays for the service. It also points out that once Canadian DTH services are operational, consumers will have to purchase new equipment, the equipment bought for accessing US DirecTV not being functional for DTH services offered by Canadian companies.

The brochure353 states that "the law provides for both criminal prosecution and civil action by private parties whose financial interests are affected by illegal decoding." It warns that purchasers as well as retailers of unauthorized satellite services such as illegally modified decoders and pirate access cards, can be charged with a criminal offense, fined or jailed.

It also warns that a decoder that is authorized to catch satellite signals in the US may be illegal to use in Canada. It also instructs dealers to inform customers as to which services are legal and which are not.

353 Facts You Should Know, Ibid. back flap.
Though the brochure purports to be a quick reference to the applications of the Radiocommunication Act (R.S.C. 1985 R-2) to DTH, several issues on various aspects of the legality of the use by Canadians in Canada of American DTH TV services are still before the courts.

Two recent apparently contradictory decisions have done little to remove confusion.

In R. v. Ereiser\(^{354}\), Ereiser and Kerrobert Satellite & Cellular were accused of unlawfully possessing equipment or a device intended to be used to decode an encrypted subscription programming signal without any authorisation from the lawful distributor of the signal, contrary to section 10 (1) (b) of the Radiocommunication Act of Canada.

They were in fact selling so-called "green cards". This had an impact on DirecTV's substantial grey market income and caused embarrassment to News Datacom International which was responsible for encrypting DirecTV's signal. With assistance from US customs, it encouraged the RCMP to mount an investigation.

Judge Klebuc refused to apply s.327 of the Criminal Code which makes it an offence to use or possess or manufacture devices to gain service from a telecommunications facility without payment therefor. The judge observed that the intention behind s.327 is to protect the proprietary rights of persons legally entitled to provide a telecommunication service. Hence, in his view, no offence arises under s.327 unless the telecom facility in question is authorized by law and the provider is lawfully entitled to a fee. "Mere production of 'pirate' or 'grey market' signal is insufficient to constitute an offence under s.10 (1) (b) of the Radiocommunication Act of Canada."

Judge Klebuc also affirmed that "Section 10 (1) (b) protects lawful distributors (...) If there were no lawful distributor of the signal in Canada, can the prohibition extend to non-resident enterprises whose signals happen to overlap onto Canada? I think not."

In Express Vu et al v. NII Norsat\(^{355}\), Judge Frederick E. Gibson dismissed Norsat's motion for summary judgment on the portion of the claim related to section 18 of the Radiocommunication Act, satisfied that the conduct of Norsat is contrary to s. 10 (1) (b) of the Radiocommunication Act in that Norsat imports, sells and possesses equipment or devices under circumstances that give rise to a reasonable inference that the equipment or device has or have been used and was or were intended to be used for the purposes of


\(^{355}\) *ExpressVu et al v. NII Norsat International Inc.* (24-25 June 1997) Toronto, Fed Ct. T - 1639 -96
contravening s. 9 (1) c) of the Act. The Judge also affirmed that he was satisfied that Plaintiff had at that stage demonstrated sufficient evidence of damage.

In their defence to the statement of claim, defendants allege, in summary, that the CRTC and Parliament have no jurisdiction over foreign broadcasters using foreign satellites; the reasons why US DTH broadcasters ask for an American billing address are immaterial; the provision of DTH services into areas not served by cable cannot harm Canadian DTH licensees; CRTC licenses do not confer exclusive territorial rights; s. 9 (1)c of the Radiocommunication Act does not create statutory protection from consumers buying American services and compatible equipment nor do Canadian DTH programmer's rights; s. 9 (1) (c) of the Radiocommunication Act refers to the piracy of Canadian signals - any other interpretation would be contrary to the Charter of rights and freedom; no Canadian law prohibits owning, using or subscribing to American DTH services or using a foreign address; the claim is both premature (Express Vu is not yet operational) and tardy (the situation has gone on too long to warrant an injunction); defendants are not broadcasting they are selling equipment which they import and on which they pay tax; the defendants cannot warn nor be made responsible for making possible the receipt of spillover which are not the same as plaintiff's signals but for which Canadians pay.

Both decisions relate to section 9 (1) (c) of the Radiocommunication Act and to the reception of foreign satellite transmitted signals. Whilst R v. Eireiser deals with piracy (decoding), Express Vu v. NII Norsat deals with the purchase of signals. Whilst in R. v. Eireiser no lawful distributor in Canada exists, in Express Vu v. NII Norsat, a CRTC authorized distributor exists. Bluntly put, from a consumer's point of view the decisions translate into meaning that piracy (of foreign signals) is permitted but not the purchase of foreign signals. These decisions are consistent with the implementation of sovereignty over the airwaves principle. On the other hand, Express Vu v. NII Norsat raises the touchy issue of whether Canadian's freedom of information right is not being breached (CTV v. Canada (CRTC), Supra note 319, was a pre-Charter case) by such an interpretation of the Radiocommunication Act. It also raises the issue of whether the enforcement of such an interpretation would not require border customs controls and new legislative provisions providing therefor - likely a costly and unpopular operation.

.Growing popularity of DTH satellite TV

In addition to the superior quality resolution\(^{356}\) of image, vast channel choice and price/value ratio, the economic aspect also merits consideration. The Canadian public

\(^{356}\) Blockbuster movie products are particularly well adapted to DTH digital TV service, they are in 35mm and therefore of high resolution.
would probably be shocked to learn that according to a study carried out by University of Toronto's Tom Wilson, Simon Fraser's Stephen Globerman and the Brooking Institution's (Washington) Robert Crandall, allowing Power to offer DTH TV in Canada would have saved customers 468 million dollars a year or roughly 60 dollars per subscriber. (cf J. Bell, "Challenges Facing Canadian Broadcasting" Address to the Insight Conference on DTH satellite broadcasting, 30 March 1995)

Allegedly, 85% of cable revenues in the heavily cabled Canadian market goes towards packaging, administration distribution and return on net assets. Less than 20% of revenues goes towards program producers and content creators. Cable has 40% operating margins. If the non-creative costs fell by 25%, approximatively 750 million would be available for content providers. DTH technology is more efficient and digital receiving equipment costs less. Though the cable industry is heavily indebted (Rogers: Revenue of 1.8 billion net loss 203.2 million, debt 3.7 billion) revenue flow is steady and finance available on the US financial market.

A solution to the "grey market" issue does not lie in asking Hughes via diplomatic means to lower its satellite beam in such a way as to exclude the Canadian population from its footprint. Though feasible to some degree in principle, a satellite footprint cannot be made to precisely match the US/Canadian border. In practice, if the beam was lowered, some areas such as St Paul, Minnesota, for example, which is located north of Toronto, would not capture the US DTH service. In addition, it happens that most of the Canadian population resides within a few hundred miles of the border. This fact also precludes the use of another (perhaps questionable) strategy which would consist in applying for a Canadian slot so close to the US slots that though the quality of signals from US beams to US inhabitants would remain acceptable, signals "spilled over" from US satellites into Canada would be unclear due to the Canadian signals being beamed from a slot so close to the US. Administratively, the strategy could be difficult to put into practice because unlike the US, Canada has not occupied its (6) DBS orbital slots.

It is widely recognized that a solution does not lie in isolating Canada by blocking US satellite beams. Nor does it lie in instituting a "dish" police (such as in closed societies). There is nothing inherently wrong in watching US films. In the context of the recent US Internet decisions, the freedom of information principle is bound to gain strength in Canada as well. The general population would probably be quite astonished to learn of the extent to which TV content is subject to CRTC control.357

357 Though this is, of course, public information, few people obviously have the leisure and/or inclination to peruse and make sense of the law, regulations and CRTC decisions which on occasion are not limpid to outside observers.
In fact, the CRTC needs to allow an alternative to the "grey market". Most recognize that, sooner or later, consumer freedom of choice will triumph, this notion of Frontier Freedom is being experienced by a small (but growing) portion of the population surfing the Internet. As well, most would agree that Canadians expect to be technologically on par with their American neighbours with respect to TV. In fact, presently, except for US DTH TV, Canadian TV image quality and number of available channels may in some cases be superior to that offered by US cable services for a higher price.

In any event, the CRTC has been for these reasons relaxing some of its rigidity. With regard to US specialty TV channels, the CRTC has advised at the end of July that the Commission will no longer delist US channels to make room for competing Canadian ventures: also CNBC, a competitor of the Globe and Mail's ROB TV service was authorized to operate on a 24 hour basis as it does in the US. Many foreign TV services (such as American Health Network, the Golf Channel, TV Food Network. ART American, FITTV, BBC World, Deutsche Welle, TV Japan) were authorized for distribution in Canada. KWGN (Denver), the Game Show Network and two classic movie services were added to the list for packaging with pay TV channels. Gradually, specialty broadcasting which with networks and independent programming, are chosen by 90% of the population, may displace unpopular pay TV and pay per view movies which take up 15 to 18 channels as these are encouraged to free scarce space up, at, least until cable goes digital.

Another indication of relaxation and further to come is apparent in the broadcast licences granted to Bell and Telus authorizing them to offer cable-TV services on an experimental trial basis to 10,000 consumers in Alberta, Ontario and Québec. The licences largely put aside Cancon linkage rules which had been sacrosainct.

In the light of a possible upcoming negotiation with the US, in the meantime, the CRTC must perform a tricky balancing act between "caving in"prior to negotiations and stemming the growth of the grey market for US DTH services.

- Infeasibility of maintaining Canadian content quotas in the face of digitalization and multi-channel TV

There is no question that, as discussed earlier in this thesis, digitalization, in addition to improving image quality, multiplies the amount of space available for content. In this sense, spectrum scarcity on which basis the regulator's intervention to ensure an
adequate amount was being devoted to Canadian content was justified, is no longer a valid assumption. In fact, as pointed out in the European section of this thesis with regard to the airtime quotas, it is unlikely there would be enough domestically produced content to fulfill a 51% quota.

ExpressVu slowly abandons its "wait and see" attitude

A licenced DTH service provider, ExpressVu now owned by BCE (Cancom and WIC Western) was formed largely at the CRTC's instigation. At its origin, it had even included a cable consortium. Though ExpressVu has strong financial backing (from BCE) it has only recently launched its service. - in part due to technical mishaps suffered by Telesat's satellites. Another factor which may have hampered ExpressVu is that its controlling shareholders lack of substantial retail programming/packaging or global TV marketing experience.

A licence must be proceeded upon otherwise it may lapse. One gets the sense that ExpressVu is very slowly abandoning its "wait and see" attitude. That attitude was probably justifiable considering the considerable and growing erosion of Canada's DTH market to the benefit of Hughes DirecTV, the possibility that a regional DTH broadcasting agreement may be negotiated with the US and finally and less importantly perhaps, the inappropriate licensing of 3 or 4 DTH service providers for Canada when a more limited number are licensed in more populous jurisdictions such as the US and the UK. In the UK, there is only one licensed service for a country with a mostly uncabled population of over 46 million persons. In the heavily (over 60%) cabled US market, there is only one significant DBS service and though it is steadily making progress after the strongest introductory success of an electronic consumer product since VCR, and benefits from its indirect owner's (GM) clout, and though it benefits from the US Administration's commitment, it faces severe regulatory constraints and a strong broadcasting and cable lobby.

358 After having "waited" so long, Express Vu is not waiting for delivery of Telesat's DBS satellite in '98. It is now marketing a larger dish compatible with the medium powered Anik E-1 which it will substitute for an 18" dish when the DBS satellite is launched.

359 USSB is marketed with DirecTV and offers complementary packages to those offered by DirecTV. Both companies share space on DirecTV's owner's satellite, Hughes Corp. Echostar is at a disadvantage as it does not have access to full CONUS and Prime Star presently mostly serves remote areas.
One can surmise that there is some chemistry between Express Vu and Echostar with whom Express Vu has an arrangement for the use of Echostar's end-to-end DTH technology (DISH brand) and to whom it has granted an option to invest in Express Vu. Ever since Echostar failed to conclude an alliance with ASkyB whereby Echostar would have gained access to a full CONUS slot, an Express VU-Echostar rapprochement is even more likely. However, nothing is definite and BCE may very well have other priorities given the uncertainties. Refinancing may occur through a public offering or debt issue. Though challenged by rivals under the Competition Act, Express Vu appears to be well positioned because its owners have interests in the satellite operator, Telesat, as well. This compares favourably with a possible future official competitor, DirecTV, which also is owned by the satellite's operator's owner.

- WHAT APPROACH IS APPROPRIATE NOW TO BENEFIT FROM THE OPPORTUNITIES WORLD TV MAY REPRESENT FOR THE CANADIAN BROADCASTING INDUSTRY, ITS CRAFTS PEOPLE AND CANADIAN CULTURE?

Faced with the tidal wave of digital borderless personal communication technology, some would say that national culture does not stand a chance. They are right in the sense that the implementation of cultural policy via Cancon rules will have to be rethought in the context of new assumptions brought about by new technology.

Notwithstanding the statement\(^{360}\) by Raymond Chrétien, Canada's Ambassador to Washington, in October 1996 prior to the election, that "Ottawa will not water down its cultural protection rules even if fast emerging technology makes them outdated..."; it is highly unlikely that Canada would, even if it could in the words of Sergeant David Long of the RCMP's commercial crime unit in Vancouver "put a wall from here to the moon". Sergeant Long's concern was one of enforceability of sovereignty over broadcasting. At the very least, such a wall-erecting attempt would be counter-indicated in a country which embraces multi-culturalism.

Others summarily dismiss the importance of culture and see the new assumptions as a chance to finally cut cultural spending to the bone and side with the American view of culture as just another product. Fortunately for the Americans, their popular culture has worldwide appeal. Trade representatives regularly accuse Canada, and other countries

\(^{360}\) P. Morton, "Cultural Policies Affirmed by Ambassador to US", \textit{The (Toronto) Financial Post}, (10 October, 1996) 11
such as France, of using culture as a pretext for protecting economic interests. Is it not possible, on the contrary, that the American argument of assimilating culture to other products is simply self-serving? If national sovereignty, which also is undergoing pressure from international agreements, has any substantial meaning left, it is important to consider the thought of world acclaimed Ontario economist (now based at Harvard), John Kenneth Galbraith: "Critical issues in sovereignty are not economic but cultural."

Economics is undoubtedly critical to citizens' well-being and is obviously all the more critical in the context of global integration of economies and its inevitable competition. Understandably, economics is currently the main focus in many domestic and international issues. There is no reason why the cultural industry should not be associated with profitability where appropriate nor why cost-efficient distribution modes should not be favoured. However it is unwise, in my view, to dismiss culture if it is critical to sovereignty. Culture needs to be nurtured economically.

The Red Book Policy of the Liberal Party of Canada (1993) stresses the importance of committing to cultural development goals. The Liberal Party of Canada sees culture as the key factor in Canada's unity: "Canadian culture embraces our shared perception and beliefs, common experiences and values, and diverse linguistic and cultural identities. Everything that makes us uniquely Canadian. Culture is the very essence of national identity, the bedrock of national sovereignty and national pride. At a time when globalization and the information and communication revolution are erasing national borders, Canada needs much more than ever to commit itself to cultural development."361

Few would deny the importance of culture, national identity and the preservation of some amount of pluralism and choice on World TV. Dr. Sylvia Ostry of the University of Toronto's Centre for International Relations recently highlighted362 the issue of whether people really want to live in a homogenized world. The question merits attention since some form of harmonization/standardization is, after all, the WTO's ultimate goal.

As noted above, Canada's GII policy echoes the Red Book's priority on culture. The other priority is (quite justifiably for a government) jobs. Faced with global competition and the need to enact budget cuts as well as with the enforcement dilemma new technology poses to Cancon as reflected in the DirecTV episode and the huge multiplication of TV channels made possible by digitalization, there is almost inevitably a resulting sense of malaise. It derives from the sense of futility generated when goals are set for which adequate means to attain them have yet to be fully provided.

362 J. Schofield, " Back to Square 1" Macleans (14 July 1997) 36
Canada must continue gearing up to take a chance on the opportunities global TV represents. Some would simply shrug their shoulders at Washington-based satellite newsletter publisher Bob Sherman's prophecy: "In a couple of years, Canada will be left with a crippled and dying satellite fleet and a million grey market DBS system owners watching US Channels HBO and Showtime the Canadian government is so afraid of."363

More people, however, would be concerned by the job priority and the fact that the industry represented in 1992-93, 60,000 jobs and has a substantial trickle down effect in the economy. Sovereignty (of which culture is a critical element) might also pique the enthusiasm of many who see an interest to maintaining Canada as a country, if only for its quality of life.

363 S. Feschuk, "Canada Scrambles for DTH", The (Toronto) Globe and Mail (November 1996) B.1
PART V: Elements of a global positioning model

THE CHALLENGE OF DRAWING PROFIT FROM GLOBALIZATION AND REGIONAL DISTRIBUTION ENABLING DTH TECHNOLOGY

Government's policy making role in general has to do with favouring the maintenance of jobs for its citizens and making sure profitable industries are not unduly hampered by domestic and international regulatory restrictions. As noted above, culture, because it is a critical element of sovereignty, is also a priority.

Because of the new assumptions brought about by technology and international trade agreements, Canada's generally successful mode of implementation of cultural policy based on the supply principles of production of content and its access to distribution channels, is under review.

The cultural policy itself is of course, being maintained. Throughout the review, precise and attainable objectives must be identified. These will underly the development of new rules for the implementation of cultural policy.

The objectives

First of all, work for Canadian audio-visual crafts people needs to be maintained at least at the current level. This goal relates to government's policy making role in general. Jobs for skilled workers mostly on the technical side of production as opposed to the more conceptual roles, for example, of writing and directing, come from south of the border i.e. American TV and film production companies.

According to Canadian Heritage statistics, in 1993-94, an estimated 894,000 people worked in the cultural sector - almost 7% of the total labor force. Of these, some 285,000 worked in core production and distribution activities, and over 600,000 in related jobs. As a whole, the sector contributed 29.6 billion dollars to or 4.8% of the GDP. In 1992-93, according to a Statistics Canada, Client Study, the broadcasting and film industry created 60,000 direct employment jobs (more than the print media) which is close to half the number of jobs created by the automobile industry. In the cultural sector, after print media, broadcasting was the second largest contributor to GDP.

\footnote{IHAC, Supra note 324 at 33}
Currently, this important number of skilled jobs is dependent to an important extent on the weak Canadian dollar, which in turn is dependent on US (and Canadian) fiscal policy. The continuation of the use of Canadian craftspeople by established American production companies is clearly fragile and needs to be secured. Digitalization will bring about the need for increased production of content and ensuring the continuation of Canada's substantial participation in the production of TV programming is one way of deriving profit from technology. Such an objective does not directly profit Canadian producers. Profit in a general sense, however, includes profit to individual Canadian citizens and is undoubtedly a highly worthwhile objective.

Second, Canadians must continue to have access to Canadian cultural products, if they so desire. This goal relates to the Government's cultural priority. Airtime quotas are not, and never were, intended to prevent Canadians from having access to American programs, or to force Canadians to watch Canadian TV, or to prove that were programming available in Canada, it would be more popular than American TV. The implementation of cultural policy via airtime quotas was established because under past technological conditions spectrum was scarce and insufficient to accommodate an acceptable proportion of Canadian programming in addition to American programming, admittedly a popular Canadian choice. Some limit\textsuperscript{365} on American or foreign produced programming therefore had to be established.

When digitalization is fully implemented on all distribution mediums, it will no longer be necessary, or possible, to maintain airtime quotas because there will be more than enough room for all content providers. This mode of implementation therefore needs to be reviewed. Obviously, it may pose challenges for distributors which are not yet competitive as to the number of channels and image quality offered.

Third and also related to the government's cultural policy, is the objective that Canadian cultural product must continue to be available. Due to limited worldwide distribution access compared to American made product, financing of state of the art domestic productions has been difficult (though less so than film) and subsidies and incentive programs had to be introduced, as well as criteria for determining what is Canadian.

While awaiting the materialization of opportunities new technology such as DTH and the information highway may present with regard to ease of access to regional and global distribution market access, subsidies and incentives programs will have to be

\textsuperscript{365} It may be that the selection of "permissible" (CRTC list) American programming is geared to favoring the holders of Canadian rights for American programs.
maintained, though in modified form, to take into account the need to have purely objective criteria for determining whether a product qualifies as Canadian culture. This is especially true considering that Canada’s society is now pluricultural and is an open society with a global outlook. Subsidy programs must also be modified to take into account the likely advent in the near future of the Multilateral Investment Agreement (MIA). This Agreement, as well as access to the Canadian market by foreign distributors of independent film productions, may be beneficial to a wider distribution of Canadian content internationally.

Finally, a new objective, that of encouraging access to domestic, regional and global markets via new technology must be mentioned. In addition to being related to the government’s cultural policy this objective is related to the government’s policy making rule in general i.e. that of securing a favourable regulatory environment for profitable industries. In the past, the implementation of cultural policy was carried out largely via local distributors over whom the government has authority. With the advent of borderless personal communications technology, this avenue of implementation is becoming difficult, and its effect distorted by off shore competitors. It must be reviewed and the opportunity of entering a regional agreement with the US examined.

. The means

In spite of the complexities convergence presents, we are still at the age of the dinosaurs in the history of space communications technology, hence it is very important to consider simple solutions to issues over complicated ones and keep options open while at the same time seizing opportunity. In the words of Winston Churchill: "out of intense complexities, intense simplicities emerge".

In order to realize the first objective related to job preservation for crafts people a regional (US-Canada) TV broadcasting pact, in the tradition of the Automobile Pact, whereby Canada would benefit from production quotas (maybe 20%) and US majors could be involved, merits serious consideration. After all, as we have seen, the number of workers involved itself is significant; Canadians are important consumers of US TV programs and the Canadian market is profitable for the US because it is inexpensive to access. It may be opportune to consider this avenue at the present time whilst the number

366 Subjective discretionary criteria are inadmissible where the distribution of public funds is effected
367 The Agreement concerning Automotive Products between the Government of Canada and the Government of the United States 1966 stipulated duty free access to the US respecting origin criteria in return for duty free access to Canadian market subject to assemblers meeting performance requirements.
of Canadian workers involved in American TV productions is high, whilst the TV production service industry is still excluded from GATS and a regional bi-lateral agreement is therefore permissible. It would appear that, as the cultural "exemption" under NAFTA and the FTA applies only between Canada and the US (not Mexico), a new bilateral agreement between them may be possible. Also, prior to the entry into effect of the GATS Agreement on Basic telecommunications next year, the US is particularly keen on negotiating with Canada. In the words of FCC Chairman, Reed Hundt: "We would have another person in the bullpit with the US who are able to preach the message to the real problem areas, the Chinas, the Brazils, the Indonesias." Though this statement was made in the context of the international telecom agreement from which broadcasting has been excluded, obviously, a broadcasting agreement would be a major step forward and perhaps as important as Canada's restriction on telecom foreign ownership Canada is at least for the moment hanging onto. Such a pact with its world respected neighbour would certainly give the US more credibility when it insists on opening broadcasting globally, as well as when it makes bids to improve other countries' telecom offers.

The production quota system may well be the price Canada should request in exchange for a broadcasting agreement. Prior to any trade agreement and even in policy elaboration on foreign access to the domestic market, the US examines in the public interest, its competitive advantage and concerns itself particularly with making sure a trade agreement would not create competitive distortions in its home market. Obviously, this is also of concern to Canada as regards possible distortions in its home market.

As the automobile industry generates many jobs in Canada and in the US, special sectorial provisions have been negotiated in NAFTA. These carry forth much of the provisions of the Automobile Pact. A major policy objective for Canada's automotive industry has been access to the larger US market and protecting jobs that depend on or serve the Canadian market.

Access to the American market with regard to TV programming, would be beneficial to profitable Canadian TV companies such as CanWest Global and the effects

368 The French, stalwart opponents of GATS inclusion of cultural/audio-visual services now that they have consolidated their industry, may, in a negotiation context, cease to be so. Hence, a GATS inclusion may eventually be agreed to despite opposition from Canada.
369 The (Toronto) Financial Post (19 July 1997)
370 Telecommunications Act, Supra note 254-2.
371 Foreign Licensed Space Stations, Supra note 281
372 NAFTA, Supra note 253 -2 Annex 300-A
of access by Americans into the Canadian market would be counterbalanced by the securing of jobs for Canadians in that industry.

In addition to the fact that Canada has a long experience negotiating with the US and that it as America's principal neighbour, holds a major card in the context of global telecommunication negotiation, it should be noted that: product/content is important both for Canadian and American TV service providers: work for Canadian crafts people, exposure for products expressed by Canadian artists and manoeuvrability with regard to DTH technology are what Canada needs; and US and Canadian interests are not diametrically opposed. American producers such as Warner and Disney, for example, have shown that, for economic and quality of life reasons, they are far from against shooting in Canada where skilled crafts people are available at a short flight away. The American entertainment industry exploits products not the labour force. In LA, an electrician in the entertainment industry can earn as much as 200,000 $ per year.

Québec needs to be firmly on board (whether as part or not of Canada) these negotiations with the US and shown where its benefits lie, otherwise its politicians may seize the opportunity to blast the negotiation's chances of success away. In 1995, the Québec Liberal Party, the PQ and Québec arts organizations protested heavily against making Québec and Canada a simple extension of the American market as suggested in the DTH license application briefs submitted by Power DirecTV. A Québec Minister contended that the Broadcasting Act was possibly being violated and the cultural exemption clause in NAFTA agreement (which includes satellite broadcasting in the definition of cultural industry) compromised, if Canadian content on only 3 channels (5% of film broadcast, 14% of "event coverage") out of 63 was to be permitted. At the time, US content was held to be about 15 percent on Québec screens.

In order to realize the second objective (access to Canadian product in Canada) the airtime quota implementation mode needs to be reviewed in the light of the multiplicity of channel space available as digitalization takes hold. Obviously the aim, as David Schwanen, Senior Policy Analyst at the CD Howe Institute puts it, "should be to make quality Canadian programming easily available, rather than attempt to maintain a set ratio of 'Canadian' channels to foreign ones. " Mr Schwanen proposes that " the policy would be to always have room available across Canada for broadcasters ready to provide high Canadian content programming."

373 R. Conlogue, "Liberals, PQ Unite Against CRTC Plan", The (Toronto) Globe and Mail, (19 October, 1995) E.11
374 D. Schwanen, A Matter of Choice: Toward a More Creative Canadian Policy on Culture, (Toronto, CD Howe Institute, 1997) at 30
In order to realize the third objective (production of Canadian content), until regional access via new technology such as DTH, for example, is established, subsidies and incentives need to be maintained as the proposed Broadcasting Agreement Pact though obviously designed to ensure the existence of programming with high Canadian content in terms of labour force, would by no means guarantee the existence of Canadian cultural content programming. However, objective criteria solely related to the citizenship of the author and director need to be established. Presently, criteria are left to the subjective appreciation and autonomous or independent judgement of government funding groups. Cultural products are the expression of Canadian artists (not corporations) which, by definition, is a reflection of Canadian culture. Even if these artists write for American productions or the American audience which, as noted above, is not generally the case at the present time as most American productions hire American writers or buy American stories, this will not be a problem. The fact American programs are written by Canadians or adapted from Canadian stories would already incorporate a Canadian cultural perspective.

Also, with regard to subsidies and incentives, all companies, including non-domestic companies, should have access to these programs destined to encourage the use of Canadian talent. Attracting non-domestic, well established international distribution companies would ensure the distribution of work reflecting Canadian culture. Daniel Schwanen recommends that in the film distribution and book retailing sectors, Canada accept the entry of foreign competitors as this could actually increase the promotion of Canadian products to Canadian and foreign audiences.375 There is no automatic link between the nationality of production or distribution companies and the cultural content distributed. There is no reason to assume that foreign related companies operating in Canada are not as law abiding as domestic companies.

With the likely advent in the near future376 of the Multilateral Investment Agreement (MIA), the CD Howe's approach is very much in tune with emerging realities. MIA, which would extend open-border investment guarantees to 29 OCED countries would impose national treatment requirements on the investment incentives, including subsidies and low interest loans that countries offer corporations.

It is not without significance to refer in this regard to the fact377 that the Canadian government recently granted a 60 million dollars subsidy to a foreign owned

375 Ibid. note at 34
376 L. Surtees, "Treaty Seen as Ending Telecom Restrictions", The (Toronto) Globe and Mail (1997) D.1
377 L. Eggerston, "Ottawa Taking 60 million $ Stake in Cancer Drugs", The (Toronto) Globe and Mail (June 1997) A.1
pharmaceutical company, Pasteur Mérieux Connaught, previously the renowned Connaught Laboratories (which originally was attached to the University of Toronto) to further develop here in Canada the promising vaccine Connaught discovered for curing some forms of cancer. The Canadian government has a form of royalty participation in eventual profits which could be huge. The French owned company has since 1989 implemented a 350 million dollars research program in Canada involving the creation of 250 direct jobs in addition to 250 spinoff jobs.

Also narrowly related to the third objective (ensuring the existence and the second objective, availability) of Canadian cultural product, is the CBC's mandate. The CBC can be depended upon, as no other, to continue the production of quality programming which relates to Canadian culture including its multi-cultural heritage. In the Chairman of the CBC's Board, Guylaine Saucier's words, "CBC is central to my view of what defines Canada".

As of September 1996, American programming on prime time (7 to 11pm) on English TV was eliminated. In 1995-96, the CBC was the only English language broadcaster which scheduled a significant amount of Canadian content on prime time i.e. 83%. The total share of CBC English TV viewing during prime time is 11% (23% for French CBC). In comparison, commercial non-pay stations have a 44% share, US services a 25% share and pay/specialty an 8% share.

That being said, funding, 918 million dollars in 1995-96 which represents approximatively 75% of operating funds, has undergone severe cuts i.e. 379 million dollars spread over 4 years. CBC's commercial revenues (such as advertising revenues) which represent 21% of its operating funds are declining by approximatively 35 million dollars in large part due to the cutback on American programming during prime time. In addition, the CBC, like other broadcasters, must deal with the costs of going digital. Canada, because of its North American reality, cannot ignore the calendar set by the FCC for digital implementation without which interoperability would loose credibility and the manufacturing of digital receivers would not be commenced. A CBC Task Force on the implementation of Digital TV is due to report in the Fall on the development of a strategy for the implementation of over the air transmission of digital TV, which will include financial issues and criteria for digital and analog allotments. A preliminary review has already found digitalization to be far beyond the CBC's present level of support and as

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378 Witness, North of 60, Directions, The Rez (new) to name but a few and very importantly its two principal cultural groups through cooperative efforts between its English and French TV departments i.e. The National and Le Point, Country Canada and La Semaine Verte and through the airing of series such as The Road to Avonlea and Robe Noir on each other's markets
379 CBC SRC, Annual Report (Ottawa, 1995,96)
for off the air broadcasting which via cable is available to 80% of Canadian households, upgrading costs exceed estimated profits. Operators have up to now only begun to upgrade and this in the most populated regions. Only 1% of independent TV producers have plans for digital.

As noted earlier, the issue is a bit of a chicken and egg conundrum. Several sensitive points will have to be addressed such as how off air broadcasting would deal with US border station digital programs Canadian off-air broadcasters are allowed to simulcast. The way in which the subject is approached so far seems to indicate that the full roll-out of (cheaper and quicker) Canadian DTH TV is not likely in the near future in Canada.

Finally, the CBC's mandate to "reflect Canada and its regions to national and regional (local) audiences" requires it, in a sense, to be all things to all Canadians from coast to coast. Given the trend towards market fragmentation to which Canada cannot immune, the CBC's wide and indiscriminate mandate poses a challenge.

However, there is another side to the coin! In principle, the growth of new digital networks should give Canadian independent producers and content providers a cheaper way to distribute their products. As communications technologies such as DTH TV, for example, become personalised, niche markets will grow. As demonstrated earlier in this thesis there is a substantial market out there if one considers that wherever a satellite beams American programming, a market share is also available for another kind of programming, a more gentle less abrasive TV such as the CBC's. Canada is the only G7 country which doesn't have a colonial past or hegemonic plans. The values dear to Canadians are what make it such a well regarded country abroad. The CBC is particularly well positioned given that the excellence of its programs has been recognized at home and abroad through hundreds of awards and prizes. The CBC has tremendous branding advantages as a Canadian service and as a producer of quality programming.

The CBC is in fact as indicated earlier taking advantage\textsuperscript{380} of new technologies and testing waters through its relationship (via an alliance with Power broadcasting) with DirecTV for the airing of 2 CBC specialty channels, TRIO a family entertainment channel and Newsworld International, a 24 news and information channel which consists of the best of domestic Newsworld programming along with documentaries from around the world. In Canada, Newsworld which presents 90% Canadian content (on a weekly basis)

\textsuperscript{380} The CBC is also making use of the Internet to market its programs and interact with the public sometimes on the air. In 1995, a joint venture was underway with Bell Canada, Newbridge, Oracle, Telesat and Televitesse to test a computer based news service PNW - the only digital news and information service of CBC Newsworld
is the specialty network with the highest penetration in Canada reaching 7.4 million subscribers. It has a 1% audience share. Like RDI it is self funding on an incremental basis.

It may be useful to take a look at how other public broadcasters and new services are adapting to change. The public broadcaster, BBC, is financed solely by licence fee fixed by Parliament. It is financially healthy despite its battle for survival against the hostile Conservative government which criticizes its lack of profitability and is concerned with shifting financing more strongly towards Pay TV. The BBC promises to spend an additional 845 million dollars on existing services over the next 5 years. Domestically, BBC 1 and BBC 2 viewing figures are rock solid at 32% and 12% respectively despite competition from satellite and cable audiences which presently garner, to ITV's loss, 11% of viewing.

On the international front, BBC World which does not broadcast in Britain except for its digital service, has an audience of 50 million homes. In 1998, BBC World expects to be on the air in the US thanks to an agreement with TCI's Discovery Communications documentary network. Seventeen year old CNN which reportedly\(^{381}\) has a news budget of 500 million dollars, 113 million subscribers (71 million in the US) and is profitable (250 million dollars on revenues of 800 million) is adopting a regional approach (i.e. broadcasting in the native language) in its offerings which though more costly is more luring to advertisers. Obviously, the US is dominated by CNN and the next battleground for these services is Europe, Asia and emerging countries.

If it hasn't done so already, the CBC might do well to look into developing for English TV a packaging concept similar to the successful TV5 package in which its French TV division participates, with Commonwealth country broadcasters as a start-up group. Thanks to TV5, CBC French TV has an international audience in Europe, Asia, Africa, Latin America, the West Indies and on the International channel in the US. CBC French TV has also participated in co-productions with other pubcasters of the TV5 consortium on the subject of AIDS. A channel or two of a TV5 like English package could also eventually be distributed in developing countries with the support of CIDA. Sooner or later, the cost of mass produced receiving equipment will decrease appreciably.

In any event, the CBC is Canada's last best guarantee for the continuation of the presence of Canadian culture on domestic TV and it should not be held too closely to account by the strictures of its mandate while it actively promotes (via self-financing

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\(^{381}\) R. Covington, "Television Newscasters Vie for Global Audience", *The International Herald Tribune (Paris)* (23 April 1997)
projects) Canadian culture abroad, an achievement which always produces beneficial fall-out for Canada's economy.

Finally, with regard to the last objective, (encouraging access to domestic regional and global markets via new technology) the opportunity of entering a regional agreement with the US relating to DTH TV should be examined. It would be critical to regain at least in part some manoeuvrability with regard to Canada's orbital slots and, if possible, satellite technology. One has to bear in mind, however, that for the reasons mentioned earlier, growth in the use of the existing new medium is likely to progress slowly, at least in the US, while cable's difficulties are being worked out. Notwithstanding the regional broadcast agreement and clear wish of the US Administration to see competition and the emergence of DTH satellite TV, it is quite likely that strong lobbying on the part of major US cable operators and MSO's and the extensive examination of competitive distortions will unduly prolong the presentation of an adequate US offer.

Though obviously US companies cannot outwardly be against gaining official DTH access to the Canadian market, it is highly probable, as explained earlier, that companies which have paid high prices for the orbital slots, will not welcome the supply of additional satellite space as this could reduce the value of their rights in the hypothesis that programming is allowed to be beamed to the US from Canadian satellites. Indeed, US companies such as Loral and Lockheed Martin are very careful to not step on clients (i.e. Echostar/GE Americom) in the context of their participation with Mexican companies in the privatization of Satmex which in conjunction with the US Mexican Satellite reciprocity agreement of 28 April 1996 appears promising.

. The time is ripe to take advantage of global opportunity

While still at the dawn of World TV, it is time to review the implementation of cultural policies. This is confirmed by the Senate Committee on Transportation and Communications in April 1997.382

Canada would do well to heed Marshall McLuhan's foresight: "The electric age establishes a global network that has much of the character of our central nervous system."

382 Interim Report, Subcommittee on Communications of the Standing Senate Committee on Transport and Communications - Wired to Win, Canada's International Competitive Position in Communications, The Honourable Marie P. Poulin, Chair (Ottawa: Senate of Canada, April 1997)
APPENDIX I

ITU Structure

Plenipotentiary Conferences

Council

Radiocommunication Sector

Telecommunication Standardisation Sector

Telecommunication Development Sector

World Regional Radiocommunication Conferences
Radiocommunication Assemblies

Radio Regulations Board

Study Groups

World Telecommunication Standardisation Conferences

Study Groups

World Regional Telecommunication Development Conferences

Study Groups

World Conferences on International Telecommunications

World Telecommunication Policy Forum

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Co-ordination Committee
Secretary-General = WTAC*
Deputy Secretary-General

General Secretariat

Director
Bureau

Advisory Group

Director
Bureau

Advisory Group

Director
Bureau

Advisory Board

*World Telecommunications Advisory Council

Table is from ITU's Celebrating 150 years 1865-1995, Geneva International Systems and Communications Ltd 1995 p 27
## APPENDIX II

### Table 1

Plenipotentiary Conferences between 1865 and 1994

<table>
<thead>
<tr>
<th>№</th>
<th>Year</th>
<th>Dates</th>
<th>Place</th>
<th>Title</th>
<th>Number of Participating Countries</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1865</td>
<td>1/3-17/5</td>
<td>Paris</td>
<td>International Telegraph Conference (Plenipotentiary)</td>
<td>20</td>
<td>Signature of the first international Telegraph Convention. The Morse code was designated at the international telegraph alphabet</td>
</tr>
<tr>
<td>2</td>
<td>1875</td>
<td>1/5-19/7</td>
<td>St. Petersburg</td>
<td>International Telegraph Conference (Plenipotentiary)</td>
<td>20</td>
<td>Revision of the telegraph and international Telegraph Regulation at Rome, 1871/1872. Signature of the St. Petersburg Convention. Preparation of a new international treaty</td>
</tr>
<tr>
<td>3</td>
<td>1903</td>
<td>4/13/8</td>
<td>Berlin</td>
<td>Preliminary Conference on Wireless Telegraphy</td>
<td>9</td>
<td>Study of international regulations for wireless telegraphy with a view to the Berlin Conference 1900</td>
</tr>
<tr>
<td>4</td>
<td>1906</td>
<td>3/10-3/11</td>
<td>Berlin</td>
<td>International Radiotelegraph Conference (Plenipotentiary)</td>
<td>30</td>
<td>Signature of the International Radiotelegraph Convention, the Final Protocol and the Service Regulations</td>
</tr>
<tr>
<td>5</td>
<td>1912</td>
<td>4/6-5/7</td>
<td>London</td>
<td>International Radiotelegraph Conference (Plenipotentiary)</td>
<td>45</td>
<td>Preparation of the International Radiotelegraph Convention, the Final Protocol and the Service Regulations</td>
</tr>
<tr>
<td>6</td>
<td>1920</td>
<td>8/10-15/12</td>
<td>Washington*</td>
<td>World Electrical Communications Conference</td>
<td>5</td>
<td>Preparation of the Washington Radiotelegraph Plenipotentiary Conference. This meeting involved representatives from only France, Italy, Japan, the United Kingdom and the United States</td>
</tr>
<tr>
<td>7</td>
<td>1927</td>
<td>4/10-25/11</td>
<td>Washington</td>
<td>International Radiotelegraph Conference (Plenipotentiary)</td>
<td>80</td>
<td>Revision of the International Radiotelegraph Convention, the Final Protocol and the Service Regulations. Establishment of the first international frequency allocation table, creation of the CCIR</td>
</tr>
<tr>
<td>8</td>
<td>1932</td>
<td>3/9-10/12</td>
<td>Madrid</td>
<td>International Telegraph and Radiotelegraph Conference (Plenipotentiary)</td>
<td>68</td>
<td>The Telegraph Convention and the Radiotelegraph Convention were amalgamated into an International Telecommunication Convention to which the Telegraph, Telephone and Radio Regulations were annexed. The International Telegraph Union became the International Telecommunication Union</td>
</tr>
<tr>
<td>9</td>
<td>1948</td>
<td>30/9-21/10</td>
<td>Moscow*</td>
<td>Telecommunication Conference</td>
<td>5</td>
<td>Preparation for the Plenipotentiary Conference, Atlantic City, 1947, and for special conferences supplementary to that Conference. This meeting involved representatives from only China, France, the United Kingdom, the USSR and the United States</td>
</tr>
<tr>
<td>10</td>
<td>1947</td>
<td>1/7-3/10</td>
<td>Atlantic City</td>
<td>Plenipotentiary Conference</td>
<td>71</td>
<td>Revision of the Madrid Convention, 1932. Development and modernization of the Union. Under an agreement concluded with the United Nations, the ITU became a specialized agency and its headquarters were transferred from Berne to Geneva. Establishment of the &quot;International Frequency Regulation Board&quot; (IFRB)</td>
</tr>
<tr>
<td>11</td>
<td>1952</td>
<td>3/10-15/12</td>
<td>Buenos Aires</td>
<td>Plenipotentiary Conference</td>
<td>79</td>
<td>Revision of the Atlantic City Convention. It should be noted, however, that few changes were made. The Union was then 67 years old, and the Buenos Aires International Telecommunication Convention now established a more facade than ever</td>
</tr>
<tr>
<td>12</td>
<td>1959</td>
<td>14/10-21/12</td>
<td>Geneva</td>
<td>Plenipotentiary Conference</td>
<td>84</td>
<td>Signature of the new International Telecommunication Convention. Completion of the process of integrating the ITU into the United Nations system. The Union being assimilated into the common system of working conditions, salaries, pensions, etc. Decision that the Secretary-General and Deputy Secretary-General should henceforth be elected directly by the Plenipotentiary Conference and not, as before, by the Administrative Council</td>
</tr>
<tr>
<td>13</td>
<td>1965</td>
<td>14/9-12/11</td>
<td>Montreux</td>
<td>Plenipotentiary Conference</td>
<td>118</td>
<td>The Union was now a hundred years old. Considerable changes were introduced in its organizational structure. Special measures were adopted to promote technical co-operation</td>
</tr>
<tr>
<td>14</td>
<td>1972</td>
<td>14/9-26/10</td>
<td>Malaga-</td>
<td>Plenipotentiary Conference</td>
<td>142</td>
<td>Revision of the Montreux Convention, 1965. The decisions taken have enabled the ITU to adapt its activities to spectacular developments in telecommunications</td>
</tr>
<tr>
<td>15</td>
<td>1982</td>
<td>28/9-6/11</td>
<td>Nairobi</td>
<td>Plenipotentiary Conference</td>
<td>147</td>
<td>Revision of the Convention of Malaga-Torremolinos, 1973. The Resolutions adopted called for a continuation of the Union's work, particularly with regards to telecommunications development, e.g. proclaiming &quot;World Communications Year&quot;, establishing the &quot;Independent International Commission for World-wide Telecommunications Development&quot; and strengthening the Union's regional presence</td>
</tr>
<tr>
<td>16</td>
<td>1985</td>
<td>23/5-29/6</td>
<td>Nice</td>
<td>Plenipotentiary Conference</td>
<td>143</td>
<td>Adoption of the ITU Constitution and Revision of the Convention of Nairobi, 1982. Creation of the Telecommunications Development Bureau (BDT) and the High Level Committee (HLC) to Review the Structure and Functioning of the Union</td>
</tr>
</tbody>
</table>

### Forthcoming Conferences

<table>
<thead>
<tr>
<th>Year</th>
<th>Place</th>
<th>Conference Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>Tokyo</td>
<td>Plenipotentiary Conference</td>
<td>An additional Plenipotentiary Conference if so decided by the Administrative Council at its 1991 session.</td>
</tr>
</tbody>
</table>

*Table is from El-Zanati, A.G. "Dissemination of Information and Documentation at the International Telecommunication Union in the '90s", a paper presented to the International Seminar on Information Management: Practice and Education, ITU 1990*
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