

# United States

## 1. Country facts

### 1.1 Political background

The United States of America are a federal republic composed of 50 states and one district<sup>1</sup>, with a strong federal tradition. Political power is divided between an executive, a legislative and a judicial branch.

- **Executive branch**

The Head of State has been President George W. Bush (Republican Party), since January 20, 2001, and Vice President Richard B. Cheney. The president is both the Head of State and the Head of Government. The Cabinet is appointed by the president with the approval of the Senate. The president and vice president are elected on the same ballot by a college of representatives who are elected directly from each state. The president and vice president serve four-year terms. The last election was held November 7, 2000 (next is to be held November 2, 2004) with the following results: George W. Bush (Republican Party) 48%, Albert A. Gore, Jr. (Democratic Party) 48%, Ralph Nader (Green Party) 3%, other 1%.

- **Legislative branch**

The bicameral Congress consists of the Senate (100 seats, one-third are renewed every two years; two members are elected from each state by popular vote to serve six-year terms) and the House of Representatives (435 seats; members are directly elected by popular vote to serve two-year terms). The last election results were the following for the Senate, Democratic Party 50, Republican Party 49, independent 1, and the House of Representatives, Republican Party 221, Democratic Party 211, independent 2, vacant 1.

- **Judicial Branch**

The Supreme Court (with nine judges appointed for life by the president and with confirmation by the Senate) is the highest federal court. At lower level the judicial branch is composed of the United States Courts of Appeal, the United States District Courts, and the state and county courts.

### 1.2 Demography<sup>2</sup>

- **Population** : 288,368,698 (July 2002)
- **Average population density** : 79.6 persons per square mile (2000)

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<sup>1</sup> Federal District of Colombia (Washington D.C.)

<sup>2</sup> U.S. Census Bureau, Population Division.

Readers have to keep in mind that the United States has a very large territory<sup>3</sup>. The population density varies greatly between very populated urban areas and great territories (Midwest plains and Rocky Mountains) with a very low population density. These parameters have an important impact on the telecom industry's development. While the population density of main urban centers can be compared to Europe, the rest of the territory situation is completely different. Operators have to cover very long distances with telecom equipment often to reach only few customers.

In the United States, about 86 million people live in the 10 main urban centers. Along the coasts, where nearly half the population lives<sup>4</sup>, the population can be compared to these of more densely populated countries in the world. The Northeast averages 767 people per square mile.

**Table 1: Main metropolitan areas<sup>5</sup>**

Rank	Metropolitan Area	Inhabitants
1	New York-Northern New Jersey-Long Island, NY-NJ-CT-PA	20,196,649
2	Los Angeles-Riverside-Orange County, CA	16,036,587
3	Chicago-Gary-Kenosha, IL-IN-WI	8,885,919
4	Washington-Baltimore, DC-MD-VA-WV	7,359,044
5	San Francisco-Oakland-San Jose, CA	6,873,645
6	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD	5,999,034
7	Boston-Worcester-Lawrence, MA-NH-ME-CT	5,667,225
8	Detroit-Ann Arbor-Flint, MI	5,469,312
9	Dallas-Fort Worth, TX	4,909,523
10	Houston-Galveston-Brazoria, TX	4,493,741

<sup>3</sup> About 10 times the size of Europe and it is the 4th largest country in the world.

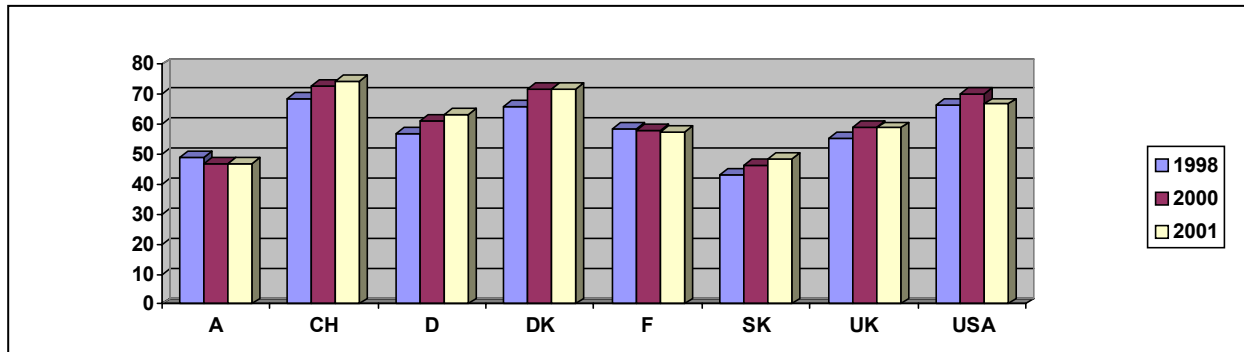
<sup>4</sup> 46% of the U.S. population lives in coastal regions. Source : US Census Bureau

<sup>5</sup> Source: US Census Bureau

### 1.3 Telecom consumption habits

The number of subscriber lines in the United States is similar to the other countries covered by this study, but over the past two years, there has been a slight decline in the penetration rate of fixed telephony subscriber lines, among other because of the shift from fixed telephony to mobile telephony.

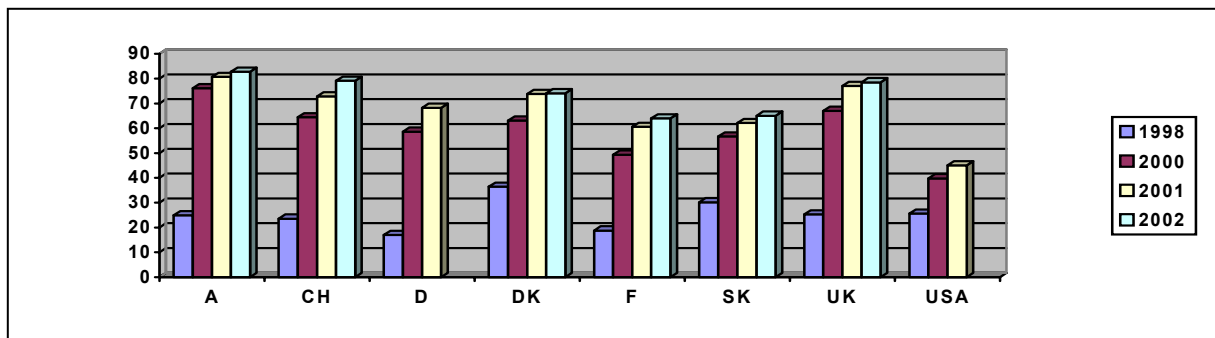
Figure 1: Main telephone lines per 100 inhabitants



Source: ITU

In 2001, the number of mobile subscribers out of 100 inhabitants was 45, which is rather low compared to European countries where mobile penetration ranges from 60% to more than 80%. The presence of 4 different mobile technologies and the size of the American territory could be explanatory factors, although, according to the FCC, 94 % of the American population lives in counties where there are more than 3 operators available<sup>6</sup>. According to the American regulator the calculation method of mobile penetration in the US differs from the one used in Europe, which could also explain the rather high difference.

Figure 2: Mobile telephony subscribers per 100 inhabitants



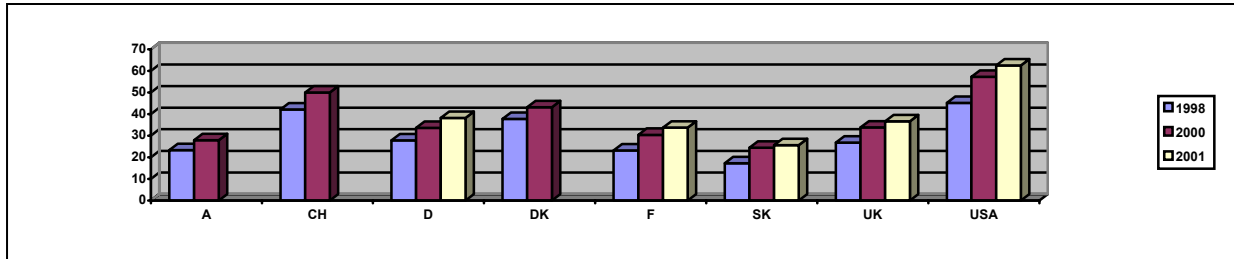
Sources: ITU and World Markets research Center, Country reports January 17, 2003, OFCOM

<sup>6</sup> FCC, 7<sup>th</sup> release of the Commission's annual reports on the state of CMRS competition, 2002

- Internet

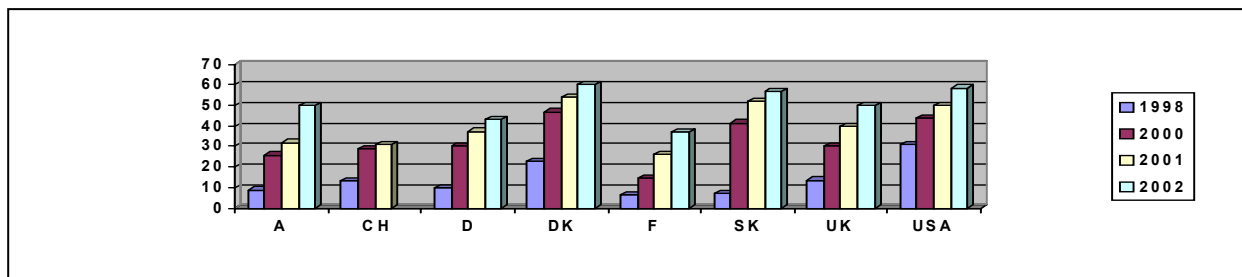
The Americans are known to be fervent IT and Internet users, which is confirmed by the high penetration rate of personal computers and internet users shown in the figures below:

Figure 3: Personal computers per 100 inhabitants



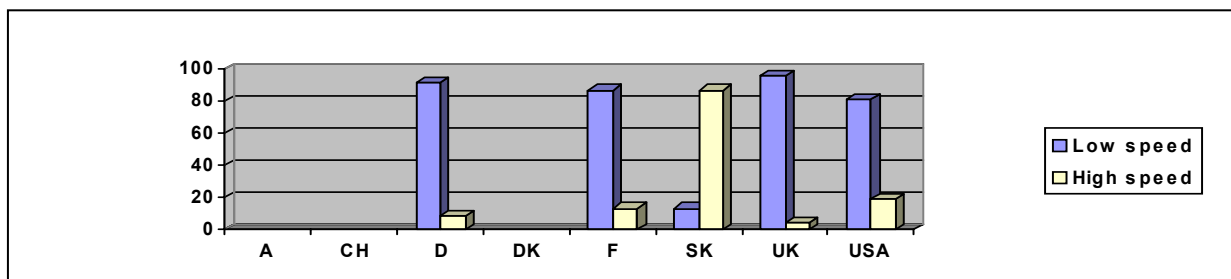
Source ITU

Figure 4: Internet users per 100 inhabitants (at home, office or elsewhere)



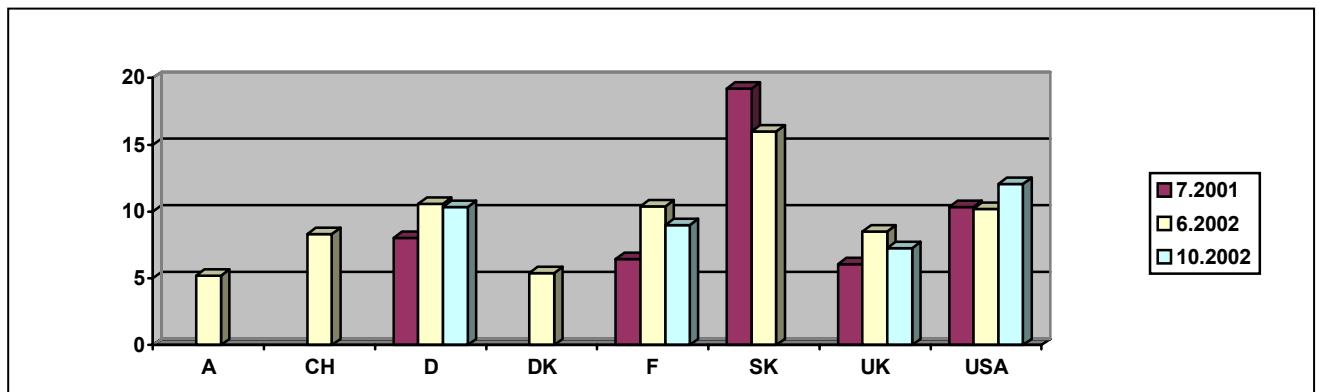
Source ITU, www.nua.com, Cyberatlas.com for figure France 2002

Figure 5: Broadband and low-speed Internet connections, % of users online at home, 2001



Source: the Current state of Play, Australia's scorecard, National Office for Information Economy Australia, 2002

Figure 6: Average Surfing time per month in hours



Source Nielsen NetRatings

## **2. Brief telecom history**

### ***2.1 Historical background and liberalization process***

The telecommunications landscape in the US is quite complex. The liberalization of the telecommunications market took place in several steps with the implication of various telecom related institutions at different times.

The Communications Act of 1934 created the Federal Communication Commission (FCC), a quasi-independent agency of the federal government with the responsibility for communications policy. The telecom sector was previously regulated by the Interstate Commerce Commission (ICC), which was also in charge of rail road regulation. At the time of its creation in 1934, the FCC inherited the responsibilities of the ICC in the field of telecommunications.

The United States have a longer telecom liberalization history than European countries. Liberalization in the US did not only take place earlier, but was also realized in a different manner with several determinant phases. Competition first arose in the long-distance service after being a monopoly of AT&T for decades. That market was fully opened to new entrants in 1984. At that time the Department of Justice's antitrust suit led to the break-up of the integrated Bell system into 7 separate local companies, the Regional Bell Operating Companies ("RBOCs" or "Baby Bells"), and one unaffiliated long-distance company, AT&T. The monopoly had already been attacked in the 1970s and early 1980s, but was only completely opened with the breaking up of AT&T in 1984.

Since the divestiture of the traditional Bell system monopoly in the United States, local and long distance services have been structurally separated by regulation into different markets. Local telephone services remained, for the most part, monopolies regulated by the State Public Utilities Commissions (PUCs). The long-distance market became more competitive. However, to ensure that it remained so, entry into the market was barred for the RBOCs because they already controlled access to local networks and could therefore discriminate rivals needing that access to originate or terminate long-distance calls.

The cellular industry started with two licenses in each service market<sup>7</sup> issued by the FCC. One was issued to the incumbent local carrier and the other to an unaffiliated entrant. The market remained a duopoly for several years partly due to regulatory limitations on available spectrum.

After recognizing that the telecommunications industry was changing at an increasingly rapid pace due to technological and market innovations, and that the regulatory framework needed to adapt to those changes, the government administration launched the National Information Infrastructure (NII) initiative in September 1993. To complement and advance the NII initiative, the administration proposed in January 1994 a set of principles for overhauling the

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<sup>7</sup> Geographic subdivision

regulatory framework of telecommunications and fostering investment and competition. The NII initiative envisioned advanced networks that would make it easy and affordable to connect people to each other, to computers, and to a vast variety of services and information resources. In the wireless market, the Omnibus Budget Reconciliation Act of 1993 authorized the FCC to increase competition in the wireless industry by auctioning major blocks of radio spectrum across the country.

The principles of the NII initiative are reflected in the Telecommunications Act of 1996, which Congress passed with overwhelming support of both political parties. The Telecommunications Act of 1996 was the first major revision of the Communications Act of 1934. The objectives of the Act were to reform the telecom laws in a manner that leads to competition and private investment, promotes universal service and open access to information networks, and provides flexible government regulation. It called for competition in all telecommunications markets. Especially in local markets, which remained de facto monopolies, it opened the door to local phone competition by eliminating legal barriers for market entry. To promote its goal, the 1996 Act obliged dominant local incumbents (Incumbent Local Exchange Carriers - ILECs) to open and unbundle their networks - under fair and non discriminatory rates and conditions – to competitors and to allow competing carriers to resell incumbent retail services. Moreover, the Act specified that the FCC would be responsible for specifying the terms under which unbundling should occur and the framework for setting prices for bottleneck facilities provided by ILECs. The 1996 Act also specified a very short timeframe for the FCC to issue an interconnection order (specifying how local networks would be unbundled), an access order (based on non-discriminatory terms, cost-based prices for network leasing and service at wholesale rates for new entrants) and a universal service order.

Because of strong federalist inheritance in the US, the FCC is not the only body involved in telecom regulation and has to cooperate with the state-level authorities that hold large regulatory competencies in public utilities. States operate their competencies through the Public Utilities Commissions (PUCs). Historically, PUCs were responsible for regulating intrastate telecommunications services, while the FCC has been responsible for interstate services. Even though the 1996 Act established the FCC as the supreme regulation authority for both interstate and intrastate telecommunications, competencies between the different bodies are sometimes not clearly defined. This situation, which led to weaknesses in the compliance of the 1996 Act's objectives, is today in the centre of telecom debates.

## ***2.2 The U.S. leading telecom services providers***

Since the break-up of AT&T in 1984 and the start of liberalization reforms, the U.S. telecom sector has been divided into three types of service providers: The Incumbent Local Exchange Carriers (ILECs), the Regional Bell Operating Companies (RBOCs) and the Competitive Local Exchange Carrier (CLECs) or alternative operators. Below are some of the leading ILECS and RBOCS, as well as the major mobile telephony operators.

### **2.2.1 Leading ILEC players<sup>8</sup>**

#### **BellSouth**

BellSouth was formed in 1984, as the descendant of the southern regional operating company that was created through the break-up in 1983 of the US Bell system. Its main business areas are:

- Fixed telephony: At the end of 2001, it had 65.6 million access lines.
- Mobile telephony: At the end of 2001, Cingular Wireless, a SBC (60%) and BellSouth (40%) joint venture, had 21.6 million subscribers in the U.S.
- Latin America: At the end of 2001, BellSouth had 10.8 million customers in 11 Latin American countries

#### Main Domestic Services

- Local, domestic long-distance and international long-distance telephony for residential and commercial subscribers.
- Internet access for homes and businesses. Web hosting and other internet-related services for businesses.
- Data communications services for businesses.
- Carrier services for local, long-distance, internet and wireless service providers.

#### **SBC Communications**

Southwestern Bell Communications (SBC) is a global telecom provider that was created through the break-up in 1983 of the U.S. Bell system. It has operations in the U.S., where it serves 20 of the largest geographical markets, and in 28 countries in Europe, Latin America, Asia, Africa and the Middle East. Its main business areas are:

- Data communications
- Broadband and DSL Internet: At the end of 2001, it had 1.3 million DSL customers and 5,800 broadband gateways in service.
- Mobile telephony: At the end of 2001, Cingular Wireless, a SBC (60%) BellSouth (40%) joint venture had 21.6 million subscribers in the U.S.
- Long-distance telephony: At the end of 2001, it had 4.9 million access lines served with long distance.
- International telephony: At the end of 2001, SBC's international holdings had 42.5 million wireless subscribers and 38.3 million total access lines.

#### Main Domestic Services

- Internet services, including dial-up and high-speed access, web hosting and virtual private networks in Arkansas, California, Connecticut, Illinois, Indiana, Kansas, Michigan, Missouri, Nevada, Ohio, Oklahoma, Texas and Wisconsin.

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<sup>8</sup> World Markets Research Centre, *Telecoms Country Report: United States*, December 6, 2002.

- Long-distance voice communications in Arkansas, Kansas, Missouri, Oklahoma and Texas for commercial and residential users. Commercial users also have access to data communications services: International private line, long-distance and international frame relay.
- Local voice communications services in Arkansas, California, Connecticut, Illinois, Indiana, Kansas, Michigan, Missouri, Nevada, Ohio, Oklahoma, Texas and Wisconsin. Commercial users have access to dial-up and DSL internet access, video conferencing, ATM cell relay service, cabling systems, dedicated communications services, extended LAN, frame relay, ISDN, private lines and remote access.

### **Verizon**

Verizon was formed in June 2000 by the merger of GTE and Bell Atlantic, and is a leading global telecom operator with operations in the US and 45 countries in the Americas, Europe, Asia and the Pacific (March 2002). It is listed on the New York Stock Exchange. Its main business areas are:

- Fixed telephony: At the end of 2001, it had about 132 million access lines in 67 of the top 100 U.S. geographical markets, and 9 of the top 10 markets.
- Mobile telephony: At the end of 2001, Verizon Wireless was the nation's largest wireless communications provider with more than 29 million wireless voice and data customers. The company covered nearly 90% of the US population, 49% of the top 50 and 96% of the top 100 US geographical markets.
- International telephony: The global presence that extends to 45 countries in the Americas, Europe, Asia and the Pacific, including FLAG, the world's longest under-sea fiber cable.

### Main Domestic Services

- Local, domestic, long-distance and international long-distance telephony for residential and commercial subscribers.
- Internet access for homes and businesses.
- Data communications services for businesses.
- Carrier services for local, long-distance, internet and wireless service providers.

### **2.2.2 Leading RBOCS**

#### **AT&T**

AT&T is the oldest and largest US Telecom Company and operator of the largest communications network in the world. It was formed in 1877, became a government-sanctioned monopoly in 1913 and lost its monopoly in 1984 with the formation of seven Regional Bell Operating Companies (RBOCs). The RBOCs took over its local activities, leaving it a predominantly long-distance provider. Currently, the company has operations in over 40 countries in North America, Europe, Asia Pacific and Latin America. Its main business areas are:

- Long-distance telephony



- Data communications/IP
- Broadband: At the end of 2001, AT&T had over one million broadband subscribers.

#### Main Domestic Services

- Long-distance, local and international telephony for residential, commercial and government subscribers.
- Internet services for homes, SMEs and global businesses.
- Data communications services, including DSL, ATM, frame relay, dedicated data networks, remote access services, business internet services, managed data networking and global messaging services.

#### ***Sprint***

Sprint was formed in 1889 and is a leading provider of voice, wireless, data communications services and internet services in the U.S. since AT&T's break-up in 1984. It also has an international presence in over 70 countries in Europe, Latin America, Asia and Africa. Its main business areas are:

- Telephony: In 2001, voice services accounted for 67% of the company's so-called Global Markets Division.
- Internet services: In 2001, internet services accounted for over 10% of the company's Global Markets Division.
- Data communications: in 2001, data communications accounted for nearly 20% of the company's Global Markets Division.

#### Main Domestic Services

- Local, long-distance and international telephony for residential, commercial and government customers.
- Wireless PCS.
- Internet services for residential, commercial and government customers.
- Local solutions for business.
- Wholesale solutions to IXCs, ILECs, CLECs, ISPs, resellers, wireless companies and other service providers.

#### ***Qwest Communications***

Qwest Communications (SBC) is a global telecom provider that was created through the break-up of the Bell system in 1983. It has operations in the US, where it serves 20 of the largest geographical markets, and in 28 countries in Europe, Latin America, Asia, Africa and the Middle East. Its main business areas are:

- Fixed telephony: At the end of 2001, Qwest had 17.8 million access lines and nearly 59 million voice lines.
- Broadband and DSL Internet: At the end of 2001, Qwest had 432'000 DSL customers.
- Mobile telephony: At the end of 2001, Qwest had 1.1 million wireless subscribers.

## Main Domestic Services

- DSL services for residential and commercial subscribers.
- Long-distance telephony for residential and commercial subscribers.
- Wireless telephony.
- Wholesale services for CLECs and resellers, inter-exchange carriers, wireless carriers, payphone carriers, enhanced services carriers and ISPs.

### **MCI WorldCom**

MCI WorldCom is a leading global supplier of data communications, internet and voice services. It operates in 65 countries in North America, Europe, Asia-Pacific, Latin America and Africa. Its main business areas are data communications, voice, international and internet services.

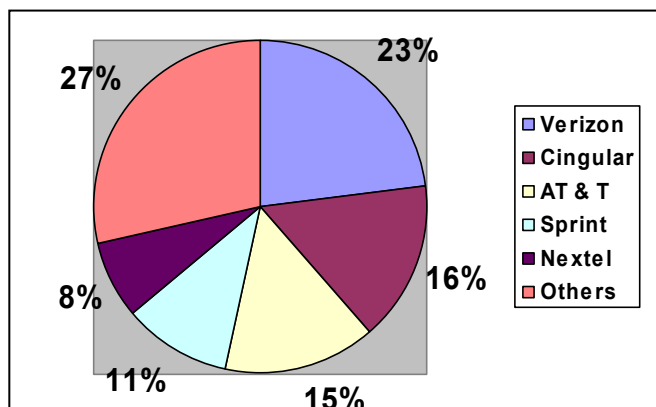
Recent developments: MCI WorldCom admitted that it had overstated revenues by \$ 3.8 billion in 2001 and the 1<sup>st</sup> quarter of 2002. In June-July 2002, the SEC and the Congress both started investigating the company, with the former issuing fraud charges, to be heard in March 2003. The company was threatened with delisting by NASDAQ. It was also talking with bondholders and investors on a restructuring of its \$ 30 billion debt.

### **2.2.3 The mobile telephony players**

At the end of 2002, the US wireless market counted an estimated 140'766'842<sup>9</sup> subscribers, with the following 5 dominating operators:

- **Verizon** : 90% population coverage and 32.5 million subscribers
- **Cingular Wireless**: 93% coverage of the population and 21.9 million subscribers
- **AT&T Wireless**: 98% population coverage and 20.9 million subscribers
- **Sprint PCS**: 85% population coverage and 14.8 million subscribers
- **Nextel**: 96% population coverage and 10.6 million subscribers

Figure 7: Market shares of main mobile operators in the USA



Source: FCC

## **3. Legal framework**

### **3.1 International Agreements**

#### **3.1.1 World Trade Organization**

<sup>9</sup> FCC, 8<sup>th</sup> release of the Commission's annual reports on the state of CMRS competition, 2003, page D-2

Trade in telecommunications services had been almost nonexistent until recently because telecommunications providers in most countries were often owned by the national governments themselves. However, countries gradually started to incorporate telecommunications services into international trade regimes<sup>10</sup>, under the treaties of the General Agreement on Tariffs and Trade (GATT) and, later, the World Trade Organization (WTO). Today, the WTO is one of the primary policy bodies for the economic and often political aspects of international telecommunications. The United States are part of the WTO agreement reached by 69 member nations in 1997 on the liberalization of basic telecommunications services. Like other trade-related rules and agreements in the WTO, the pact on basic telecommunications services significantly affects national sovereignty because it requires signatories to amend their respective domestic laws in accordance with WTO rules. The 1996 US Telecommunications Act contains the general provisions in order to implement the WTO competition measures. Except for a few states where the local loop is not yet fully open to competition, the U.S. telecom sector complies with the 1997 WTO agreement.

**3.1.2 International Telecommunication Union (ITU)**

As one of the oldest international organizations<sup>11</sup>, the International Telecommunication Union plays a fundamental role in global and national telecommunications policies. Members of the ITU include corporations and governments.

The United States were one of its earlier members. ITU member nations have historically maintained cooperative attitudes in order to maximize the benefits of *interference-free* radio operations. The U.S. have been actively working on world-wide based agreements and coordination through the ITU. The ITU recently launched a reform effort in order to adjust the Union to the changing contours of international telecommunications. The Union came under the pressure of liberalization and privatization movements across the world and has to adjust its regulatory activities to the deregulated telecommunications environment.<sup>12</sup>

**3.2 General national framework for Telecommunications**

The U.S. telecom regime is based on the Telecommunications Act which became effective in 1996. The U.S. communication regime was previously based on the Communication Act of 1934, which created the FCC. The objectives of the U.S. telecommunications law are to promote competition, innovation, deregulation, and the public interest in the various market segments of the communications industry, as well as to promote the availability of high-quality communications services to the population.

**Table 2: Content of the US Telecommunications Act, 1996**

<b>General provisions</b>	The 1996 Telecommunications Act aims to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and
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<sup>10</sup> Since the mid-1980s  
<sup>11</sup> The Union was founded in 1865 when nations realized the need for international coordination of radio telegraphy in order to avoid frequency interference.  
<sup>12</sup> The Plenipotentiary Conference, Minneapolis / United States, 1998

	encourage the rapid deployment of new telecommunications technologies. The law is enacted by the Senate and House of Representatives of the United States of America.
<b>Universal service</b>	<p>Universal service provisions are prescribed in Sec. 254. The universal principles includes :</p> <p>Quality and rates: Quality services should be available at reasonable and affordable rates.</p> <p>Access to advanced<sup>13</sup> services: Access to advanced telecommunications and information services should be provided in all regions of the nation.</p> <p>Access in rural and high cost areas: Consumers in all regions of the nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services. Those include basic services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.</p> <p>Equitable and non discriminatory contributions: All providers of telecommunications services should make an equitable and non-discriminatory contribution to the preservation and advancement of universal service. Specific and predictable support mechanisms: There should be specific, predictable and sufficient federal and state mechanisms to preserve and advance universal service.</p> <p>Access to advanced telecommunications services for schools, health care providers, and libraries: Elementary and secondary schools and other classrooms, health care providers, and libraries should have access to advanced telecommunications services.</p>
<b>Rates regulation</b>	Provisions on rates regulation are mentioned in Sec. 251 and 252 of the telecommunications Act, as well as parts 51, 61 and 69 of the Code of Federal Regulations. Local carriers are required to provide access at affordable and non discriminatory prices to new LL entrants. Primacy is left to negotiation between Incumbent operators and newcomers and a detailed schedule of the interconnection agreement has to be submitted to the FCC for approval. Upon complaint from an operator, the FCC may act as a mediator or arbitrator and rule on the interconnection rates

<sup>13</sup> Advanced services are high-speed, switched, broadband telecommunications that enable users to originate and receive high-quality voice, data, graphics, and video using any technology

	<p>using the TELRIC calculation method. General traffic rates are not under regulation.</p>
<p><b>Interconnection regulation</b> Part II, Sec. 251.</p>	<p>In the field of competitive market development, the interconnection regime provisions are fixed in the “general duty of telecommunications carriers” :</p> <p>Each telecom carrier has the duty :</p> <p style="padding-left: 40px;">To interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers;</p> <p style="padding-left: 40px;">Not to install network features, functions, or capabilities that do not comply with the guidelines and standards established pursuant to section 255 or 256.</p> <p>Obligations of all local exchange carriers:</p> <p>Resale: The duty not to prohibit, and not to impose unreasonable or discriminatory conditions or limitations on the resale of its telecommunications services.</p> <p>Number portability: The duty to provide, to the extent that it is technically feasible, number portability in accordance with requirements prescribed by the Commission.</p> <p>Dialing parity: The duty to provide dialing parity to competing providers of telephone exchange service and telephone toll service, and the duty to permit all such providers to have non-discriminatory access to telephone numbers, operator services, directory assistance, and directory listing, with no unreasonable dialing delays.</p> <p>Access to rights-of-way: The duty to afford access to the poles, ducts, conduits, and rights-of-way of such carrier to competing providers of telecommunications services on rates, terms, and conditions that are consistent with section 224.</p> <p>Reciprocal compensation: The duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications.</p>

#### **4. Key regulation actors**

##### ***4.1 The Dual Regulation in the United States***

As the U.S. political framework holds a strong federalist tradition, telecom regulation is based on shared responsibilities between the federal, the state and the local level. The Telecommunications Act of 1996 requires a close working relationship between the FCC, the state, city and local governments in order to expand competition in communications. The

FCC inherited the telecom responsibilities of the Interstate Commerce Commission (ICC) which had previously regulated both telecommunications and rail roads. At state-level, the Public Utility Commissions (PUCs) oversee regulation of utilities within the state: usually, this includes water, gas, and electricity, in addition to telecommunications.

#### **4.1.1 National Regulatory Agency (NRA)**

The Federal Communications Commission (FCC) was established by the Communications Act of 1934 and is in charge of regulating interstate and international communications per radio, television, wire, satellite and cable. It is an independent United States government agency, directly responsible before Congress. The FCC's jurisdiction covers the 50 states, the District of Columbia, and U.S. possessions.

The FCC is directed by five Commissioners nominated by the president and confirmed by the Senate for a period of 5 years. Each year a new Commissioner is nominated. The President designates one of the Commissioners to be the Chairperson. Only three Commissioners can be members of the same political party. The Chairperson, as the Commission's CEO, delegates management and administrative responsibilities to the Managing Director. The Commissioners supervise all FCC activities and delegate responsibilities to staff units and their bureaus. There are six operating bureaus and ten staff offices.

The FCC plays an important role in U.S. telecommunications and information policies and it also contributes to the determination of policies that other countries adopt as well. In recent years, the FCC has been actively harmonizing its international policy with that of the World Trade Organization, especially with the WTO's historic agreement on the liberalization of basic telecommunications (1997).

The Commission's operational budget is estimated to be \$ 268.32 million for the year 2003. An additional fund of 9.76 million has been solicited to the Commission in order to cover the retirement plan costs at the agency level.

#### **4.1.2 State Commissions (Public Utility Commissions)**

Historically, the Public Utility Commissions (PUCs) were responsible for regulating intrastate telecommunications services, while the FCC was responsible for interstate services. Since the same facilities that support local telephony services also provided access to interstate services, the demarcation of responsibilities between both institutions was sometimes arbitrary. Allocating the costs of these facilities between intrastate and interstate jurisdictions has been a continual source of problems. Until 1959, the PUCs and the FCC agreed that the monopoly Bell System had to be protected from competitive entry and that interstate subsidies should continue. Starting with a decision in 1959, the FCC became more pro-competitive and allowed companies to set up microwave private line facilities. These issues, among others, led to jurisdictional disputes between the FCC and various state commissions. The FCC asserted the right to pre-empt state regulatory authority on issues that the FCC claimed had implications on interstate services. The FCC interpreted this broadly and was successful in extending its authority over time. On average, the FCC tends to be more pro-competitive than the PUCs.

#### **4.2 Ministry: National Telecommunications and Information Administration (NTIA)**

The National Telecommunications and Information Administration (NTIA) was created in 1978 as a result of a major executive branch reorganization. This reorganization transferred and combined various functions of the White House's Office of Telecommunications Policy (OTP) and the Commerce Department's Office of Telecommunications (OT).

OTP, created in 1970, was responsible on behalf of the President for telecommunications policy making and radio spectrum management. OT provided staff support for OTP's spectrum management and other functions, which included frequency allocation and assignment, service as Secretariat to the Interdepartmental Radio Advisory Committee (IRAC) (in existence since 1922) and a technical research and analysis capability.

NTIA was created in 1977 by the *Reorganization Plan Number 1* and implemented by executive order in 1978. The reorganization undertaken by these documents abolished the OTP. The functions transferred included the President's authority to assign frequencies to radio stations and to carry out other radio spectrum management activities, as well as long-range spectrum planning in cooperation with the FCC. The reorganization also transferred certain functions related to the planning, development and other aspects of the communications satellite system. Most importantly, the executive order made the President of OT, the Secretary of Commerce, the principal adviser on telecommunications policy, and transferred the functions relating to studies in various telecom areas to the NTIA.

The NTIA also administers telecommunications grant programs. The Public Telecommunications Facilities Program was transferred to the NTIA from the Department of Health, Education, and Welfare in 1978. In 1990, Congress established in the Commerce Department the National Endowment for Children's Educational Television. In 1993,

Congress established the Telecommunications and Information Assistance Program in the NTIA.

### **4.3 Competition Authority – The Federal Trade Commission**

Competition issues are regulated by the FCC. The Federal Trade Commission (FTC) has no specific competencies on telecom market issues. For the moment, the FTC interferes in the telecom sector like it does in any other industry sector.

However, a strong debate has recently developed around the questions of whether telecommunications regulation should move from the sector-specific jurisdiction of the FCC to the more general regime of antitrust law. The debate so far has focused mostly on whether the FCC should continue to have a role in reviewing telecommunications mergers. Nevertheless, a larger debate on the mere necessity to maintain sectoral regulation is also running, which puts the current system under a lot of pressure.

There has already been a significant shift away from sector-specific regulation of telecommunications mergers<sup>14</sup> but the FCC will continue for the foreseeable future to keep a role in the merger review process.

### **4.4 Judiciary**

In the United States, there are no sector specific appeal bodies for telecommunications, but several judicial authorities play a role in the sector regulation.

At state level, the local courts have competencies on regional issues (e.g. Incumbent Local Exchange Companies, rights-of-way). However, these judicial authorities do not have competencies on interstate competition and interconnection issues.

At the federal level, the Supreme Court and the Department of Justice (DOJ) play an important role in competition, anti-trust and interconnection issues. Competitors can address the Supreme Court when they want to appeal a decision rendered by the FCC or by the State Commissions. Since the 1996 Act, the Supreme Court is more often solicited than before, especially on interconnection issues.

As mentioned above, while the FCC is losing powers relative to competition regulation, the DOJ, together with the FTC, start to intervene more often and actively on the telecom market. According to Shelanski<sup>15</sup> “the legal and economic environments of the U.S. telecom market are creating the conditions necessary for significantly reducing regulation of telecommunications carriers and the transition to regulation via general competition policy is likely to continue”.

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<sup>14</sup> Shelanski, *Telecommunications Policy*, 2002

<sup>15</sup> Ibid.



## **4.5 Incumbent and Competing Operators associations**

The U.S. telecommunications associations and lobbies are probably among the most professional and most powerful in the world. A very large range of well organized telecom associations represent the different branches of the telecom sector, for competitors at national or local level, for new entrants as well as for ILECs. In this part, we will only mention the most important ones.

### **4.5.1 Incumbent operators association**

- **National Association of Regulatory Utility Commissioners (NARUC)**

The National Association of Regulatory Utility Commissioners (NARUC) is a non-profit organization founded in 1889. Its members include the governmental agencies that are engaged in the regulation of utilities and carriers in the fifty States, the District of Columbia, Puerto Rico and the Virgin Islands. NARUC's member agencies regulate the activities of telecommunications, energy, and water utilities.

NARUC's mission is to serve the public interest by improving the quality and effectiveness of public utility regulation. Under State law, NARUC's members have the obligation to ensure the establishment and maintenance of utility services and to ensure that such services are provided at rates and conditions that are reasonable and non-discriminatory for all consumers. The NARUC principally defends the ILECs' interests against new entrants in the local telecom market.

### **4.5.2 Competing operators association**

- **Competitive Telecommunications Association (CompTel)**

The CompTel is the leading association representing competitive telecommunications companies in virtually every sector of the marketplace: Incumbent Local Exchange Carriers, Competitive Local Exchange Carriers, long-distance carriers of every size, wireless service providers, Internet service providers, equipment manufacturers, and software suppliers. CompTel's mission is to ensure the survival and prosperity of a competitive marketplace in the U.S., and to help its members and customers achieve their business goals. The CompTel works in every telecom field where competition could be improved and is one of the established, and respected voices of the competitive telecommunications industry before Congress, the Federal Communications Commission, state regulators and legislators, industry technical groups and international communications. The CompTel also analyzes the international telecom situation and produces reports about the competition level in most countries.

- **Association for Local Telecommunications Services (ALTS)**

The ALTS is a lobby at national level representing the competitors (Competitive Local Exchange Carriers) that provide local services as new entrants. The ALTS' mission is to promote facility-based local telecommunications competition. Created in 1987, the ALTS has its headquarters in Washington DC and represents companies that build, own and operate competitive networks ('facility-based' CLECs).

The ALTS is dedicated to opening telecom markets and breaking down competition barriers. ALTS' strategy is dedicated to: Opening monopolies on local telephone networks to competition so that consumers have a choice for local telephone service, ensuring non-discriminatory use of local rights-of-way, opposing efforts of municipalities to regulate new entrants, and guarantying businesses and residential tenants the right to purchase new high-speed digital technologies by working with building owners to create 'Smart Buildings' for the country.

- ***Cellular Telecommunications & Internet Association (CTIA)***

The Cellular Telecommunications & Internet Association (CTIA) is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the association covers all commercial mobile radio service providers and manufacturers. The CTIA represents more broadband PCS and cellular carriers than any other trade association.

In 1998, the CTIA took over management of the Wireless Data Forum, a trade group whose mission was to educate the IT and Internet industries on the range and capabilities of wireless data products and services. In 2001, the Wireless Data Forum merged into the CTIA and became the Wireless Internet Caucus.

The mission of the Wireless Internet Caucus (WIC) is to accelerate the growth of the wireless data ecosystem in the United States. It also serves as an information provider for wireless Internet companies on public policy issues of importance to the wireless community, such as spectrum management and privacy. The WIC establishes guidelines, principles, goals and objectives. It also serves the wireless Internet industry as a unifying force to foster wireless ecosystem development and thus, accelerates market acceptance.

## **5. Regulatory functions**

### ***5.1. Allocation of scarce resources***

#### **5.1.1 Frequencies**

The FCC is in charge of managing commercial frequencies. According to the U.S. legislation, the FCC collaborates with the states and regions to guarantee their specific needs. There is an important place for negotiation between the federal level, the state level and the companies. The FCC assures a non-discriminatory way of managing frequencies.

Government frequency usage represents about 50% of all frequency resources and is managed by the NTIA. The FCC has no competencies to determine how many frequencies should be allocated to the government and how they can use it. These responsibilities belong to the Congress and are implemented by the NTIA. There has been a project to reduce the governmental part of frequencies, but the events of September 11 and the increased security needs have reversed the tendency of reducing government frequencies.

### **5.1.2 Rights of way**

Rights of way and construction authorizations are granted through complex procedures and multi-level consultation. The requests are first submitted to Community (City) and State Commission's approval. The community level has limited power on the attribution of rights-of-way. It is the State Commission that promotes market development interests and assures non-discriminatory use of land and public properties. The FCC can intervene as a consulting and expertise institution in the management of rights-of-way.

## **5.2 Enhancing competition**

### **5.2.1 Licensing**

In the United States, all telecommunications operators need to acquire licenses. The FCC is in charge of the examination of candidates and the delivering of the licenses. The U.S. licensing regime is known as being competition-oriented, e.g. the FCC implements licensing policies that permit easy access to the market for new-entrants. The United States Congress's view is that a healthy competitive market is the best solution to enforce the Telecommunications Law requirements, i.e. services at affordable prices, dynamic technology development for all subscribers, provider and technology choices.

3G licenses have been auctioned but there is a scarcity of frequencies in the U.S. which impedes 3G deployment. Currently, the United States are still reviewing the requirements for additional spectrum for 3G. It is expected that the U.S. will not be able to offer services on the scale that will be offered abroad. Some operators (most notably AT&T) do not have excess spectrum available that they can dedicate to 3G service; as a result they will deploy it more slowly. These operators will most likely use intermediate services, but not the genuine 3G system. That will leave the US behind several European countries, in which 3G will soon be implemented.

### **5.2.2. Granting access to infrastructures to new companies**

- **Interconnection rates and agreements**

According to the principle of reciprocity, only ILECs providing open access to new entrants are permitted to extend their market. Most of the ILECs now provide Unbundled Network Element Platforms (UNE-P)<sup>16</sup>, and consequently transform local markets from monopolies to competition. However, the interconnection rates vary greatly from one platform to another and from one state to another. The FCC is currently working on establishing the TELRIC method for all interconnection agreements. Nevertheless, the CLECs are still strongly complaining about the incumbents' unwillingness to provide fair and non-discriminatory access for new entrants.

- **Leased lines**

The provision, quality and prices of leased lines are, as elsewhere, an issue of great concern for both competing telecom operators and businesses who wish to dispose of leased line

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<sup>16</sup> Unbundled Network Element Platforms or UNE-P are local telephone switches opened to new entrants; = Unbundling of the Local Loop

circuits. The prices of leased lines are low compared to those of the European Union for instance, and have especially dropped since the adoption of the Telecommunications Act in 1996. In a comparative study carried out by the press concern Reuters (who makes a very intensive use of leased lines) which is reported to the OECD<sup>17</sup>, several price indications show that prices in the U.S. are much cheaper than elsewhere. The first indicator is for instance that for a 2 Mbps leased line of 300 km, prices decreased from \$ 1,400 in 1998 to \$ 660 in 2001. In Europe, the same service can cost up to 5 times as much. Another indicator is that for local 2 Mbps leased lines, the average charge is \$ 450 in the United States and over \$ 600 European average.

Although prices have become more affordable, competitors still complain about the incumbent's reluctance to respect deadlines and quality standards for the delivery of leased lines for wholesale. Several cases were filed at the FCC and in particular, AT&T made a request to oblige the incumbents to inform the company about their delivery times for retail leased lines. The FCC elaborated 12 indicators to monitor the deliverance of unbundled local loops and interconnection elements which are applied in some individual states. It is not yet sure whether these will be enforced at national level<sup>18</sup>.

- **Unbundling**

As mentioned before, the U.S. interstate market has been liberalized in the 1980s. At this time, competition rapidly changed the long-distance telephony segment. However, the first steps of imposing unbundling of local loop came only with the 1996 Telecommunications Act. This Act was adopted by Congress in order to promote competition within the entire telecom sector.

The FCC plays a strong role in the promotion of competition and the elimination of ILECs monopolies in certain markets. In spite of the differences between states, the FCC elaborated nation-wide network unbundling/opening policies since all of the largest ILECs are carriers' subsidiaries that are also active in multiple states and compete at the national level.

Even though the 1996 Telecommunications Act gives the FCC the duty to implement ULL, the FCC has no competency to enforce unbundling on the ILECs. Instead of using penalties, the FCC's actions are based on the principle of reciprocity. ILECs that open the local loop to competition get the right to also enter markets in other states. In the contrary, ILECs that are unwilling to do so cannot receive a license to operate in other competitive markets.

### **5.2.3 Facilitating access to customers for new companies**

- **Carrier pre-selection and call-by-call selection**

Since the interstate telephony liberalization, carrier pre-selection and call-by-call carrier selection are widely used in the United States for long distance calls. However, in the local call market carrier pre-selection and call-by-call selection only became effective with the 1996 Telecommunications Act. The U.S. experienced severe cases of customer drain (slamming).

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<sup>17</sup> OECD, *Broadband access for business*, December 2002

<sup>18</sup> Ibid.

In the beginning of the introduction of CPS, many customers have been changed operators without their consent. Special intervention by the FCC contributed to clear the problem.

- **Number portability**<sup>19</sup>

The introduction of fixed number portability did not go without problems and resistance in the US, but now the FCC has made the feature compulsory for all telecom providers to all customers. Mobile number portability on the other hand has not been implemented yet.

In the United States telephone numbers are transferred between local switches through number portability technology for a variety of reasons. Most telephone numbers are transferred because the end-users changed local telephone carriers and retained their telephone number. Other telephone numbers are transferred from one carrier to another as part of a telephone-number conservation measure known as number pooling. This means that carriers with spare telephone numbers transfer large blocks of numbers to a carrier in need of numbers. Carriers may also transfer numbers among their switches in order to use numbers more effectively.

In this study, we take into account number portings from one carrier to another, as an indicator for enhanced competition between operators. Number portings in the US have encountered significant popularity over the past years, as shown in the table below:

**Table 3: Number portability in the USA**

	1998	1999	2000	2001	Total
Number	349'260	2'761'784	4'942'253	7'466'034	15.5 million
Annual variation	+ 690%		+ 79 %	+ 51 %	

*Source: FCC, Trends in Telephone services 2002, 2003*

**5.2.4 Guaranty of stable and fair market conditions**

Most ILECs (state incumbents) now have agreements with CLECs (new entrants) on TELRIC calculation for the Unbundled Network Elements platform usage. These agreements provide stronger legal certainty for new entrants and help them to set-up their business plans more accurately. However, not all the ILECs have adopted these agreements and many competitors are facing ILECs resistance to provide fair and non-discriminatory opportunities which is essential for CLECs to develop business in local services. In such cases, the CLECS can ask for arbitration by the FCC, but it can take up to 9 months after the initial interconnection request deposited with the ILEC, before a decision is issued.

In order to enforce the UNE-P obligation, the FCC often charges the reluctant ILECs with penalties. However, most of the times, the penalty amounts are irrelevant for the incumbents who prefer paying penalties rather than adapting the local platform for competition. In order to enforce the 1996 Telecommunications Act, the FCC is currently working on new law propositions that have a more precise language and give more certainty about law interpretation.

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<sup>19</sup> Source: FCC, Trends in Telephone Services, 2002.

## **5.3 Guaranty of public service**

### **5.3.1 Universal service**

Universal service has been a goal of the Federal Communications Commission (FCC), state utility regulators, and industry for decades. The Communications Act of 1934 first designates the goal as:

"To make available, as far as possible, to all the people of the United States a rapid, efficient, nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges." The Telecommunications Act of 1996 reaffirmed this goal by establishing policies for the "preservation and advancement of universal service."

Until 1996, the Universal Service Fund compensated telecommunications companies that provided service to both low-income communities as well as rural areas where the cost of providing service was high. In the Telecommunications Act of 1996, Congress expanded the scope of the Universal Service Fund. Now it encompasses four programs that support telecommunications services nationwide. These include: Low-Income, High-Cost areas, Schools and Libraries, and Health Care providers.

The Universal Service Fund is generated through contributions from telecommunications providers in the United States, including local and long distance phone companies, wireless and paging companies, and payphone providers. Contributions are based on a percentage of these providers' interstate and international telecommunications revenues. These providers, in turn, typically recover the cost of contributions from their customers, often through a line item on customer bills.

The Universal Service Administrative Company administers the Universal Service Fund under the direction of the FCC. In order for a telecommunications carrier to receive universal service funding, the carrier must be designated as an Eligible Telecommunications Carrier (ETC). To obtain ETC certification, a local telephone company must demonstrate that it offers the services supported by federal universal service support mechanisms. ETCs are also required to publicize the availability of so-called lifeline support which is designed to reach those consumers who would likely qualify for the discounts.

It is the States who are primary responsible for making ETC designations. However, the FCC has jurisdiction to designate ETCs if a carrier is not subject to state jurisdiction, such as certain carriers on tribal lands. Most local exchange carriers, and certain wireless carriers, are ETCs.

### **5.3.2 Consumer protection and quality control**

The FCC has developed an important structure for consumer protection. The FCC's bureaus are constantly investigating the telecom sectors in order to point out carriers' unfair practices, as well as controlling the quality offered to all US citizens. However, it is not the role of the regulator to set up incentive measures for the operators, but to inform the consumers about

the quality of the services provided. In the U.S., market and competition are seen as the incentives that can sanction the operators, rather than direct measures by the state. The FCC's role is first to evaluate the services provided by the telecom industry, then to release extensive information, which should prevent consumers from abusive or unfair practices.

## **6. Evaluation of the regulatory system**

### **6.1 Assessment of the NRA**

At an international level, the FCC is considered as a pioneer and as such respected for its knowledge and experience within the telecom sector. For a long time now, the FCC has been contributing to shape certain aspects of the telecom sector that have international repercussions. For instance in 1999, the FCC initiated an assistance program aimed at a few key developing countries in Africa, Asia, Latin America/Caribbean, and Eastern Europe (Federal Communications Commissions, 1999). Under this program, the FCC provided regulatory and policy assistance to enhance a transition to pro-competitive telecommunications markets.

Additionally, the FCC has sometimes acted unilaterally on certain policy areas before winning international consensus. One of these cases is the FCC's effort to establish fixed international accounting rates for international calls involving U.S. carriers<sup>20</sup>.

#### **6.1.1 Resource and expertise**

The FCC is recognized as the most important telecom authority with technical and market expertise both at national and international level. The FCC is also recognized as having sufficient means – expertise, finance, knowledge – in order to fulfil its missions. Nationally, there is not a single party affected by telecom regulation that would put into question the FCC's expertise, although many complain about its willingness to use the means at its disposal.

#### **6.1.2 Independence vis-à-vis political interests and transparency**

Establishing an independent regulatory authority is a crucial factor in the success of any country's effort to introduce competition and to privatize and liberalize the telecommunications sector. Once the decision has been made to establish a pro-competitive, liberalized and privatized regime, it was essential for the US government to establish an impartial referee to create the rules and processes by which the industry is to be regulated and service to the public will be provided.

The notion of regulatory independence in the United States encompasses at least four concepts:

- The separation of regulatory and operational functions.
- Freedom from direct political pressure.
- Fair and transparent procedures.

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<sup>20</sup> Kennedy and Pastor, 1996, pp. 123-130

- Delegation of broad authorities to an expert agency to establish rules and adjudicate disputes, to regulate in the public interest.

The US legislators established the telecom regulation in a way that the regulatory agency would be free from political pressure. By doing so they ensure the integrity of the policymaking process. It also limits arbitrary changes in rules, and encourages greater confidence of investors. The FCC is recognized as having very elaborate and strict rules to guaranty transparency.

### **6.1.3 Efficacy and Credibility**

Legislators adopted a legal framework that would make the independent regulator transparent in the decision-making. Transparency means that “the process of arriving at regulatory policies and specific rulings is open, consistent and predictable”<sup>21</sup>. For example, the FCC publishes its rules in the Code of Federal Regulations, which is publicly available. The agency announces proposed decisions in public memoranda, and written records of its proceedings are available to the public. A "sunshine agenda" announces the items that will be discussed at upcoming public meetings. Public comment and participation are invited on proposed rules, and the implementation of rules can be publicly followed up through FCC’s communications.

Transparency in decision-making allows investors, service providers, and the public to have knowledge of, and participate in the formulation of policies and regulations. This process engenders considerable public trust in the integrity of FCC’s decisions, decreases litigation and enforcement costs, and also provides the agency with valuable public input on challenging issues.

## **6.2. Flexibility of the whole regulatory system**

The Telecommunications Act of 1996 was built in a way that the regulation could constantly be adapted to the future telecom market and technological issues. However, the imprecise legislation language has led to contradictory interpretation. The U.S. regulatory system is currently learning to enforce clear competencies in the law in order to break the numerous “veto powers” rising from state’s interests, ILECs resistance and judicial misinterpretations, leading to discriminatory regulation.

As mentioned earlier, many telecommunications experts argue that the US telecommunications sector is mature enough to shift from sector specific-regulation (FCC) to the general antitrust authorities (Department of Justice and the Federal Trade Commission). This debate is currently putting the whole system under pressure. Some analysts<sup>22</sup> criticize the FCC latest decisions’ which seem to give more protection to the ILECs, penalizing new entrants. Even if it has the necessary tools to promote competition, the FCC does not always make decisions in favor of the market. That is one of the reasons why some economists

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<sup>21</sup> FCC, “Establishing and maintaining regulatory independence’.

<sup>22</sup> Lawrence J. Spiwak, *Getting Their Wires Crossed, The FCC’s plan to unshackle the Baby Bells is bad policy based on bad economics*, in: Legal Times, January 27, 2003, vol. XXVI, No. 4.



advocate bringing back the sector-specific regulation under the Department of Justice and the Federal Trade Commission.

## 7. Outcome performance indicators

### 7.1 Competition

- **Number of telecommunications operators and market shares**

With the end of the AT&T monopoly in 1984, the United-States started its telecom liberalization with long-distance telephony. At this time, AT&T held a 90 % share of long distance revenues. Today, facing new competitors<sup>23</sup>, AT&T's share of long-distance revenues declined to less than 40% of the total revenues reported by all long distance carriers. Since 1995, AT&T has no longer been regulated as a “dominant” carrier. The struggle for new entrants to compete with AT&T was not easy in the beginning and the erosion of the former monopolist only took place slowly. Today, there are a large number of operators for long-distance and local telephony. More than 700 companies offer long distance service available on a nation-wide basis.

However, as lower prices stimulate greater demand, an overall increase in revenues results for all telephony sectors in spite of additional competitors present within the market. For example, while AT&T long distance market share fell from 90% in 1984 to 45% in 1997, its revenues increased from \$35 billion to \$40 billion during the same period<sup>24</sup>.

Until the 1980s, consumers had no choice in selecting their local telephone company. At this time, competitors started to offer new access to business customers and to some extent to local call customers. With the 1996 Act, three ways were made available for the competitors to enter local telephone service markets:

- Competitors<sup>25</sup> can resell the services of incumbent local exchange carriers (ILECs).
- CLECs utilize the ILEC infrastructures, by leasing ILEC Unbundled Network Element (UNE) loops to use in combination with the CLECs' own switching capabilities.
- CLECs can build their own infrastructures in order to compete with ILECs.

According to FCC's Trends in Telephone Services 2002 report, the CLECs provided 9% of the approximately 192 million switched access lines in service to end-user customers.<sup>26</sup> This represents a 16% growth of CLEC's market size during the first half of 2001. It is important to emphasize that about 55% of these CLEC's lines serve medium and large business, institutional, and government customers, while only 23% of ILEC's switched access lines serve such customers. The FCC also reports that one-third of the CLEC's switched access lines are provided through their own local facilities.

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<sup>23</sup> Such as MCI, Sprint

<sup>24</sup> Source: FCC

<sup>25</sup> Competitive Local Exchange Carriers (CLECs)

<sup>26</sup> At the end of June 2001

- **Choice for the consumers in terms of operators/technologies**

The competitive marketplace that the FCC has been promoting and implementing for years has now reached a high level of service and product diversity provided by a large number of telecom companies. However, because of the wideness of the U.S. territory, there is still an important difference between rural areas' and urban areas' choice for the consumers.

In the mobile sector, there are 6 leading mobile operators on the US market, and in its latest report on mobile telephony<sup>27</sup>, the FCC stated that 94% of the American population live in areas covered by 3 or more mobile operators, 80% lives in areas with 5 or more operators. There are currently 6 so-called national operators and a whole range of large regional operators covering the more densely populated areas of the United States, such as the coasts.

In the fixed telephony sector and Internet, choice is also reported as good, but we have not been able to find data about the actual choice for the consumer for a specific type of service in a specific area.

- **End-user prices**

If we look at the end-user prices comparisons made by the OECD in the 2003 Communications Outlook, we can make the following statements:

For fixed telephony, prices for local telephony are very low due to special subvention schemes but considerably higher for national and international fixed telephony. As a result, in the OECD residential and business tariff baskets for fixed telephony, recorded in August 2002, the United States has an average position, slightly below OECD average, but with higher prices than Switzerland, Denmark, Korea, the United Kingdom, and Austria<sup>28</sup>. However, if we take into consideration the OECD composite basket of business telephone charges, that includes not only national telephony but also international telephony and fixed-to-mobile, than the US ranks among the cheaper countries.

For Internet on the other hand, prices in the United States rank among the absolute lowest of the OECD countries. In the OECD's Internet access baskets for 40-hours Internet access at daytime and at evening discount rates, the United States rank 5<sup>th</sup>, behind Korea, Canada, the United Kingdom and France.

For mobile telephony, prices are low in international comparison, according to the OECD baskets for low, average and high users of mobile services. Especially high users benefit from the traditional American approach to mobile pricing, including large amounts of minutes. Low users on the other hand can take advantage of so-called local calling areas which are territorial subdivisions favoring 'local calls'.

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<sup>27</sup> FCC, 7<sup>th</sup> release of the Commission's annual reports on the state of CMRS competition, 2002

<sup>28</sup> The baskets taken into consideration are: OECD residential tariff basket, OECD composite basket of residential telephony charges, OECD business tariff basket, Communications Outlook 2003, pp. 158-159

## 7.2 Public service

- **Availability of services throughout the country**

ADSL coverage 50% of population <sup>1</sup>	Leased lines n.d.
ISDN availability n.d.	Voice telephony over cable available
Penetration rate CATV 97% households <sup>1</sup> , cable modem availability	Voice telephony over powerline
FWA available	Mobile coverage in percentage of population 97% (OECD 2003 Comm outlook)

<sup>1</sup> OECD, Communications Outlook 2003

Availability of services is good in the United States, in spite of its very large territory. The FCC has listed a number of vulnerable populations that could potentially be victims of digital divide; especially people living in remote areas, far away from urban centers, and focuses some attention on the prevention of digital divide, both for geographical reasons and socio-economic reasons.

In the United States, it is also seen as a priority to promote the information society by means of technological progress. In section 706 of the Telecommunications Act of 1996, the American Congress directed the Commission and the States, to encourage the deployment of advanced telecommunications capability in the United States on a reasonable and timely basis. The so-called advanced telephone services (high-speed, switched, broadband telecommunications that enable users to originate and receive high-quality voice, data, graphics, and video using any technology) are not required as a strict obligation but more like recommendation objectives for telecom providers. The United States Congress wanted the FCC to be a strong promoter of advanced services, even though the law does not properly obligate operators to provide advanced services. The US philosophy is more based on pro-competition behavior improving services than pro-obligation.

However, the FCC has recently put a special emphasis on broadband development, as the market seems to develop too slowly in this area. The FCC is establishing regulatory policies that promote competition, innovation, and investment in broadband services and facilities. The FCC has fixed general objectives for broadband development to be fulfilled by 2008<sup>29</sup> :

- Promote the availability of broadband to all Americans.
- Conceptualize broadband in a way that includes any platform capable of providing high-bandwidth intensive content.
- Clarify and stabilize the regulatory treatment of broadband services.
- Encourage and facilitate an environment that stimulates investment and innovation in broadband technology and services.
- Harmonize regulation of competing broadband services that are provided via different technologies and network architectures.
- Dutifully enforce market-opening requirements.

<sup>29</sup> Source : FCC, Strategic Plan 2003-2008

- **Quality of services throughout the country**

The search for quality of telecommunications services in the U.S. is more based on market dynamism and competition, than on pressure coming from regulation. Even though the FCC holds great expertise and knowledge on technology, it is not considered that regulation should stimulate the demand-side for new technologies. The regulator is considered as an authority to guaranty the system's functioning, rather than the organism in charge of making the best services available throughout the country. As the US economy is strongly based on market competition, the State does not promote public policies stimulating investments. In other words, the government is only responsible for the guaranty of a fair and open ground for the competitors to develop and play in the telecom arena.

- **Information to the public**

In the fields of information and support to the customer, the FCC provides a large range of services. Periodically, the FCC publishes fact sheets and information about the latest issues and developments of telephony, internet, broadcasting, cable, satellite dishes, and international communications. The FCC Consumer & Governmental Affairs Bureau (CGB) is in charge of these publications which are also available on the web. The CGB Fact Sheets answer Frequently Asked Questions about telephone bills, customer relationship with the phone company, phone rates, FCC special programs<sup>30</sup>, latest technologies available and illegal practices denounced in or outside the U.S. High quality information is thus available to the public, for anyone who contacts the FCC or connects to the FCC's website. However, there is no systematic and specific information mailing to telecom consumers, even for services like special programs for disabled people or Universal Service Program for Low-Income Consumers. To benefit from special government programs and funds, people have to look for the information themselves, they will not be informed automatically.

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<sup>30</sup> Such as the Universal Service Program for Low-Income Consumers or the Telecommunications Access for People with disabilities.

## 8. Conclusion

Since the interstate telephony liberalization, the U.S. long-distance sector has become a highly competitive market. In the local telephony market, on the other hand, there is still very little competition. This does not mean though that end-user prices are high. Indeed, ILECs can assure very low-rate services thanks to State subsidies for universal service in local telephony facilities. New entrants are complaining about the discriminatory practice of State subsidies which are considered as a discriminatory way of protecting the local incumbent. The State funds, that the ILECs get to provide facilities, are disproportionate to the universal service costs. The funds are often used to cross-subsidize the ILECs' development and position in the telecom market.

Although the FCC is the main industry regulator, other state and federal bodies also play a role. The Federal Trade Commission is responsible for enforcing federal anti-trust and consumer protection laws, including mergers and acquisitions. Individual state Public Utility Commissions are responsible for supervising interconnection agreements and reporting requirements pursuant to the Federal Telecommunications Act. These various regulatory bodies make telecom regulation a complex platform. FCC's supposedly 'supreme' regulatory power is often questioned when regulatory issues request the intervention of various regulation bodies.

However, the most problematic relation in the regulatory framework is between the federal and the state level – what is called the 'dual level of regulation in the US telecom regulation'. Whereas the FCC works on a nationwide basis in order to set up the best conditions for a competitive marketplace, the State Commissions are tempted to protect local facilities on the one hand, and the local incumbent service provider on the other hand. Even though liberalization took place much earlier in the US than in the EU – at least for long distance telephony – the actual situation for local telephony is not much further than the EU average. Few new competitors are able to increase their market shares in local services. The principal cause of this is the discriminatory interconnection practices most ILECs are still applying. Since the 1996 telecom Act, many CLECs did never succeeded in making profit and had to leave local telephony markets. States Commissions, as well as local telephony associations, often use the 1996 Act's unclear language in order to come up with contradictory interpretations.

As the FCC is constantly facing state resistance, the United States has still a long way to go in order to set-up viable competition in the local telephony. The FCC currently lacks enforcement power as local economy interests are strongly protected against competition. Nonetheless, generally low rates for telecom services and high competition level – except for local calls – are the greatest success of FCC since 1984. The competitive marketplace has made the United States one of the leading countries in the field of telecommunication quality and diversity of services.

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