

SPECIAL ISSUE

"An overview of 1998's Main Trends and Key Events"

1. LEGISLATION AND POLICIES

Trends: In Europe, the year 1998 was marked by the full and successful liberalisation of the telecoms sector and the consolidation of the legal framework for electronic commerce. Also striking was the high level of legal activity of European competition authorities in the communication sector at large. In contrast to the smooth transition towards competition in Europe, US authorities continued to struggle to turn the 1996 US Telecoms Act into a reality. At competition level, the focus in the USA was of course on the Microsoft antitrust suit. As for Japan, it pursued its liberalisation efforts.

EUROPEAN UNION

1) Policy and legislation

The highlight of 1998 was of course the entry into force of the regulatory package fully liberalising the European Union's telecoms services and infrastructures market. Published in November 1998, the European Commission's fourth report on the implementation of the 1998 telecoms regulatory package found that the national regulatory authorities (NRAs) have begun to implement the principles laid down in the regulatory package in all EU Member States, thus effectively opening telecoms markets to full competition. The overall picture is that of a dynamic and rapidly evolving EU telecoms market worth 148 billion euro in 1998, with an estimated growth rate of 21% for mobile communications and 13.7% for network services, as well as of declining prices of services (<http://www.ispo.cec.be/infosoc/telecompolicy/en/comm-en.htm>).

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In parallel, the Commission started to investigate the regulatory impact of the convergence of the telecoms, media and information technologies sectors. A Green Paper was adopted to launch a Europe-wide debate with interested parties on how the converged sectors should be regulated in the future. This will set the basis for the adoption of policy orientations in 1999 (<http://www.ispo.cec.be/convergencegp/>).

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Another key dimension of Commission activities in 1998 was to work towards the completion of the Internal Market for

electronic commerce and new services. The required directives were tabled and some already entered force in 1998, in particular regarding the legal protection of databases and the protection of personal data. The Directive on a transparency mechanism for information society services was adopted and will enter force around mid-1999. The other building blocks of the legal framework for electronic commerce include the proposed directive on: copyrights and authors rights in the information society; the distance-selling of financial services; conditional access services; electronic signatures; and certain legal aspects of electronic commerce (<http://europa.eu.int/comm/dg15/en/index.htm>).

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Wireless technologies will play an important role in the development of new multimedia services. In this respect, the Commission adopted a draft Decision on the coordinated introduction of the next generation of mobile and wireless communications, the Universal Mobile Telecoms System (UMTS), by 1 January 2002 at the latest. The aim is to secure pan-European roaming based on an harmonised licensing environment and the coordinated allocation of frequencies and European standards, so that UMTS users enjoy the same level of mobility as with the pan-European GSM standard for digital mobile telephony (<http://www.ispo.cec.be/infosoc/telecompolicy/en/umts.html>).

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Progress towards a clear, stable and coherent regulatory framework for electronic communications has to be reflected at global level. A key event in this respect was the entry into force, on 5 February 1998, of the World Trade Organisation (WTO) Basic Telecoms Agreement, which involves 72 nations accounting for 93% of the global telecoms market. In addition, the Commission adopted a Communication on globalisation and the information society which launched an international debate on how to improve coordination of worldwide policies affecting the global on-line economy. This could lead to the adoption of a non-binding International Charter by the end of 1999. The global business community is supporting this process through the setting up of a Global Business Dialogue (GBD), which has identified seven priority areas where swift action is required: taxation, tariffs, intellectual property, encryption, authentication, data protection and liability (<http://www.ispo.cec.be/eif/policy/com9850en.html>).

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Regarding research and development, agreement was reached on the European Union's Fifth Framework Programme for 1998-2002. As a result, the new Information Society Technologies (IST) Programme will be launched with a first call for proposals on 16 February 1999, followed by a second call on 16 March 1999. The IST programme will be worth 3.6 billion euro over four years. The budget for 1999 will amount to approximately 800 million euro.

## 2) Competition cases

The number of competition cases handled by the European Commission increased tremendously in 1998 in the telecoms and other information-related sectors. The multiplication of ventures and mergers in Europe and the world reflects both the vitality of the communications industry and the progress of convergence.

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In the telecoms sector, the Commission agreed to clear several important ventures. This includes: the purchase by the US operator Ameritech of a 34% minority stake in the incumbent Danish operator Tele Danmark; the acquisition by Germany's Mannesmann of a controlling interest in the Italian telecoms operator Infostrada, a unit of the former Italian computer giant Olivetti; the setting up of Wind Telecomunicazioni, an Italian telecoms joint venture, by the French and German incumbent operators France Télécom and Deutsche Telekom as well as the Italian electricity utility ENEL.

The Commission also cleared the merger between the US long-distance operators WorldCom and MCI subject to the sell-off of MCI's Internet assets, and the take-over by the leading US long-distance operator AT&T of the leading US cable TV operator TCI. Finally, the Commission opened a detailed enquiry into the planned joint venture between AT&T and the leading UK operator BT, which would combine the two group's international operations and assets.

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In the media sector, the Commission decided to block plans by the TV groups Kirch and CLT-UFA to take joint control over the German pay-TV channel Premiere as it would have achieved a monopoly position in the German digital pay-TV market. The venture was to include BetaDigital, a Kirch-owned supplier of digital TV set-top boxes, while the incumbent German operator Deutsche Telekom was to provide the distribution platform. The Commission added that BetaDigital and Deutsche Telekom would also have achieved dominant positions for technical pay-TV services.

Separately, the Commission cleared the purchase by Canada's Seagram of PolyGram, a leading music group owned 75% by the Dutch electronics giant Philips. Regarding PolyGram's movie arm, PolyGram Filmed Entertainment (PFE), which Seagram doesn't intend to keep, the Commission said it would assess PFE's sell-off once it knows the buyer's identity.

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Regarding new Internet and interactive services, the Commission gave its green light to several ventures. This includes: the setting up by the UK energy utility United Utilities and the Canadian telecoms group Northern Telecom of Nor.Web, a joint venture specialised in the development of a new technology, Direct Power Link (DPL), which allows for high-speed data transmission over electric power lines; the creation of AOL/CIS France, a French joint venture specialised in interactive services, by the French telecoms operator Cégétel, the French pay-TV giant Canal+, the world's leading on-line service America OnLine (AOL) and the German media giant Bertelsmann; the setting up of Symbian, a joint venture specialised

in hand-held communications devices, by Britain's Psion, a leading hand-held computer manufacturer, and three world leaders in mobile phones, Finland's Nokia, Sweden's Ericsson and America's Motorola.

Regarding the setting up of British Interactive Broadcasting (BIB), a UK joint venture specialised in interactive TV services, the Commission said the involved parties, namely the leading UK pay-TV group BSkyB and the leading UK telecoms operator BT, made substantial concessions to meet its competition concerns. The Commission will reach a final decision after taking account of third party comments.

### 3) European Union Member States

Developments in EU Member States confirmed the impact of telecoms liberalisation, both as regards new entries and the need for incumbent operators to establish strategic partnerships to draw the benefits of economic globalisation.

In Spain, for instance, telecoms authorities awarded a third fixed-network license to Lince, a consortium led by the French incumbent telecoms operator France Télécom. The Spanish government also announced that it would sell-off the remaining 30% it owns in Retevisión, Spain's second-largest telecoms operator. In France, the government decided to sell-off a further stake of the incumbent telecoms operator France Télécom, thus reducing its share to 62%. It also sold-off 30% of the consumer electronics manufacturer Thomson Multimedia. The French telecoms equipment manufacturer Alcatel, the US PC software giant Microsoft, the US digital satellite broadcaster DirecTV and the Japanese electronics group NEC each received a 7.5% stake. Another example is Austria, where the Italian incumbent operator Telecom Italia won the bid for a 25% stake in the incumbent operator Telekom Austria.

## UNITED STATES

### 1) Policy and legislation

Two years after the adoption of the 1996 US Telecoms Act, the home markets of regional US telecoms operators still remained insufficiently opened to competition. As a result, the Federal Communications Commission (FCC) continued to bar Baby Bells from entering the long distance market. For instance, the FCC blocked the business agreements by which US West and Ameritech would have provided the long-distance services of Qwest Communications as part of their local services offer. It also rejected BellSouth's second application to enter the long-distance market. On this occasion, it provided a detailed blueprint to help Baby Bells comply with the US Telecoms Act.

### 2) Competition

In 1998, the spotlight was of course – and remains – on the antitrust suit brought by the US Department of Justice (DoJ) and 19 US state Attorneys General and the District of Columbia against US PC software giant Microsoft. Initial charges were that Microsoft had engaged into anti-competitive and exclusionary practices aimed at maintaining its monopoly in PC operating systems and to extent this monopoly to Internet browsers. New allegations were added at a later stage, including Microsoft's attempt to share the market with other leading US high-tech firms such as Netscape, Intel and Apple, steps aimed at making competitors' products work – or seem to work – less efficiently with Windows than Microsoft's own software, and attempts to eliminate the potential threat posed by Sun Microsystems's Java programming language.

Meanwhile, Microsoft was dealt a first blow in the licensing-breach suit filed by Sun Microsystems when US Federal Judge Ronald Whyte ordered Microsoft to ship Java in its original version within 90 days. The decision was based on the fact that the version of Java integrated in Microsoft's Internet browser Explorer had been modified.

## JAPAN

Further progress towards opening the Japanese domestic telecoms market was achieved in 1998 with the award by the Japanese Ministry of Post and Telecoms (MPT) of its first "Type I" licenses to foreign telecoms operators, namely the US long-distance operator WorldCom and the leading UK telecoms operator BT. Type I licenses give the privileges of a public operator, including the right to build one's own network. Global One, a joint venture between the French, German and US telecoms groups France Télécom, Deutsche Telekom and Sprint, has also applied for a Type I license.

Separately, the Ministry of Finance (MoF) announced that it would sell-off a further stake in the incumbent telecoms operator Nippon Telegraph and Telephone (NTT), in which it still owns 65%. This would follow the sell-off of 28.5% of NTT's mobile unit, NTT Docomo, the world's largest cellular operator with over 20 million subscribers.

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Like the European Union, Japan placed great emphasis on convergence and electronic commerce. The MPT, for instance, released a report which tabled proposals to address convergence between telecoms and broadcasting, as well as related issues such as infrastructure development, content promotion, venture capital and globalisation. As for the Ministry of Justice, it released a report that sets the ground for the setting up, by 2001, of a legal framework for electronic certification and authentication services.

## 2. MARKETS AND COMPANIES

Trends: A key market trend in 1998 was the explosion of trans-national ventures and the emergence of trans-national strategies. This is particularly true in Europe, where an increasing number of companies are adopting pan-European strategies as a direct result of the 1998 liberalisation. The same applies to North

America, with important US-Canadian ventures. This highlights the strong integration of regional markets. Meanwhile, growing trans-Atlantic business links highlighted the growing interdependence between the European and the North-American regional markets.

## EUROPE

### 1) Telecoms

A major event in 1998 was the decision of the leading US long-distance operator AT&T and the leading UK telecoms operator BT to combine their international assets. The move would allow BT to rebound after its global development strategy was hampered in 1997 by the collapse of its planned merger with the second-largest US long-distance operator MCI. Concert, a joint venture specialised in global corporate services set up by MCI and BT, is to be integrated in the AT&T-BT alliance after BT bought back the 25% stake owned by MCI. For AT&T, the venture marks a major shift away from its current WorldPartners alliance, which comprises Unisource from Europe, KDD from Japan, Singapore Telecom and Telstra from Australia with 10% each, towards a simplified and more efficient structure. WorldPartners is to be dismantled by the end of 1999 and AT&T-Unisource, AT&T's joint venture with Unisource, in the year 2000.

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The French and German incumbent telecoms operators France Télécom and Deutsche Telekom have stepped up their efforts to coordinate their investment strategy. In Britain, for instance, the two partners set up a joint venture, Metroholdings, with the UK telecoms group Energis, to jointly develop a broadband network which would benefit Global One, their global telecoms venture which also includes America's Sprint. Another example is Switzerland, where France Télécom and Deutsche Telekom established a joint subsidiary, Multilink, which offers both corporate and residential services. The two partners' pan-European strategy is also underpinned by the upgrading and interconnection of their telecoms network to link-up Europe's main financial centres. Their partnership is also to be cemented through a 2% stake swap.

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The German industrial group Mannesmann is rapidly emerging as an important player in the European telecoms arena with assets in Germany, France and Italy. Mannesmann's most significant progress was achieved in Italy, where it owns a majority stake in Infostrada, a joint venture set up with the former Italian computer giant Olivetti. In 1998, Infostrada became the first new entrant to challenge the Italian incumbent operator Telecom Italia in the residential fixed-line market. Infostrada also won the bid for the purchase of the private infrastructure of the Italian railway company. Separately, Mannesmann announced the setting up of a Europe-wide telecoms group, euro.map, which would offer seamless services in 1999 on the basis of the networks of Mannesmann's German unit Arcor, its French partner Cegetel and Infostrada.

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The Italian incumbent operator Telecom Italia failed to define a clear partnership strategy. In 1998, it tried to establish close ties with the UK telecoms group Cable and Wireless (C&W), but the plans rapidly collapsed. Telecom Italia could still have gone ahead with its plans to take a 30% stake in the pan-European joint venture AT&T-Unisource, but the venture lost all substance after AT&T decided to team up with the leading UK operator BT and discontinue AT&T-Unisource in 2000. But Telecom Italia was more successful on other fronts, for instance in France, where the private operator Bouygues Telecom agreed to give it control over its fixed-line subsidiary 9 Télécom.

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The incumbent Swiss telecoms operator Swisscom expanded into neighbouring countries through the setting up of regional joint ventures with domestic energy utilities. In Austria, for instance, Swisscom took a 50% stake in United Telecom of Austria (UTA), a telecoms operator established in 1995 by Austria's nine energy utilities. Swisscom also set up two regional ventures, Tesion and Communications Network Services (CNS), in Germany, as well as another one in France, Estel.

## 2) Audiovisual

The main event in Europe's media industry was the decision of the Canadian beverage and audiovisual group Seagram to spend \$10.6 billion on purchasing PolyGram, one of the world's leading music groups, which was 75%-owned by the Dutch electronics giant Philips. The integration of PolyGram into America's Universal Studios is to turn Seagram into a major content powerhouse with annual revenues of \$12 billion, ranking second at world level after Walt Disney with \$19 billion and ahead of Time Warner with \$11 billion. The move reinforces the already well-established dominance of the North-American entertainment industry and further consolidates the global content industry. The last ventures of this magnitude date back to 1995 with three giant US media mergers: Walt Disney-Capital Cities/ABC for \$19 billion, Time Warner-Turner Broadcasting System for \$8.5 billion, and CBS-Westinghouse for \$5.4 billion.

## 3) Internet and Multimedia

The consolidation of Europe's Internet access market gained further momentum in 1998. A major characteristic of this process is the growing influence of US telecoms groups. This includes both already well-established US giants such as WorldCom and America OnLine (AOL), as well as new entrants. The US telecoms group Qwest Communications International, for instance, agreed to spend 133 million euro on buying EUnet, a leading European Internet service provider (ISP) which primarily serves business customers. As for Esprit Telecom, a fast-growing European telecoms start-up, it agreed to spend about 160 million Euro on purchasing PlusNet, the corporate telecoms services arm of the German industrial conglomerate Thyssen, before being itself absorbed by the US telecoms operator Global TeleSystems (GTS).

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The incumbent German telecoms operator Deutsche Telekom announced the launch of a pilot high-speed data transmission service based on the ADSL technology, which is to be followed by commercial roll-out. The move reflects a growing trend in the telecoms industry on both sides of the Atlantic as well as in Asia to increasingly rely on ADSL for the provision of high-speed access to the Internet over regular phone lines.

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The French telecoms, building and water giant Vivendi, formerly known as Compagnie Générale des Eaux (CGE), became one of Europe's first converged group through a full merger with the French media group Havas. The move aimed at reinforcing and integrating Vivendi's communications activities into three branches: Cégétel, France's leading private telecoms group, which is 44% owned by Vivendi, the rest being held by BT, Mannesmann and SBC; Havas, a 100%-owned subsidiary in charge of multimedia, the press, publishing and advertising; audiovisual, mainly with Havas' 34% stake in the French pay-TV giant Canal+. Furthermore, Vivendi agreed to spend \$800 million on purchasing America's Cendant Software, a world leader in CD-ROM and DVD-ROM-based interactive games, educational software and lifestyle.

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The German media and publishing giant Bertelsmann continued to emerge as one of the major European player in the global on-line industry. In addition to its alliance with the world leading on-line service America OnLine (AOL), it took important steps to challenge America's Amazon.com, the pioneer on-line book selling group. This included the launch of a German-language on-line bookstore, Boulevard Online, a Europe-wide on-line bookstore, Books Online (BOL), and the purchase of a 50% stake worth \$200 million in Barnes & Noble.com, the on-line bookstore of the largest US book retailer Barnes & Noble. The latter would give Bertelsmann a trans-Atlantic market reach. Furthermore, Bertelsmann announced the launch in Germany of regular telephony services as well as a range of Internet-based services, including telephony, e-mail and fax, through a new subsidiary, Cllas Clever Communications.

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A new battle opened up in 1998 for the setting of an industry-led operating system standard for new wireless devices such as smartphones and personal communicators. The two main contenders are Britain's Psion, a leading manufacturer of hand-held computers, and the US PC giant Microsoft, with their respective technologies EPOC and Windows CE. EPOC is promoted by Symbian, a joint venture which includes the world's leaders in mobile telephony Nokia, Ericsson and Motorola. It was also endorsed by key high-tech players such as the US software group Oracle and the Dutch electronics giant Philips. As for Windows CE, it is supported by Qualcomm, a US leader in wireless communications, and several US information technology groups as well as the French consumer electronics manufacturer Thomson Multimedia.



## NORTH AMERICA

### 1) Telecoms

For the third year in a row, the US telecoms market was marked by gigantic mergers also involving cable operators. This merger mania leading to a dramatic consolidation of the US telecoms industry is a direct outcome of the 1996 US Telecoms Act.

In 1998, the focus was on three major mergers. The first involved the Baby Bells SBC Communications and Ameritech. Their \$62 billion worth merger plan, the largest in telecoms history, dwarfed previous mergers in the telecoms industry. This followed SBC's acquisition for \$4.4 billion of the local operator Southern New England Telecoms (SNET) The second concerned the Baby Bell Bell Atlantic and the regional operator GTE, which agreed on a \$53 billion worth merger.

The third involved the leading US long-distance operator AT&T and the leading US cable TV operator TCI, which agreed to merge in an all-stock transaction valued at about \$48 billion. This followed AT&T's acquisition for \$11.3 billion of the local operator Teleport Communications. AT&T also agreed to spend \$5 billion on purchasing the data network operations of the US computer giant IBM, which serves corporate and residential Internet users worldwide. This comes on top of the planned global alliance with the leading UK operator BT. AT&T hence emerges as one of the main winner of the restructuring process which is sweeping the global telecoms industry.

Also noteworthy was a smaller \$4.4 billion worth merger between the long-distance operators Qwest Communications International and LCI International, which would result in the creation of the fourth largest US long-distance operator after AT&T, WorldCom-MCI and Sprint.

### 2) Computers

The major event in the computer industry was the decision of the PC giant Compaq to spend \$8.7 billion on purchasing its counterpart Digital Equipment, the biggest deal to date in the information technology sector. The move turned Compaq into the world's second-largest computer group after IBM and ahead of Hewlett Packard.

### 3) Networking

Underpinned by the rapid growth of electronic communications, the consolidation of the networking industry gained further momentum in 1998. The years 1996 and 1997 had been marked by major mergers amongst US market leaders, a process which continued in 1998 with the purchase by market leader Cisco Systems of NetSpeed and Precept Software for \$4 billion and \$84 million respectively.

A new trend in 1998 was the purchase of US networking groups by large telecoms equipment manufacturers eager to close the technology gap with the networking industry. America's Lucent Technologies, for instance, bought three networking companies, Livingstone Enterprises, Prominet and Yurie Systems. As for Canada's Northern Telecom, it agreed to spend \$9.1 billion on purchasing one of the market leader, Bay Networks. A similar strategy was followed by European equipment makers. France's Alcatel, for instance, agreed to acquire DSC Communications for \$4.4 billion and Packet Engines for \$315 million. As for Sweden's Ericsson, it agreed to spend \$285 million on purchasing Advanced Computer Communication (ACC).

Also noteworthy in this context is the interest raised by small Israeli networking companies. Lucent, for instance, bought LanNet, while America's ADC Telecoms agreed to buy Teledata Communication. This amplified the wave of acquisition of small high-tech Israeli companies, mainly by US groups. In fact, the interest for Israeli high-tech companies goes beyond the networking sector. The world's leading commercial on-line service, America OnLine (AOL), for instance, bought the Internet start-up Mirabilis, which produces the popular ICQ ("I seek you") software.

#### 4) Internet and Multimedia

An important event in 1998 was the emergence of a European telecoms group, the UK operator Cable and Wireless (C&W), as a significant player in the US Internet access market. This was based on the purchase for \$1.75 billion of the Internet communication business of MCI, the second-largest US long-distance operator. This included the transfer of a substantial corporate customer base, as well as 1,000 employees. MCI was forced by competition authorities on both sides of the Atlantic to sell its Internet business in order to complete its merger with WorldCom, as the merged company would have gained control over 50% of the Internet traffic. While the move is significant, WorldCom-MCI remains a major Internet player, as the sell-off didn't concern the underlying telecoms infrastructure nor WorldCom's huge Internet assets.

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In 1998, the US software giant Microsoft continued its shopping spree for innovative US Internet start-ups in a move to diversify its activities into a variety of Internet market niches. This included, for instance, the purchase of Hotmail, the leading provider of free Internet e-mail, as well as Firefly, which supplies a technology that allows Internauts to control the nature of personal information they provide to any given Web site.

Also interesting was Microsoft's announcement that it would take a 1.33% stake in Qwest Communications, a new entrant in the US long distance market, in a \$200 million transaction. Furthermore, Microsoft confirmed its interest for the cable sector as a dissemination platform for new interactive services. Indeed, Microsoft and the giant PC maker Compaq agreed to

invest \$212 million each for a 10% stake in Road Runner, a joint venture set up by cable operators to offer high-speed Internet access. In 1997, Microsoft had already bought 15% of the fourth-largest US cable operator Comcast.

## 5) Satellites

In November 1998, Iridium LLC became the first consortium to roll-out a global voice and data satellite communications service. Led by the US telecoms equipment manufacturer Motorola, Iridium services are based on a constellation of 66 low-earth orbit (LEO) satellites. As for Iridium's main rival Globalstar, which is led by America's Loral, it was dealt a serious blow by the failure of an Ukrainian-made Zenit rocket which resulted in the destruction of the first 12 satellites it was to put into orbit. But Globalstar still intends to launch commercial service in late 1999.

A third rival which emerged in 1998 is Ellipso. Led by the US telecoms group Mobile Communications Holding (MCHI), Ellipso would only rely on 17 satellites. This would entail lower equipment and launch costs, and could therefore allow for faster deployment and lower prices. The US aircraft and aerospace giant Boeing was awarded a \$1.4 billion contract for the design, development and deployment of the Ellipso system.

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Regarding global broadband satellite systems, the trend is towards rationalisation in face of the high costs involved. Hence, Motorola dropped its Celestri project and took a 26% stake in Teledesic, a rival system led by Microsoft chairman Bill Gates, telecoms entrepreneur Graig McCaw and Boeing. Additional support came from Matra Marconi Space, Europe's leading satellite manufacturer, which was a partner in Celestri. The \$9 billion worth Teledesic network, to be in operation by 2003, is to be based on 840 low-earth orbit (LEO) satellites. Motorola's involvement increases the project's credibility.

While several "Internet in the sky" projects have been launched, Teledesic's only credible competitor to date is Skybridge, a 64-LEO satellite system worth \$3.5 billion to be operational by 2002. Skybridge is led by the French telecoms equipment manufacturer Alcatel in partnership with America's Loral Space and Communications, France's Aérospatiale, and Japan's Toshiba, Mitsubishi and Sharp.

## CANADA

In 1998, the Canadian telecoms sector was marked by two parallel trends: the decision of regional operators to do away with the understanding that they don't compete in each other's market and the beginning of an important concentration process.

Partners in Stentor, a consortium formed in the early 90s by 11 Canadian regional operators to face competition in the long-distance sector, agreed to loosen their alliance in order to compete in each other's market. Stentor's remaining task is to operate and manage Canada's national network comprised of the 11 members' regional networks. As for competition in the

long-distance market, it would only start in the year 2002.

As regards industrial concentration, it was marked by three important mergers. The first concerned the Western Canadian operators BC Telecom and Telus, respectively Canada's second and third-largest operators, which agreed to a merger of equals. The merged group would benefit from the strategic support of the US regional operator GTE, which owns 50% of BC Telecom. It would be a serious challenger for Canada's leading operator, the Eastern carrier Bell Canada. The second involved the Canadian long-distance operator Teleglobe and the fifth-largest US long-distance operator Excel Communications, which agreed to a \$3.5 billion worth merger of equals. Finally, the Canadian long-distance operators Call-Net Enterprises agreed to spend \$1.2 billion on buying its Canadian counterpart Fonorola.

## JAPAN

### 1) Telecoms

Following the 1997 liberalisation, the Japanese telecoms market was marked by growing competition, which is also leading to industrial consolidation. Several operators launched cut-price local and long-distance services in competition with the incumbent operator Nippon Telegraph and Telephone (NTT), for instance Tokyo Telecoms Network Co. (TTNet) and Japan Telecom (JT). In order to compete more efficiently with NTT, some new entrants in the domestic market decided to join forces to reach a critical size, in particular the country's leading overseas telecoms operator Kokusai Denshin Denwa (KDD), which agreed to merge with the long-distance operator Teleway, which is majority-owned by the Japanese car giant Toyota. At regional level, KDD said it is planning to set up a joint venture with Singapore Telecom.

Competition is also heating up for NTT in the data communications market with the planned launch of Japan's first ventures specialised in Internet Protocol (IP) communications. The first would be a joint venture between the Internet service provider Internet Initiative Japan (IIJ), Toyota and the electronics giant Sony. It would become operational in April 1999. The second would be launched by the long-distance telecoms operator Japan Telecom, and would become operational in April 2000.

Competition is also coming from abroad after the US long-distance operator WorldCom and the leading UK telecoms operator BT were awarded "Type I" licenses, which allow them to build their own network. Global One, a joint venture set up by France Télécom, Deutsche Telekom and Sprint, has also applied for a Type I license.

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Faced with increasing competition in its home market, NTT has started to expand its overseas operations. In the USA, for instance, NTT launched a nation-wide corporate Internet service, Arcstar Internet, which also plans to offer Internet and e-mail roaming between the USA and Japan in the near future. NTT also strengthened its China operations through the creation of joint ventures with Chinese operators. This included the setting up of Beijing Telecom NTT Engineering (BNTE),

which is 49%-owned by NTT. This followed the establishment in 1997 of Shanghai NTT Telecoms Engineering (SNTE), in which NTT owns a 51% stake. Furthermore, NTT agreed with China Telecom to provide high-quality international communication services between Japan and China and to eventually supply IP backbone services.

## 2) Audiovisual

The Japanese digital satellite broadcasting (DSB) groups JSkyB and PerfecTV agreed to a merger of equals. The five main shareholders with a 11.4% stake each are the US media giant News Corp. and Japan's Fuji TV Network, Itochu, Softbank and Sony. The main rival of the merged company, SkyPerfect TV, is DirecTV Japan (DTVJ), a DSB service led by America's Hughes Communications. Further competition would come from BS Japan, a DSB joint venture recently set up by a group of 40 Japanese investors, which would launch operation in late 2000.

## 3) Internet and Multimedia

After North America and Europe, the supply of high-speed Internet access over cable TV networks is now gaining ground in Japan. Such services have for instance been rolled-out by Titus Communications, a cable TV operator which is jointly owned by the Japanese trading house Itochu and the US cable TV giant Time Warner, as well as by the Internet access provider J-Com Internet.

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