DICKSTEINSHAPIRO LLP

# U.S. Communications Law and Transactions

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## I. Introduction: A Look Back

When this guide to U.S. communications law and deal-making first issued in 2002, the world it surveyed was very different from that of today. At the time, the telecom and "dot-com" bubbles had burst. Bankruptcies were the order of the day. The Telecommunications Act of 1996 and the rules promulgated pursuant to it, though mired in litigation among the "Baby Bells" (the local telephone companies spun off in the 1984 American Telephone & Telegraph Company ("AT&T") divestiture), their local market competitors and the long distance carriers, were still seen as the way to develop a competitive telecommunications market. Cellular telephone service, the Internet, cable television and satellite service – though pervasive, growing, and holding out the promise of convergence – were still structurally separate sectors, owned and operated by different companies, subject to different legal and regulatory regimes, and used for different purposes by their customers.

All that has changed, and fast. Competition has come, not from where Congress foresaw it in the 1990s, but from the emergence of innovative services: from wireless service as a replacement, not a supplement, for landline telephone service; from cable modem service for broadband connectivity; and from the Internet for voice and data service. In the meantime, cable television service has rapidly consolidated and faces competition from satellite service operators. Nor have broadcasters been spared: their television signals are carried by cable and satellite operators to most markets; their audience has been diluted and diverted by the Internet and channel proliferation; and digital audio radio satellite service looks increasingly likely to replicate the success of satellite subscription television service, to the detriment of terrestrial radio providers.

In the meantime, the broader telecommunications market is back with a vengeance, as merger and acquisition and public and private finance activity continues across the service sectors, with the balance between regulation and competition-based activity tilting towards a capital markets-centered, transaction-based paradigm and away from a government-centered, regulatory-based one.

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It is a lot of change, and it has put strain upon the existing legal and regulatory structure governing these different services. As the broadband revolution takes hold, convergence transforms the competitive landscape, and the Internet permeates our lives, the pace of change looks likely to accelerate, not slow down, going forward. It was in considering that prospect that we realized that this guide to U.S. Communications Law and Transactions needed a full rewrite to remain both relevant and accessible. Here it is.

## II. U.S. Communications Law: A Brief History

### A. Early Regulation: Mann-Elkins and the Radio Acts

Alexander Graham Bell received a patent for the telephone in 1876. Guglielmo Marconi received a patent for the radio in 1896. These two patents represent the "Ur" inventions of electronic communications, from which the range of modern devices we use for one-way and two-way communications are derived. Landline and submarine copper wire and fiber optic networks that transmit voice, data, and video communications, whether in the form of telephone service, cable television or the Internet backbone, are all descendents of the telephone. All instruments that use wireless means to transmit voice, data, and video communications, whether in the form of cellular telephones, broadcast television and radio, or satellite service, are children of the radio.

Regulation has played catch-up to technology ever since. The first dedicated electronic communications regulation in the United States was the Mann-Elkins Act of 1910 (the "Mann-Elkins Act").[1] The Mann-Elkins Act vested regulatory control of telegraphs and telephones in the Interstate Commerce Commission, and required telegraph and telephone service providers to offer non-discriminatory service at just and reasonable rates.

The Radio Act of 1912,[2] passed in partial response to the *Titanic* disaster, attempted to prevent radio frequency interference, established the requirement of a license to operate a radio, and reserved frequencies for government use.

The Radio Act of 1927[3] initiated regulation of licensing and programming and established the Federal Radio Commission to govern the radio spectrum and allocate radio frequencies.

During this period, there was little telephone regulation; AT&T had an initial monopoly on telephone service on the strength of patents obtained subsequent to the expiration of the original Bell patent. The Western Union Company had a similar monopoly on telegraph service.

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1 Pub. L. No. 61-218, 36 Stat. 539 (1910).

2 Act, August 13, 1912, ch. 287, 37 Stat. 302 (1912).

3 Act, February 23, 1927, ch. 169, 44 Stat. 1162 (1927).

## B. The Communications Act of 1934

The Communications Act of 1934 (the "Communications Act")[4] was one of the sweeping pieces of "New Deal" legislation passed during the first term of President Franklin D. Roosevelt's administration. The Communications Act repealed the Radio Acts and established the Federal Communications Commission (the "FCC" or the "Commission").[5] FCC jurisdiction is founded on the "Interstate Commerce Clause" of the U.S. Constitution and is therefore limited to communications determined by Congress or the courts to be fundamentally interstate in nature.[6] On that basis, the Communications Act gave the FCC jurisdiction over interstate telephone communications and over all radio wave broadcasting. The Communications Act also established a structure of separate regulatory treatment for telephones, in its Title II, and for radio wave broadcasts, in its Title III, a dichotomy that persists to this day, and which, as we will see, is increasingly strained by modern technology and service.

The Communications Act, as amended and as supplemented by other legislation, remains the basic U.S. communications legislation to this day. It is codified at Title 47 of the United States Code (47 U.S.C.). Its framework will be covered in Part IV.

## C. The AT&T Divestiture and the MFJ

By the 1970s, AT&T's nationwide telephone system, while still operated under a federal telecommunications regulatory scheme, came to be regarded as an illegal monopoly by another arm of the federal government. In 1974, the U.S. Department of Justice (the "DoJ") commenced legal action against AT&T in the U.S. District Court for the District of Columbia. The company that had come to be known as the "Bell System" or "Ma Bell" was charged with violating the antitrust laws by unlawfully monopolizing long distance telephone service and equipment manufacture.

The AT&T trial began in January 1981. Following denial of its motion to dismiss, AT&T agreed to a settlement in which it divested its local service operations. Under the settlement, known as the Modification of Final Judgment ("MFJ") or AT&T Consent Decree, AT&T's local operating companies were spun off and reorganized as seven "Regional Bell Operating Companies" ("RBOCs").

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4 Pub. L. No. 73-416, 48 Stat. 1064 (1934), codified as amended at 47 U.S.C. § 151 *et seq*.

5 47 U.S.C. § 151.

6 U.S. Const. art. I, § 8, cl. 4.

Under the MFJ, the United States was geographically divided into 163 "Local Access Transport Areas," or "LATAs." The RBOCs were required to offer to competitors non-discriminatory interconnection with their networks, and were prohibited from offering any service or product other than local and short-haul long distance within a LATA, known as intraLATA, telephone service.[7] The MFJ prohibited the RBOCs from carrying interLATA telephone calls – that is, calls originating in one LATA and terminating in another LATA – but required them to provide local access for interLATA carriers.[8] The MFJ further prohibited the RBOCs from offering "information services,"[9] or data-processed communications, a restriction that was withdrawn in 1991.[10] The MFJ also prohibited the RBOCs from manufacturing telecommunications equipment.[11]

### D. The Cable Acts

Cable television service began in Pennsylvania in 1948 as "community access television" (the "CATV" acronym still is used frequently in the industry). Initially, the FCC regulated cable television. However, state and local challenges to FCC jurisdiction arose because cable television does not require a radio broadcast, is not intrinsically interstate by nature and therefore is seemingly not subject to FCC jurisdiction, which is based, as stated, on the U.S. Constitution's Interstate Commerce Clause.

The Cable Communications Policy Act of 1984 (the "1984 Cable Act")[12] divested the FCC of much of its authority over cable television. The 1984 Cable Act established a regulatory regime by which systems meeting the statutory definition of "Cable System[s]" are subject to state and local regulation as franchisees. A Cable System is defined in the 1984 Cable Act and the FCC's rules as: "a facility, consisting of a set of closed transmission paths and associated signal generation, reception, and control equipment that is designed to provide cable service which includes video programming and which is provided to multiple subscribers within a community."[13]

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7 1982 Decree, *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd*, 460 U.S. 1001 (1983).

8 1982 Decree § II(B)(3), *id.* at 227.

9 1982 Decree § II(D)(1), *id.*

10 *United States v. W. Ele. Co.*, 767 F. Supp. 308 (D.D.C. 1991), *aff'd*, 993 F.2d 1572 (D.C. Cir. 1993).

11 1982 Decree § II(D)(2), *United States v. AT&T*, 552 F. Supp. at 227.

12 Pub. L. No. 98-549, 98 Stat. 2779 (1984), codified at 47 U.S.C. § 521 *et seq.*

13 47 U.S.C. § 522(7); 47 C.F.R. § 76.5(a).

The Cable Television Consumer Protection and Competition Act of 1992 (the "1992 Cable Act")[14] superseded much of the 1984 Cable Act and amended the Communications Act to reassert FCC authority to regulate cable service pricing. The 1992 Cable Act also directed the FCC to establish limits on the number of cable subscribers an operator of cable services is permitted to serve. The 1984 Cable Act and the 1992 Cable Act are codified at Title VI of the Communications Act.

## E. The Telecommunications Act of 1996

The Telecommunications Act of 1996 (the "Telecommunications Act") was the first major amendment to the Communications Act since its enactment in 1934.[15] Its name is something of a misnomer, as it made significant changes not only to the telecommunications-related provisions of Title II of the Communications Act, but to much of the rest of the Act as well.

### 1. Telecommunications Provisions

With respect to telecommunications, the Telecommunications Act had at its heart an attempt to replace the MFJ's judicial limitations on RBOC activity with a competition-based paradigm. In the aftermath of the MFJ, competition in the long distance market had developed quickly, but the RBOCs largely retained their monopoly control over the intraLATA market. Equally significantly, the RBOCs continued to be excluded from the interLATA market. The intent of the Telecommunications Act was to end the legal monopoly the RBOCs and other local phone companies ("incumbent local exchange carriers," or "ILECs," in the language of the Act) had historically enjoyed over local phone service and require them to open their networks to competitors. In exchange, once an RBOC could demonstrate to the FCC that its local markets in a particular state were opened to competition, the RBOC would be granted access to the interLATA market in that state. The intent was that the RBOCs would enter the long distance carriers' markets, and at the same time the long distance carriers would begin to offer local phone service. With the RBOCs and the long distance carriers each able to offer packages of combined local and long distance service, the theory was that competition between the two would serve to ensure a functioning competition-based market, rendering monopoly regulation of the RBOCs unnecessary.

As things turned out, however, while the RBOCs had all obtained authority to enter the long distance markets in each of their states by 2003, and have had tremendous success in entering the long distance market, vibrant local competition never developed. As

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14 Pub. L. No. 102-385, 106 Stat. 1460 (1992), codified at 47 U.S.C. § 533.

15 Pub. L. No. 104-104, 110 Stat. 56 (1996).

explained in more detail in Section IV(A)(2), the enactment of the Telecommunications Act was followed by nearly ten years of litigation in the courts and before the FCC over the extent to which the RBOCs would have to open their networks to use by competitors.

The RBOC long distance entry provision of the Telecommunications Act is codified at Section 271 of the Communications Act.[16] Section 271 sets out a 14-point checklist, which generally requires an RBOC to prove to the FCC that it has complied with its local market opening obligation and that it faced effective competition in the state where it sought to provide interLATA long distance service. The first RBOC application to the FCC for Section 271 authority to enter the interLATA market was approved by the Commission in December 1999, when Bell Atlantic, the predecessor to Verizon Communications, won approval to offer InterLATA long distance service in New York. The process ended in 2003, with all remaining RBOCs authorized to offer long distance service throughout their regions.

The core of the local market opening provisions of the Telecommunications Act are codified at Sections 251 and 252 of the Communications Act.[17] Those provisions, and the decade-long regulatory and legal battle over their implementation, are discussed in more detail in Section IV(A)(2).

### 2. Broadcast Provisions

Although the telephony/local competition provisions of the Telecommunications Act have received the most attention (in no small measure owing to the aforementioned decade of litigation), the Act effected significant changes to broadcast, cable, and other Title 47 legal and regulatory regimes.

The Telecommunications Act relaxed the FCC's media concentration rules by allowing a single company or network to own television stations reaching as many as 35% of U.S. households (up from 25% prior to the Act) and eliminated the national radio station ownership cap.[18] However, the Act maintained ownership concentration limits on local radio and television station ownership. Current broadcast ownership limitations will be examined in Section IV(B)(3). The Telecommunications Act also extended the term of television and radio broadcast licenses to eight years and relaxed renewal procedures (see Section IV(B)(1)).

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16 47 U.S.C. § 271.

17 47 U.S.C. §§ 251-252.

18 Telecommunications Act § 202, modifying 47 C.F.R. § 73.3555.

### 3. Cable Provisions

Cable regulation was also relaxed by the Telecommunications Act. The Act relaxed much of the regulation imposed by the 1992 Cable Act. Notably, the Telecommunications Act phased out the 1992 Cable Act's rate regulation[19] and provided for telecommunications company entry into cable television service or video programming.[20] The Telecommunications Act also permitted a broadcast network to own cable systems. The current status of "cross-ownership rules" is examined in Sections IV(B)(3) and (C)(2).

In some respects, the timing of the Telecommunications Act could not have been worse. The Telecommunications Act was debated, passed out of committee, voted on, and signed into law literally during the same year or two that the first mass market browser, Mosaic, and the advent of the World Wide Web, made the Internet an unprecedented medium of mass communication, information storage, and information dissemination. As a result, the Telecommunications Act did not anticipate the Internet's role, in the little more than a decade since its public emergence, in lowering entry barriers and promoting convergence of technologies and delivery platforms for functionally equivalent services.

## III. Structure and Functions of the FCC

The FCC is the federal agency charged with administering U.S. telecommunications regulation. Headquartered in Washington, D.C., the FCC is an independent federal agency (in other words, it is not part of a cabinet-level federal department) composed of five commissioners – traditionally three from the political party occupying the White House, which nominates them, and two from the other party. The current Commissioners are: Chairman Kevin J. Martin, Jonathan S. Adelstein, Michael J. Copps, Deborah Taylor Tate, and Robert M. McDowell.

The commissioners are served by a bureaucratic apparatus in which the FCC staff are employed. The FCC is organized into six operating bureaus:

1. Consumer and Governmental Affairs, which deals with consumer education and complaints, as well as with other governmental organizations on the federal, state, and local level and non-governmental organizations;

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19 Telecommunications Act, § 301(b), 47 U.S.C. § 543(c), (d).

20 Telecommunications Act, § 302(b), 47 U.S.C. § 651.

2. Enforcement, which deals with enforcement of the Communications Act, other laws that the FCC is charged with administering, the FCC's rules and regulations, and punishment of their violators;

3. International, which deals with international telecommunications services, submarine cables, and satellites;

4. Media, formed from the former Mass Media and Cable Services Bureaus, which deals with broadcast television and radio, cable television, and post-licensing Direct Broadcast Satellite ("DBS") service;

5. Wireless Telecommunications, which deals with cellular telephones and radio spectrum allocation and licensing; and

6. Wireline Competition, the former Common Carrier Bureau, which deals with companies that provide local and long distance wireline telecommunications service.

The workings of the FCC are governed largely by the Communications Act and the federal Administrative Procedures Act ("APA")[21], which governs the manner in which the FCC and other federal agencies make decisions. Under the APA, the FCC conducts two types of proceedings. The first are so-called rulemaking proceedings, through which the FCC considers and adopts new regulations implementing the Communications Act and other legislation that the FCC is charged with administering. The APA requires the FCC to conduct a public rulemaking process that solicits input from the industry and public on the FCC's new proposed rules.

Rulemaking proceedings are initiated with the release of a Notice of Proposed Rulemaking or "NPRM," which may be issued by the FCC either on its own initiative or in response to a request for a rule change from a member of the public.

The NPRM sets forth what the FCC proposes to do and why, invites public comments from interested parties for a certain period, and then reply comments, which are theoretically confined to rebuttal of previously filed comments. NPRMs are published in the Federal Register and on the FCC's Web site at www.fcc.gov (the web site is a repository of useful information and links to other communications-related web sites). All comments and reply comments are made a part of the public record of the proceeding, although in some limited circumstances, the FCC permits parties to its proceedings to submit confidential material. During and after the comment and reply comment cycle, interested parties may also visit FCC commissioners and staff to express views in a

[21] 5 U.S.C. § 500 *et seq*.

proceeding, but they must file an "ex parte" letter in the public record of the proceeding, detailing whom they visited and what they discussed, although the latter requirement is often honored more in the breach than the observance.

After the close of the comment and reply periods, the FCC will review and assimilate the comments, arrive at a decision, and typically issue a Report and Order (or "R&O") which contains the resulting rulemaking, sometimes in the form of a new rule or regulation, sometimes a repeal of a previously existing rule or regulation, and sometimes a modification. The FCC's rules and regulations are published in the Federal Register and codified at Title 47 of the Code of Federal Regulations (47 C.F.R.).

In addition to NPRMs and R&Os, there are a variety of other types of policy-making documents that the FCC may adopt. If the FCC is interested in a particular issue but has not formulated a specific rule change proposal, the agency may adopt a Notice of Inquiry, or "NOI." An NOI simply asks for comments and information about some topic or topics. The comments submitted in response to an NOI may lead the FCC to propose a specific rule change in an NPRM. An NOI may also be used to gather information for a report, perhaps to Congress, either at the FCC's own initiative or in response to Congressional direction. A member of the public may also file a "Petition for Declaratory Ruling" with the FCC. This is a request that the FCC clarify the scope or application of an existing rule. In response, the FCC may issue a Declaratory Ruling intended to provide greater certainty to the public.

The second form of FCC actions under the APA are adjudication proceedings. In adjudication proceedings, the FCC, either on its own initiative or as the result of a complaint brought before it, exercises its authority to enforce the Communications Act. Generally, enforcement actions brought by the FCC can result in fines or (in extreme cases) the revocation of operating authority, while in complaint proceedings the FCC can award damages to the complainant.

The FCC also exercises its authority through the licensing process. The FCC grants, regulates, and revokes licenses for a variety of communications providers. In the broadcast arena, the FCC licenses both radio and television broadcasting stations, including all U.S. AM and FM radio stations and all VHF and UHF television stations, which include the new digital television stations (see Section IV(B)(1) and (4)).

The FCC also licenses satellite systems, including both commercial and government satellite operators and providers of direct-to-home ("DTH") video satellite services. The FCC grants licenses for both space stations, as the satellites themselves are known in FCC rules and regulations, and earth stations, the ground-based tracking, control, and radio uplink/downlink facilities necessary to satellite operation (see Section IV(F)(4)).

The FCC also issues licenses to provide terrestrial wireless (i.e., non-satellite-based) telecommunications services. These are generally divided into Commercial Mobile Radio Services ("CMRS"), which includes cellular and paging services, and Private Mobile Radio Services ("PMRS"), private systems used for a variety of purposes. In the wireless arena, the FCC relies principally on competitive bidding or auctioning to assign licenses (see Section IV(D)(1)).

In the wireline context, the FCC must authorize carriers to provide interstate and international telecommunications (local telephony services are authorized by the States), although in recent years the approval process has become very limited. The FCC has provided a blanket grant of authority for domestic interstate carriers that are classified as non-dominant, so no application is necessary. Carriers that provide international services generally receive a presumption in favor of entry and are subject to a 14-day streamlined approval process (see Section IV(H)(2)).

Appeals of FCC decisions granting or revoking operating licenses are made to the U.S. Court of Appeals for the D.C. Circuit.[22] Non-licensing related decisions of the FCC generally can be reviewed by any U.S. Court of Appeals.[23]

Because FCC jurisdiction is founded on the Interstate Commerce Clause of the U.S. Constitution, FCC oversight in Congress is exercised by the committees of the Senate and House of Representatives that have jurisdiction over interstate commerce, which are the Senate Committee on Commerce, Science, and Transportation and the House Committee on Energy and Commerce.

## IV. The Legal and Regulatory Structure

### A. Telephony

#### 1. Common Carrier Regulation

Communications by telephone ("telephony") are governed at the federal level primarily by Title II of the Communications Act. The heart of Title II is so-called "common carrier" regulation. Telephone companies that serve the general public are considered "common carriers" or "carriers," defined by the Communications Act as "any person engaged as a common carrier for hire, in interstate or foreign communication by wire or

22 47 U.S.C. § 402(a); 28 U.S.C. § 2342.

23 47 U.S.C. § 402(a); 28 U.S.C. § 2342.

radio or interstate or foreign radio transmission of energy."[24] The Telecommunications Act introduced a new term, "telecommunications carrier," which is used in place of "common carrier" in many of the provisions added by the 1996 Act.[25] The two terms are largely, although not entirely, synonymous.[26] To be a carrier, a company need not physically carry calls from end-to-end; carrier status may also apply to companies that merely originate, terminate, or provide transport for calls, or to companies that provide service by reselling other carriers' facilities or services; the key determinant of common carrier (and telecommunications carrier) status is the sale of point-to-point communications service to the public.[27]

Pursuant to Title II, common carriers offering interstate or international service are required to submit to rate regulation and open public access.[28] Pursuant to the First Amendment to the U.S. Constitution, common carriers are not subject to any restrictions on the content carried by them, nor are they liable for it. Common carriers are required to offer "communication service upon reasonable request therefor"[29] to the general public and to interconnect with other carriers if the FCC finds such interconnection is in the public interest.[30] Carriers must charge rates that are "just and reasonable"[31] and not unreasonably discriminatory.[32] The FCC has the power to determine whether a carrier's rates are unreasonable or unreasonably discriminatory and, upon such a finding, to prescribe a maximum or minimum rate.[33] Common carriers are also prohibited from

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24 47 U.S.C. § 153(10). Exempt from the definition of "common carrier," however, is "a person engaged in radio broadcasting . . . insofar as such person is so engaged." 47 U.S.C. § 153(10).

25 47 U.S.C. § 153(44) (defining "telecommunications carrier" as a "provider of telecommunications services").

26 One difference between the terms is that certain telecommunications resellers known as "aggregators," (a category that includes hotels, motels, and pay telephone providers serving the "transient" public (47 U.S.C. § 226(a)(2)) may be classified as "common carriers" but are expressly excluded from the definition of "telecommunications carrier."

27 47 U.S.C. § 153(46) (defining "telecommunications service").

28 Intrastate long distance and local telephone service are generally regulated at the state level. In fact, Section 2(b) of the Communications Act, 47 U.S.C. § 152(b), expressly prohibits the FCC from regulating intrastate communications; however, the Telecommunications Act created numerous exceptions to this longstanding prohibition.

29 47 U.S.C. § 201(a).

30 47 U.S.C. § 201(a).

31 47 U.S.C. § 201(b).

32 47 U.S.C. § 202.

33 47 U.S.C. § 205(a).

discontinuing service to a "community" or "part of a community" without the FCC's approval.[34]

Title II also requires common carriers to file public tariffs, or rate schedules, with the FCC, and to charge only tariffed rates.[35] Through most of the 20th century, tariffs were deemed so fundamental to common carrier regulation that a doctrine, called the "Filed Tariff Doctrine," developed by jurisprudence and reaffirmed by the U.S. Supreme Court,[36] permits a carrier to invoke its own filed tariff to invalidate a (presumably less favorable) contract rate that the carrier itself negotiated with a customer. The doctrine may be invoked even by a carrier that intentionally misrepresented its rates to the customer.

Since 1996, however, the FCC has been authorized to forbear from enforcing the common carrier requirements when such regulation is not required to protect the public interest.[37] As competition has grown and eroded the need for rate regulation, the FCC has engaged in a series of "detariffing" proceedings, exercising its forbearance authority to eliminate most long distance[38] and international tariffs.[39] Today, it is primarily local exchange access service provided by the RBOCs and other local exchange carriers that is still subject to tariff regulation.

**a. Universal Service**

Section 254 of the Telecommunications Act established a "Universal Service Fund." All common carriers providing interstate or international service are required to contribute to the fund, which is essentially a tax to subsidize and promote the extension of telecommunications service to low-income households and to rural and other "high cost" communities, the provision of telemedicine to certain hospitals, and the provision of advanced telecommunications service to schools and libraries. The Universal Service Fund's current annual payments are approximately $7 billion. Section 254 requires the

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34 47 U.S.C. § 214(a).

35 47 U.S.C. § 203.

36 *See, e.g., AT&T v. Cent. Office Tel., Inc.*, 524 U.S. 214 (1998).

37 47 U.S.C. § 160.

38 *Policy and Rules Concerning the Interstate Interexchange Marketplace*, *Implementation of Section 254(g) of the Communications Act of 1934*, 11 FCC Rcd 20730 (1996), *aff'd, MCI WorldCom v. FCC*, 209 F.3d 760 (D.C. Cir. 2000).

39 *International Detariffing Order Takes Effect*, Public Notice, 16 FCC Rcd 9372 (2001).

FCC to review periodically what constitutes "universal service" as an evolving standard.[40]

Controversy has arisen over the Universal Service Fund in several respects. There is controversy as to which carriers should be eligible to receive Universal Service funds, e.g., should wireless carriers be eligible to receive funds and, if so, at what levels. There are also debates over how the burden of contributing to the fund should be distributed across the telecommunications industry. The Telecommunications Act provides that non-carrier providers of interstate telecommunications service "may be required to contribute to the preservation and advancement of universal service if the public interest so requires."[41] As detailed further in Section IV(E), the FCC recently ruled that Voice over Internet Protocol ("VoIP") telephony service providers must pay into the fund; however, providers of broadband DSL and cable modem service remain exempt, causing complaints that the burden is unfairly borne exclusively by providers and users of the "legacy" circuit-switched telecommunications network. In addition, there is controversy over how the burden of universal service funding should be spread to end-users.

In March 2005, the FCC issued an order setting forth the qualifications for eligibility to receive Universal Service Fund payments.[42] The FCC has also established two different universal service support mechanisms, one for rural or high cost areas and the other for non-rural areas. The rural support mechanism has been the subject of reform efforts involving how "rural" carriers eligible to receive universal service funds should be defined and how the support funding should be calculated.

The FCC is also examining whether to amend the rules for determining Universal Service Fund contributions, shifting from the current percentage of revenue-based formula to one based on another metric, such as a flat fee for each active telephone number served by the contributing provider.

### b. Customer Proprietary Network Information ("CPNI")

Section 222 of the Telecommunications Act imposes on carriers the duty to protect the confidentiality of customer proprietary network information ("CPNI") and generally prohibits them from using or disclosing such information without the customer's consent for purposes other than billing, administration, and the marketing of services of the same type (i.e., local, long distance, or wireless) as services that the carrier already provides to

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40 47 U.S.C. § 254(b), (c).

41 47 U.S.C. § 254(d).

42 *Federal-State Joint Board on Universal Service, Report and Order*, 20 FCC Rcd 6371 (2005).

the customer. However, a 1999 decision by the U.S. Court of Appeals for the Tenth Circuit invalidated an FCC rule implementing § 222 that required carriers to obtain the customer's affirmative ("opt-in") consent to other marketing uses of CPNI.[43] The FCC then devised a new set of rules providing for an "opt-out" regime for use of CPNI by carriers and their affiliates, while requiring "opt-in" consent by customers for provision of CPNI to unaffiliated third parties.[44]

In April 2007**,** the FCC adopted additional protections for CPNI, including requirements for passwords, annual CPNI security reports, "opt-in" consent for disclosure of CPNI to joint venture partners or independent contractors, and notification of customers and law enforcement in case of unauthorized access to CPNI. The Commission also requested comment on additional steps to further protect customers' privacy, such as requiring additional passwords, audit trails, and data retention limits.[45]

#### c. CALEA

The Communications Assistance for Law Enforcement Act ("CALEA")[46] requires carriers to build into their networks the capacity to support law enforcement surveillance. Although many mistake it for a post-September 11 measure, CALEA actually dates from 1994. CALEA is controversial because of privacy concerns. In the wake of revelations that the Bush administration conducted electronic surveillance of persons in the United States without obtaining a judicial warrant, and the extension of CALEA obligations to VoIP and broadband Internet service providers ("ISPs") (see Section IV(E)(3)), concerns about the privacy implications of CALEA have mounted.

### 2. Local Competition

As described earlier, the Telecommunications Act fundamentally changed the way local telephone service is regulated in the United States by setting obligations on ILECs intended to foster competitive entry. The FCC was given a major role in implementing the rules adopting those local competition provisions. The FCC's adoption of those rules

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43 *US West, Inc. v. FCC*, 182 F.3d 1224 (10th Cir. 1999).

44 *Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information*, Third Report and Order and Third Further Notice of Proposed Rulemaking, 17 FCC Rcd 14860 (2002).

45 *Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 6927 (2007).

46 Pub. L. No. 103-414, 108 Stat. 4279 (1994), codified at 47 U.S.C. § 1001 *et seq*.

turned into a decade-long legal battle between the ILECs on the one hand and the long distance companies and other competitive entrants on the other hand.

### a. The Local Competition Provisions of the Act

The local competition provisions of the Telecommunications Act are codified in Sections 251 and 252 of the Communications Act, 47 U.S.C. §§ 251-252. Section 251 sets out certain rights afforded to competitive entrants and Section 252 provides the procedures through which competitors can exercise those rights.

Section 251 provides three basic means by which competitors ("competitive local exchange carriers" or "CLECs") can enter the local telephone service market, which can be used singly or in combination. The three modes of entry are as follows:

***Access to UNEs.*** ILECs are required to lease to CLECs various elements in their network that are used individually or in combination with each other to provide local telephone service. Section 251 directs the FCC to determine which facilities must be made available by the ILECs as "unbundled network elements" ("UNEs"). In determining which network facilities constitute UNEs, the FCC is directed to assess whether a CLEC's ability to serve its customers is "impaired" without access to the facility. The ILECs must make UNEs available at regulated rates under a forward looking, cost-based pricing regime known as "TELRIC" – short for "Total Element Long Run Incremental Cost."

***Construction of New Facilities.*** CLECs may also enter the local service market by building entirely new facilities. The ILECs are required to allow CLECs to interconnect their facilities with the ILECs' facilities so that the CLECs' customers can reach the ILECs' and vice versa.

***Resale.*** ILECs are required to permit CLECs to purchase their services for resale to the public at a wholesale rate that is less than the rate charged by the ILECs to their retail customers.

In addition to specifying the three modes of competitive entry, Section 251 also provides CLECs with other rights, including:

- the mutual right to compensation when a CLEC or an ILEC terminates a local call originated on the other carrier's network;
- access to local telephone numbers so that CLECs can issue phone numbers to new customers on the same basis as ILECs;

- rights related to local number portability, which allows customers to change local carriers without changing phone numbers, removing a significant barrier to serving existing ILEC customers; and

- "collocation" rights allowing CLECs to place their telecommunications equipment in ILEC local telephone stations (known as "central offices"), which enables CLECs to have access to the existing wires connecting their customer's premises to the telephone network (known as "local loops").

Section 252 requires that, upon a CLEC's request, ILECs must negotiate, in good faith, agreements that set forth terms governing the CLEC's interconnection to the ILEC's network, access to UNEs, and resale. Section 252 provides a timetable for the completion of those negotiations and establishes procedures for the arbitration of any unresolved issues by the state public utility commissions and review by the federal courts. New entrants were also given the right to use telephone company and other utilities poles, ducts, and conduits to run their wire and fiber optic cable. See Section IV(D)(3).

### b. The FCC's Implementing Orders and Ensuing Court Battle

In a series of highly-contested orders and related court challenges that date back to 1996, the FCC promulgated rules implementing the market-opening provisions of the Telecommunications Act. The story of local competition regulation over the last decade is largely the story of the battle over the FCC's efforts to define the scope of local competition, particularly the FCC's evolving effort to define which ILEC network facilities must be made available as UNEs.

### c. The Local Competition Order

The FCC's efforts to define the scope of UNEs available to competitors under the Telecommunications Act began with its August 8, 1996 local competition order (the "Local Competition Order").[47] Under that early definition of UNEs, CLECs had access to all of the ILEC's network elements necessary for serving a customer, including the local loop, the use of the switch in that central office, and transport throughout the ILEC's network. Under this regime, CLECs could serve a customer without any of their own facilities. This mode of service offering was known as the unbundled network element platform, or "UNE-P."

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47 *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 (1996); *see also Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Second Report and Order and Memorandum Opinion and Order, 11 FCC Rcd 19392 (1996) (relating to dialing parity and ability to place calls without use of an access code).

The Local Competition Order, however, was immediately the subject of highly-contested litigation that essentially paralyzed its implementation for the first two and one-half years of its existence. Among other things, the RBOCs and state public utility commissions contested the FCC's authority to regulate intrastate telecommunications.

On January 25, 1999, in *AT&T v. Iowa Utilities Board* (the "*AT&T Decision*"),[48] the U.S. Supreme Court substantially reversed a decision of the U.S. Court of Appeals for the Eighth Circuit that had vacated most of the Local Competition Order, rejecting the challenges to the FCC's statutory authority.[49]

However, the *AT&T Decision* Court, while upholding the FCC's general rulemaking authority, held that that the FCC had failed to distinguish those network elements to which blanket access should be given and those which should be made available only on a case-by-case basis, and vacated the rule. In response, the FCC repromulgated its UNE rules with a new test for the "impairment" standard and minor modifications, adding to the list of necessary network elements list "dark" (non-activated) fiber local loops and sub-loop elements.[50] In a separate proceeding, the FCC ordered ILECs to allow competitors to sell high frequency, or broadband, DSL Internet service on the same local loop line that the ILECs were using for low frequency voice service ("line-sharing").[51]

The revised FCC unbundling rules came under challenge as well. In *U.S. Telecom Ass'n v. FCC* ("*USTA I*"), the U.S. Court of Appeals for the D.C. Circuit directed the FCC again to review the unbundling rules, finding that in establishing a uniform national list of network elements that must be unbundled, the FCC had failed to consider individual market differences and had thereby violated the "impairment" standard.[52] The Court also overturned the FCC's line-sharing rules, finding that the FCC had failed to consider DSL competition from other broadband platforms such as cable modems.

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48 525 U.S. 366 (1999).

49 *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997) (first judgments); 124 F.3d 934 (8th Cir. 1997) (second judgments).

50 *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3696 (1999).

51 *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Third Report and Order, 14 FCC Rcd 20912 (1999).

52 290 F.3d 415 (D.C. Cir. 2002).

### d. The Triennial Review Order

In response to *USTA I*, in February 2003 the FCC, in a contentious 3-2 split decision, once again repromulgated its UNE rules. By that time, with President Bush in the White House and a Republican majority among the FCC commissioners, the political climate had changed. Unlike the Commission that adopted the Local Competition Order, the FCC in place in 2003 accepted the ILECs' argument that requiring them to open their networks to competitors would create a drag on their investment in next generation facilities and hamper their ability to compete with the cable companies' broadband offerings. The Democratic minority, however, remained sympathetic to CLEC calls for access to the ILECs' networks. Reflecting the tremendous political infighting over its adoption and refinement, an order based on the decision did not issue until August 2003 (the "Triennial Review Order").[53]

While the Triennial Review Order preserved CLECs' access to most of the UNEs necessary for offering voice service, it eliminated the ILECs' Internal Protocol ("IP") switching and high-speed, broadband network elements from the unbundling requirements. The FCC also removed line-sharing from the list of UNEs to which access must be given, and decided that the broadband portion of the loop is not an UNE.

In adopting the Triennial Review Order, the FCC had sought to address the *USTA I* court's concern that it must conduct its impairment analysis on a market-by-market basis by adopting a national impairment standard but delegating to state public utility commissions the authority to apply that standard. In March 2004, in a case also denominated *U.S. Telecom Ass'n v. FCC* ("*USTA II*"),[54] the D.C. Circuit substantially invalidated much of the Triennial Review Order, vacating the FCC's delegation to state commissions of authority to determine impairment standards for UNEs on a local basis as well as vacating and remanding the FCC's nationwide UNE impairment standards.

### e. Current Status

In response to *USTA II*, the FCC issued new unbundling rules in a "Triennial Review Remand Order" that went into effect in March 2005.[55] The new rules further limited CLECs' rights to UNEs. Among other things, the new rules phased out CLECs' access

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53 *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Report and Order, 18 FCC Rcd 16978 (2003).

54 359 F.3d 554 (D.C. Cir. 2004).

55 *Unbundled Access to Network Elements*, Order and Notice of Proposed Rulemaking, 20 FCC Rcd 2533 (2005).

to the use of ILEC switches (and thus the ability to offer UNE-P based local service) over twelve months from March 11, 2005. This means that UNE-P is no longer available to CLECs. In order to serve a customer, CLECs must now have their own switches, which renders providing local service to mass market customers (i.e., consumers and small businesses) uneconomic in most instances. The FCC also eliminated access to certain high-capacity loops and transport circuits. In June 2006, the D.C. Circuit upheld the Triennial Review Remand Order, bringing an end to the decade-long legal battle defining the UNEs to which ILECs must provide access.[56]

### 3. The Battle Over Forbearance

With the battle over UNEs ended, the ILECs have now turned their attention to achieving even greater freedom from regulation through so-called Forbearance Proceedings. Section 10 of the Communications Act authorizes the FCC to forbear from applying a particular provision of the Act or of its rules if it finds that such forbearance would enhance competition and would not be counter to the public interest. The ILECs have focused on § 10 as a vehicle for eliminating many of the remaining regulatory requirements under which they operate. The main thrust of those proceedings has been the deregulation of the ILECs' broadband services.

### 4. Intercarrier Compensation

As we have seen, a great deal of legislative, regulatory, and judicial attention has been devoted to governing the manner in which telecommunications carriers interconnect with each other. The legislative and regulatory scheme requires carriers to pay each other for interconnection. In practice, these payments fall into three categories: (i) access charges – the charges paid by carriers to local exchange carriers for originating and terminating their non-local traffic; (ii) reciprocal compensation payments between local exchange carriers; and (iii) international settlements – the off-setting payments by carriers to carriers from other countries to originate and terminate traffic. International settlements will be covered in Section IV(H)(5).

The current intercarrier compensation regime predates passage of the Telecommunications Act and has been widely criticized for its market-distorting subsidies. Post-Telecommunications Act efforts at reform have included both the so-called "CALLS" (Coalition for Affordable Local and Long Distance Service) Plan, that attempts to replace the subsidies built into access charges with explicit support mechanisms that ostensibly go to help keep local rates low, and which has been generally adopted by industry and the FCC; and the "MAG" (Multi-LEC Association Group) Plan,

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56 *Covad Commc'ns Co. v. FCC*, 450 F.3d 528 (D.C. Cir. 2006).

which operated for smaller carriers in much the same way as the CALLS Plan did for larger ones.

In 2005, the FCC issued a further proposal in a pending 2001 proceeding to develop a uniform intercarrier compensation system.[57] Under a scenario supported by a coalition of large carriers, the existing system would be largely supplanted by a "bill-and-keep" regime, in which each carrier would recover from its customers the costs of originating and terminating calls, rather than seeking payments from other carriers. Smaller carriers, however, have presented a number of alternative plans, which would move towards a uniform intercarrier compensation rate over a period of time. A critical problem for the FCC, regardless of the plan adopted, is how to ensure that intrastate carrier access charges are reduced or phased out. These charges are currently much higher on average than the federal carrier charges, but the rates are not directly under the FCC's jurisdiction.

The intercarrier compensation proceeding is extremely complex, with many contending interests that make an overall policy solution very difficult to achieve. The FCC has so far indicated a disposition to take only limited steps in this area.

## B. Broadcast

### 1. Licensing

Broadcast activities are governed by Title III of the Communications Act, as amended. The heart of Title III is the FCC's exclusive jurisdiction to grant, regulate, and revoke radio licenses for "the transmission of energy or communications or signals by radio."[58] The FCC regulates broadcasting under a broad "public interest" standard. The Telecommunications Act authorizes the issuance of broadcast licenses and renewals for eight-year terms if the FCC finds that the "public interest, convenience, and necessity would be served thereby."[59] Renewal applications must be filed four months before the expiration of the current license term.

### 2. Indecency and Content Restriction

Radio and television broadcasters are specifically not considered common carriers pursuant to the Communications Act, and are therefore not required to permit public

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57 *Developing a Unified Intercarrier Compensation Regime*, Notice of Proposed Rulemaking, 16 FCC Rcd 9610 (2001), Further Notice of Proposed Rulemaking, 20 FCC Rcd 4685 (2005).

58 47 U.S.C. § 301.

59 47 U.S.C. § 307(c).

access.[60] Broadcasters, however, are subject to content regulation based upon doctrines that emerged in a series of U.S. Supreme Court decisions that justified broadcast content restriction on the grounds of scarcity of bandwidth spectrum, the "invasive" nature of broadcasting (that the airwaves pass, unbidden and uninvited, into and through the nation's households), and the very tradition of government regulation of broadcasting.[61] The FCC therefore regulates the broadcast of "indecent" and "obscene" material, and has the power to enforce its authority by, *inter alia*, fines and suspensions or revocations of broadcast licenses. By contrast, the FCC consistently has declined to assert any extension of its content-regulating authority to non-broadcast, subscription-based services such as cable and satellite television. It is for this reason that certain language on broadcast channels is "bleeped" out, while the same language is transmitted unbowdlerized by cable channels that may be only a few numbers away on the dial.

In the famous "seven dirty words" case, *FCC v. Pacifica Foundation*, the U.S. Supreme Court upheld the FCC's definition of "indecent speech": "language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards for the broadcast medium, sexual or excretory activities or organs."[62] The *Pacifica* Court held that "indecent" speech is protected by the First Amendment to the U.S. Constitution, and that any governmental circumscription of it is subject to "strict scrutiny" analysis and can be justified only by a compelling governmental interest – that must be achieved by the least intrusive means possible.

Following a series of cases in the D.C. Circuit, *sub nom. Action for Children's Television v. FCC*,[63] in which the Court attempted to draw a line between the free speech rights of adults and the compelling governmental interest in protecting children, the FCC settled on a rule prohibiting "indecent material" to be broadcast between 6:00 a.m. and 10:00 p.m.[64]

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60 47 U.S.C. § 153(10).

61 *See, e.g., Red Lion Broad. Co. v. FCC*, 395 U.S. 367 (1969); *FCC v. Pacifica Found.*, 438 U.S. 726 (1978); *FCC v. League of Women Voters*, 468 U.S. 364 (1984); *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622 (1994); *Sable Commc'ns of Cal., Inc. v. FCC*, 492 U.S. 115 (1989).

62 *FCC v. Pacifica Found.*, 438 U.S. at 731-32, 748-51.

63 (Act I), 852 F.2d 1332 (D.C. Cir. 1988); (Act II), 932 F.2d 1504 (D.C. Cir. 1991); (Act III), 58 F.3d 654 (D.C. Cir. 1995).

64 47 C.F.R. § 73.3999(b).

By contrast, obscenity is not protected by the First Amendment. Obscene language in radio or television broadcasts is prohibited.[65] The determination of obscenity is subject to a three-part test laid down by the U.S. Supreme Court that: (1) an average person, applying contemporary community standards, must find that the material, as a whole, appeals to the prurient interest; (2) the material must depict or describe, in a patently offensive way, sexual conduct specifically defined by applicable law; and (3) the material, taken as a whole, must lack "serious literary, artistic, political, or scientific value."[66]

A vigorous line of jurisprudence has struggled with the "patently offensive" and "contemporary community standards" elements of both indecency and obscenity and with the "serious literary . . . value" element of obscenity. In April 2001, the FCC issued a Policy Statement intended to clarify the indecency standard.[67]

In 2004, the broadcast content restriction issue re-emerged from obscurity with the controversies concerning the exposure of entertainer Janet Jackson's breast as the result of a "wardrobe malfunction" during her appearance at the Superbowl half-time show, the removal of "shock jock" Howard Stern's radio program from the air by many broadcast radio channels, and the Golden Globe Awards presentation of singer Bono uttering a adjectival form of one of the seven dirty words. The FCC issued several fines and proposed a rule requiring retention of program copies in order to facilitate investigations.[68]

In March 2006, the FCC released a package of decisions styled the "Omnibus Indecency Order"[69] and proposed fines totaling over $4 million concerning consumer complaints regarding broadcast indecency between February 2002 and March 2005. In May 2006, the FCC refused to reconsider the $550,000 fine it had imposed on broadcaster CBS for broadcasting the Super Bowl wardrobe malfunction. In June 2006, the enactment of the Broadcast Decency Enforcement Act[70] increased by a factor of ten – from $32,500 to

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65 18 U.S.C. § 1464.

66 *Miller v. California*, 413 U.S. 15, 24 (1973).

67 Industry Guidance on the Commission's Case Law Interpreting 18 U.S.C. § 1464 and Enforcement Policies Regarding Broadcast Indecency, Policy Statement, No. EB-00-IH-0089,FCC 01-90 (Apr. 6, 2001).

68 *Retention by Broadcasters of Program Recordings*, Notice of Proposed Rulemaking, 19 FCC Rcd 12626 (2004).

69 *Complaints Regarding Various Television Broadcasts Between February 2, 2002 and March 8, 2005*, Notices of Apparent Liability and Memorandum Opinion and Order, 21 FCC Rcd 2664 (2006).

70 Pub. L. No. 109-235 (2006).

$325,000 to a cap of $3 million per incident per day – the maximum fine for broadcasting indecent content that the FCC can levy.

The raised ante in the indecency broadcast stakes, combined with the even greater disparity created between broadcasters and cable and satellite providers, has sent several fined broadcasters to court, seeking to test a range of issues ranging from the reasonableness of FCC action in their own case to the Constitutional underpinnings of broadcast content regulation itself. In June 2007, the U.S. Court of Appeals for the Second Circuit overruled the FCC's broadcast indecency standards for "fleeting" use of expletives on grounds that they were "arbitrary and capricious," in some cases "divorced from reality," and remanded the case to the FCC for further consideration of the indecency standards.[71] In September 2007, CBS took its appeal of the $550,000 fine to the U.S. Court of Appeals for the Third Circuit. Decisions are pending.

Depictions of violence still do not outrage the American legislator and regulator as do nudity or depictions of sexual activity, a national trait much remarked on by European and other non-U.S. observers. Nevertheless, several broadcasts depicting the most baroque violence did move the FCC to issue an NOI in July 2004 (the "Violence Inquiry").[72] The Violence Inquiry seeks to ascertain the effect of broadcast violence on children, how violence should be defined, what regulatory solutions are appropriate, and the limits of FCC authority to regulate violent content.

### 3. Ownership Limits

In addition to content regulation, broadcasters also have been subject to both national and local ownership and inter-media "cross-ownership" limitations intended to assure competition and a diversity of content or "voices" reaching the public. Under the Telecommunications Act and FCC rules, television broadcasters are subject to a national ownership "cap" preventing any entity from owning broadcast stations reaching more than a certain percentage of U.S. households. As noted earlier, the Telecommunications Act also eliminated radio station national ownership limits.

In 1999, the FCC relaxed local market broadcast ownership restrictions for television and radio stations, permitting one company to own more than one television station in a market without counting against the national coverage cap. Under the so-called "Duopoly" rule, common ownership of two television stations within the same geographic Nielsen Designated Market Area ("DMA") was permitted if, following the

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71 *Fox Television Stations, Inc. v. FCC*, 489 F.3d 444 (2d Cir. 2007).

72 *Violent Television Programming and Its Impact on Children*, Notice of Inquiry, 19 FCC Rcd 14394 (2004).

acquisition, eight full-power commercial and non-commercial stations remained in the DMA and one of the jointly-owned stations was not among the top four-ranked stations in its market. Common ownership of up to six radio stations (AM and FM) was permitted in any market in which at least 20 independent voices remained post-acquisition, or up to four stations where at least 10 independent voices remained.[73]

At the same time, the FCC adopted an R&O that liberalized "attribution" rules that regulate whether interests in broadcast stations count towards the ownership limits, and how the national audience cap is calculated.[74] The "equity/debt plus" rule provided that a holder of a financial interest, whether equity, debt, or mixed debt and equity, in excess of 33% in a broadcast licensee's total assets will have an attributable interest in the licensee if the interest holder is either a major program supplier to the licensee (more than 15% of the licensee's weekly program hours) or if it is a "same market media entity" (whether broadcast, cable, or print). Interests acquired prior to November 7, 1996 were grandfathered.

Under a newspaper/broadcast cross-ownership rule, no entity could own both a newspaper and a commercial broadcast station in the same market. A cable television/broadcast television cross-ownership rule forbade ownership of a broadcast station and a cable station in the same market (for cable ownership limits, see Section IV(C)(2)).

However, in early 2002, two decisions by the U.S. Court of Appeals for the D.C. Circuit began dismantling these rules. First, the D.C. Circuit invalidated the cable/broadcast cross-ownership rule and directed the FCC to reconsider the television broadcast ownership limits, finding that the rule was arbitrary and had not been shown to be in the public interest.[75] Then, the D.C. Circuit held that the Duopoly rule was arbitrary and capricious in its definition of "independent voices," and directed the FCC to reconsider it as well.[76]

In 2003, the FCC, as part of its then Congressionally-mandated biennial regulatory review (now increased to quadrennial), issued a comprehensive media ownership concentration decision in a politically charged atmosphere following voluminous

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73 *Amendment of Section 73.202(b), Table of Allotments, FM Broadcast Stations (Mt. Washington, New Hampshire)*, Notice of Proposed Rulemaking, 14 FCC Rcd 1025 (1999).

74 *Reexamination of the Commission's Cross-Interest Policy*, Report and Order, 14 FCC Rcd 12559 (1999).

75 *Fox Television Stations, Inc. v. FCC*, 280 F.3d 1027 (D.C. Cir.), *modified on reh'g*, 293 F.3d 537 (D.C. Cir. 2002).

76 *Sinclair Broad. Group, Inc. v. FCC*, 284 F.3d 148 (D.C. Cir. 2002).

submissions of comments and public hearings on the proposed rulemakings (the "Media Ownership Decision"). In the Media Ownership Decision, the FCC relaxed the national television ownership cap from 35% to 45%.

In addition to relaxing the national broadcast television ownership cap, the Media Ownership Decision also relaxed the Duopoly rule to permit a company to own two stations, only one of which could be among the top four-rated in markets with five or more television stations; while in markets with 18 or more television stations, a company would be able to own three stations, only one of which could be among the top four-rated. A case-by-case waiver review process was made available for mergers of top four-rated stations.

The Media Ownership Decision continued existing local radio ownership limits, but (1) added noncommercial radio stations to the market assessment; and (2) changed the methodology for defining local radio markets. In markets with 45 or more radio stations, a company can have an attributable interest in not more than eight commercial stations, not more than five of which may be in one class (AM or FM); in markets with 30-44 radio stations, a company can have an attributable interest in not more than seven commercial stations, not more than four of which may be in one class; in markets with 15-29 radio stations, a company can have an attributable interest in not more than six stations, not more than four of which may be in one class; and in markets with 14 or fewer radio stations, a company can have an attributable interest in not more than five stations, not more than three of which may be in one class (and in no event more than 50% of the stations in the market).

The Media Ownership Decision also relaxed the cross-ownership rules. In markets with three or fewer television stations, no cross-ownership would be permitted among television, radio, and newspapers. In markets with four to eight television stations, a company could own either (a) one television station, one daily newspaper, and up to half of the local radio ownership limit for that market; or (b) no television stations, one daily newspaper, and up to the local radio station ownership limit for that market; or (c) two television stations (if allowable under the local television ownership limit for that market), up to the radio station limit for that market, and no daily newspapers. For markets with nine or more television stations, the FCC eliminated the cross-ownership rules altogether (although the local television and radio station ownership limits themselves would continue to apply). The Media Ownership Decision also continued the prohibition on mergers among the four top-ranked national broadcast networks.

In reaching the Media Ownership Decision, the FCC relied upon a so-called "diversity index" that it developed, based upon similar tools used in antitrust review, to measure the degree of media concentration in local markets. Fundamentally, the index measured

diversity of independent voices by adding the sum of the square of market shares of competitors in each local market. Of course, as with any data processing algorithm, the end result is only as good as the data input, and the diversity index generated controversy based on its assumptions about which, and how many, media sources are actually competing in given local markets and which are available to provide choice to consumers.

Public and congressional groundswell in opposition to the Media Ownership Decision erupted immediately after its announcement. The opposition came not only from the center-left of the political spectrum, but from unlikely allies on the political left and right wings. Both sides expressed concern that the new rules would lead to further media concentration that would deny them outlets for the expression of their views. Members of Congress from both sides of the aisle also expressed concern about the rules' effect on their access to the airwaves to speak to their constituents and the fate of independent media outlets in non-media-center districts.

In September 2003, the U.S. Court of Appeals for the Third Circuit issued a preliminary injunction blocking any of the new rules from taking effect. In June 2004, the Third Circuit issued a decision nullifying much of the Media Ownership Decision.[77] The Third Circuit found that the FCC's repeal of the newspaper/broadcast cross-ownership rules was justified, but that its basis lacked rational justification, faulted the diversity index for its methodology and lack of rational basis, and remanded the cross-media limits to the FCC for further consideration. The Third Circuit also upheld the Media Ownership Decision to prohibit common ownership of more than one top-four-ranked television station in a given market, but remanded for further consideration the numerical limits for same market television combinations. With respect to the national television ownership rule, the Third Circuit concluded that the FCC was under a statutory directive to modify the national television ownership cap to 39%, and that challenges to raise the cap to 45% were moot. With the exception of the local radio ownership rules (for which the injunction was lifted), the pre-Media Ownership Decision rules remain in effect.

In 2006, the FCC commenced a new proceeding addressing the Third Circuit remand.[78] The proceeding seeks comments on how to modify or replace the Diversity Index and what ownership limitations should be placed on the different types of cross-ownership, local television station ownership, and local radio station ownership.

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77 *Prometheus Radio Project v. FCC*, 373 F.3d 372 (3d Cir. 2004), *cert. denied*, 545 U.S. 1123 (2005).

78 *2006 Quadrennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996*, Further Notice of Proposed Rulemaking, 21 FCC Rcd 8834 (2006).

### 4. DTV Transition

One of the FCC's major policy initiatives is the transition from analog to digital television ("DTV"). The transition began more than a decade ago and has involved significant regulatory, technical, financial, and political issues.

Full-power television stations currently transmit their signals on two 6 MHz channels – one for the broadcast of an analog signal, and the second for the broadcast of a DTV signal. The guiding principle of the conversion has been, and remains, that television broadcasters will cease all broadcasts of an analog signal when the conversion is complete and that they will thereafter broadcast only with a DTV signal.

In the 1997 Budget Act, Congress established a deadline that required the conversion to be completed by December 31, 2006. To achieve that goal, the FCC conducted a variety of proceedings and took a broad range of actions. Those actions included the adoption of rules that require that new television sets have broadcast digital tuners for over-the-air service and that Cable Operators provide plug-and-play capability that will enable consumers to enjoy digital cable service without the need for set top boxes.

The conversion encompasses not only a change in consumer electronics but also a redistribution of the spectrum that television station owners currently use for analog service. Following the conversion, DTV service will be offered only on channels 2-36 and 38-51. Television station owners will be required to surrender channels 52-69 in the 700 MHz band. The 48 MHz of spectrum currently occupied by channels 52-59 has been allocated for fixed and mobile wireless use and will be distributed by an auction. The 60 MHz of spectrum occupied by channels 60-69 has been allocated for public safety (24 MHz) and advanced wireless services (36 MHz). The commercial portion of that spectrum will also be distributed by auction.

While planning for the re-distribution of spectrum, the FCC was and is forced to address a myriad of transitional questions, including the "must carry" rights of television station owners. That transitional issue involved the question whether cable television systems would be required to carry both the analog and DTV signals of a local television station before the conversion was complete. The FCC eventually ruled that a cable television system is required to carry only the analog signal unless the television station is broadcasting only its DTV signal.

Despite the efforts of the FCC and various segments of the industry, it became clear long before December 31, 2006, that the congressionally-mandated deadline – which was subject to certain qualifications – could not be satisfied. Congress therefore changed the deadline in the Deficit Reduction Act of 2005. That new law requires – without exception – that the FCC terminate all licenses for full-power stations in the analog

service by February 18, 2009. As part of the same Act, Congress made $990 million available for the purchase of converter boxes by consumers who would otherwise be left without television service following the DTV conversion (and need the converter box to enable their television sets to receive the DTV signals). Congress also authorized the Assistant Secretary of Commerce to borrow up to $1.5 billion to implement the converter box program.

At this juncture, it appears that the new transaction date will remain in effect. To that end, the FCC has adopted a new Table of Allotments that identifies the channels on which all television stations will provide DTV service.

## C. Cable

### 1. Licensing

The 1984 Cable Act governs general state and local franchise requirements for Cable Systems and their operators ("Cable Operators").[79] Among the general franchise rules are that any franchise shall be construed to authorize construction of a Cable System over public rights-of-way;[80] that except for systems operating prior to July 1, 1984, no Cable System may operate without a franchise;[81] that a Cable System is not subject to common carrier regulation[82] (conversely, cable services provided solely over a common carrier's facility, such as former video dialtone systems, are not Cable Systems[83]); and that the 1984 Cable Act's grant of state and local authority to award franchises does not extend to "any facility or combination of facilities which serves only subscribers in one or more multiple unit dwellings under common ownership, control, or management and which does not use any public right-of-way."[84]

### 2. Ownership Limits

Cable Operators have been subject to an ownership "cap" pursuant to the 1992 Cable Act and subsequent FCC rules barring entities from owning Cable Systems that reached more than 30% of U.S. subscribers passed by cable. Two FCC Reports and Orders in 1999

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79 47 U.S.C. § 541.

80 47 U.S.C. § 541(a)(2).

81 47 U.S.C. § 541(b).

82 47 U.S.C. § 541(c).

83 *See Entertainment Connections, Inc*., Memorandum Opinion and Order, 13 FCC Rcd 14277 (1998).

84 47 U.S.C. § 541(e).

loosened its rules for horizontal cable ownership attribution.[85] Under the rules, the existing 30% cap on percentage of cable households that a single company can serve was maintained, but horizontal ownership was measured by total nationwide cable subscribers, DBS, and other multichannel video programming distributors ("MVPD"), not just cable subscribers, theoretically allowing a single company to control nearly 37% of current cable subscribers.

In its 1999 Orders, the FCC implemented a 33% "equity/debt" attribution rule similar to that for broadcasters (see Section IV(B)(2)) and narrowed the interpretation of limited partnership interests that would count against the cap, insulated limited partners not "materially involved" with management or operation of "video programming activities" of the partnership (the prior rule insulated only those not materially involved with "media activities").

In 2001, in *Time Warner Entertainment Co. v. FCC*,[86] the D.C. Circuit ruled that the FCC had failed to justify the 30% limit based on market data, and directed the FCC to reconsider the rule. As noted in Section IV(B)(2), *supra*, the D.C. Circuit Court struck down the cable/broadcast cross-ownership rule in 2002.

### 3. "Must Carry" Rules and À La Carte Programming

Cable Operators are also subject to programming access and distribution regulation. The "must carry" rules guarantee programming access for public, educational, and governmental use as well as for commercial use.[87] In February 2005, the FCC concluded that Cable Operators would not be required to carry both the analog and digital channels of broadcasters during DTV transition (see Section IV(B)(4)).[88] In May 2007, the FCC released a second NPRM seeking comment on the post-DTV conversion transition

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85 *Implementation of the Cable Television Consumer Protection and Competition Act of 1992*, Report and Order, 14 FCC Rcd 19014 (1999); *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992*, Third Report and Order, 14 FCC Rcd 19098 (1999).

86 240 F.3d 1126 (D.C. Cir. 2001).

87 47 U.S.C. §§ 531, 532, 534-535.

88 *Carriage of Digital Television Broadcast Signals: Amendments to Part 76 of the Commission's Rules*, Second Report and Order and First Order on Reconsideration, 20 FCC Rcd 4516 (2005). Post conversion, a Cable Operator will be required to carry only one "channel" per broadcaster.

obligations of Cable Operators as to mandatory carriage of both local commercial television stations and non-commercial educational television stations.[89]

Cable operators have long used a business model bundling or packaging different programming to their subscribers. Although subscribers may have choices among "basic cable" and "premium cable" packages, they typically have no choices within a package and accept or reject it *in toto*. In recent years, both Congress and the FCC have become interested in so-called "à la carte" programming, which would allow subscribers to mix and match, and essentially design their own cable package. Both the FCC Media Bureau and private sector analysts have questioned the extent to which subscribers would see savings on their cable bills as a result of à la carte choice, however.

## D. Wireless

Wireless telecommunications service is subject to exclusive federal jurisdiction under Title III (and, when the service is provided by common carriers, Title II as well) of the Communications Act, as amended. Wireless communication is intrinsically radio communication; paradoxically, the true parent of cellular telephones is Marconi's, not Bell's, invention. All wireless service providers must have a radio license. Pursuant to § 332 of the Communications Act, CMRS may be subject to common carrier regulation.

Unlike some 118 countries, including most of Europe, which early on decided on the unified Global System for Mobile Communications ("GSM") standard for wireless communications, the United States labors under a fractured market, divided between GSM and another second generation digital technology called "CDMA."[90] Beginning in 2003, carriers began introducing "Third Generation," or "3G," network technology, which is intended to offer transmission of advanced broadband, including video applications. There are 3G versions of both GSM and CDMA.

### 1. Spectrum Allocation and Auctions

Many wireless policy issues are driven by the scarcity of a natural resource: the electromagnetic spectrum. The electromagnetic spectrum is a continuum of radiation at wavelengths and frequencies that include infrared and ultraviolet radiation, x-rays,

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89 *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules*, Second Further Notice of Proposed Rulemaking, 22 FCC Rcd 8803 (2007).

90 Code Division Multiple Access, in which the signal is transmitted across a wider than necessary bandwidth, dispersing power and modulating the code so as to allow simultaneous use of the same frequency without interference. Other formats, including analog cellular and Time Division Multiple Access ("TDMA"), in which transmissions on the same frequency are given alternating time slots to avoid interference, have been largely phased out.

gamma rays, visible light and radio waves. Radio waves run from frequencies of 1 Hertz ("Hz") (one cycle of a radio wave per second) up to approximately 300 GigaHertz ("GHz"), where the infrared part of the spectrum begins.[91] We have already reviewed the controversy raised by reallocation of spectrum pursuant to DTV Conversion (Section IV(B)(4)) and the influence of the *Titanic* disaster in the early years of the twentieth century on radio regulation (Section II(A)). The issue of spectrum security, allocation, and avoidance of interference has only been heightened by the natural and man-made catastrophes of the early years of this century: the September 11, Madrid, and London terrorist attacks; the Indian Ocean Tsunami; and Hurricane Katrina.

Until January 2003, CMRS operators were subject to a "spectrum cap" on the amount of spectrum to which they might hold licenses: 45 MHz for a single entity in any given cellular geographic service area ("CGSA") and 55 MHz in rural areas. The ostensible purpose of the spectrum cap was to promote wireless competition and lower consumer fees. The spectrum cap was eliminated in 2003.

U.S. wireless spectrum licenses are awarded by auction pursuant to § 309(j) of the Communications Act, as amended.[92] Section 309(j) was enacted in 1993 to replace a pre-existing lottery system and to encourage Federal Government revenue realization from a scarce, if non-depletable, resource. Section 309(j)(3)(B) requires the FCC, in adopting rules for auctions, to promote various public policy objectives, including "disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women," the so-called "Designated Entities."

In an important proceeding begun shortly after enactment of § 309, the FCC planned to use auctions to assign letter-designated blocks of spectrum in the 1850-2000 MHz range to CMRS operators for the provision of "personal communications service" ("PCS"), a variant of cellular telecommunications service. The "C" and "F" blocks were reserved for § 309(j)(3)(B) Designated Entities with limits on maximum annual gross revenues and total assets and were dubbed the "entrepreneur" blocks. The C and F block licenses fees were to be payable in installments, in order to reduce the pre-and post-auction financing needed to bid, and therefore open the process to more thinly-capitalized bidders.

The FCC then implemented control and attribution rules for assessing control group equity participation in Designated Entities. The rules, *inter alia*, allowed companies that

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91 1000 Hz = 1 KiloHertz ("KHz"), 1000 KHz = 1 MegaHertz ("MHz"), 1000 MHz = 1 GHz.

92 47 U.S.C. § 309(j).

were prohibited from bidding in auctions for the entrepreneurial C and F block licenses to invest in C and F block bidders,[93] gave a 10% bidding credit to small business bidders, and gave favorable installment payment terms to such bidders when they succeeded at auction.[94]

Initially, the rules also provided preferences for women- and minority-owned businesses;[95] however, after a U.S. Supreme Court decision struck down analogous racial preferences on Constitutional grounds,[96] the FCC amended the rules to eliminate the race and gender preferences and scale those benefits upward to include all small businesses.[97] The FCC's amended rules were upheld by the U.S. Court of Appeals for the D.C. Circuit in *Omnipoint Corp. v. FCC*.[98] Critics of the control and attribution rules claimed that many so-called "small businesses" were mere nominees for major CMRS operators.

At the 1996 auction for C and F block licenses, NextWave Personal Communications, Inc., a company formed in order to bid, was one of the most successful bidders, acquiring many of the licenses, with bids totaling $4.74 billion. The FCC rules for the C and F blocks permitted financing of up to 90% of the license fee, which NextWave did, paying an initial installment of $474 million. The company thereafter had difficulty in obtaining investment to fund the remaining installments and in 1998 filed for bankruptcy protection. The FCC then revoked the licenses. NextWave blamed the FCC and sued, taking the position that subsequent auctions had devalued its licensed spectrum, making financing of the remaining installments and buildout of its planned network impossible.

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93 As much as 75% of the equity of a bidder could be held by as few as three passive, non-voting investors that would be too large themselves to bid.

94 *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Fifth Report and Order, 9 FCC Rcd 5532 (1994); Fifth Memorandum Opinion and Order, 10 FCC Rcd 403 (1994).

95 The rules allowed women and minority-owned businesses to have a single, passive, non-voting investor with an interest as large as 49.9%, as long as the other 50.1% was women or minority-held; allowed an individual member of a minority group to participate as a member of the control group of the applicant, even though the individual's other business properties would otherwise make the applicant too large to bid in an entrepreneur's block; and gave minority and women-owned businesses an additional 15% bidding credit, tax certificates, and a more favorable installment payment plan than other small businesses.

96 *Adarand Constructors, Inc. v. Pena*, 515 U.S. 200 (1995).

97 *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Sixth Report and Order, 11 FCC Rcd 136 (1995).

98 78 F.3d 620 (D.C. Cir. 1996).

In 2003, the U.S. Supreme Court affirmed a 2001 decision of the U.S. Court of Appeals for the D.C. Circuit[99] and held that the FCC, by revoking NextWave's licenses, had violated § 525 of the U.S. Bankruptcy Code,[100] which prohibits a federal agency like the FCC from revoking the license of a bankruptcy debtor "solely because" the debtor has failed to a pay a debt that would be dischargeable in the bankruptcy. The Court rejected the FCC's argument that it had a "valid regulatory motive" for revoking the NextWave licenses. Although a necessary condition for finding a violation of § 525 is that "the failure to pay a dischargeable debt must alone be the proximate cause of the cancellation – the act or event that triggers the agency's decision to cancel," the Court held that if this condition obtains, then there is a violation "whatever the agency's ultimate motive in pulling the trigger may be, and § 525 would be denuded of all applicability, since some motive other than a mere failure to pay could always be found by an interested government agency."

The Supreme Court also found that Next Wave's obligation to pay FCC license auction fees was not covered by any of the exceptions to the Bankruptcy Code's rule that virtually all debts arising before a bankruptcy are dischargeable in bankruptcy.

Since 1996, the FCC has conducted dozens of other auctions of spectrum for various uses.

### 2. Reallocation and Re-banding Proceedings

The FCC is currently engaged in several spectrum reallocation and "re-banding" proceedings intended to transfer spectrum from licensees that have more than the FCC says they need to those who have less, and to resolve interference issues caused by spectrum licenses that are too close in radio frequency to other frequencies. As might be expected, great controversy has been generated by reallocation, which generally takes spectrum from broadcasters and gives to CMRS carriers and government.

Spectrum freed up by the release of broadcast channels 52-69 in the 700 MHz band by DTV conversion (see Section IV(B)(4)) is being auctioned off as it becomes available, with a final auction deadline of January 28, 2008. In July 2007, the FCC adopted a comprehensive scheme for the 700 MHz band. Of the 86 MHz remaining to be assigned, the FCC allocated 24 MHz to public safety uses and 62 to commercial uses. Ten MHz from each allocation, however, was designated for a shared public/private partnership. Two nationwide licensees – one public safety non-profit entity and one private

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99 *FCC v. NextWave Personal Commc'ns, Inc.*, 537 U.S. 293 (2003), *aff'g NextWave Personal Commc'ns, Inc. v. FCC*, 254 F.3d 130 (D.C. Cir. 2001).

100 11 U.S.C. § 525.

commercial entity – will share this 20 MHz of spectrum, with the commercial entity bidding in the auction to obtain its rights in the commercial portion. The commercial entity will also have preemptible rights to use the public safety portion, and the public safety entity will have priority access to the commercial portion in emergencies. The other 52 MHz of commercial spectrum will be auctioned in a mix of geographic area sizes and in block sizes ranging from 6 to 22 MHz. Responding to the urgings of "information age" companies and other parties, the FCC decided to split the 22 MHz block among 12 regional licensees who will be required to provide a platform that is more open to devices and applications than the other 700 MHz blocks or the existing cellular/PCS networks. The FCC stated that the open platform for this block will allow consumers to use the handset of their choice and to download and use the applications of their choice, subject to reasonable network harm safeguards. The FCC emphasized, however, that its decision was limited to the 700 MHz context and should not be interpreted as establishing "net neutrality" principles applicable in other contexts (see Section IV(E)(4)).

The pending 800 MHz proceeding[101] is intended to resolve interference issues potentially affecting public safety operations. The problem centered primarily around Nextel Communication's (now Sprint Nextel) use of the band, but affects thousands of other licensees and those in contractual relations with them. The FCC adopted a plan to have Nextel relinquish most of its 800 and all of its 700 MHz band spectrum for spectrum in the 1.9 GHz band, freeing an additional 4.5 MHz of 800 MHz spectrum, the equivalent of 90 two-way channels. The plan, as modified, was accepted by Nextel in February 2005. In March 2005, the FCC Wireless Telecommunications Bureau adopted a "Regional Prioritization Plan" to implement a "band reconfiguration schedule" and appointed a "Transition Administrator" to implement a band reconfiguration process to eliminate 800 MHz interference in different regions in four separate "waves."

The first wave commenced in June 2005 and includes the Northeast region, California and several other western and midwestern states. The second wave began in October and includes Texas and a mix of Ohio valley, western, and midwestern states. The third wave encompasses most of the southeastern states and commenced in January 2006. The fourth wave includes Canadian and Mexican border regions and commenced band reconfiguration in April 2006. Nextel must complete the reconfiguration by December 2008.

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101 *Improving Public Safety Communications in the 800 MHz Band*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, 19 FCC Rcd 14969 (2004), *as amended by Erratum*, 19 FCC Rcd 19651 (2004), *and Erratum*, 19 FCC Rcd 21818 (2004).

In 2004, the FCC decided to reband spectrum in the 2495-2690 MHz bands, with a transition period extending over several years, in order to improve efficiency and create new service opportunities for the fixed wireless services – specifically Instructional Fixed Television Service ("ITFS") (renamed Educational Broadband Service) and Multipoint Distribution Service ("MDS") (renamed Broadband Radio Service) that occupy those bands. In April 2006, the FCC substantially revised the transition plan for rebanding this spectrum. Under the transition plan, individual licensees negotiate transition arrangements with other licensees in the same area. In order to make it easier to develop workable transition plans, the FCC reduced the size of the geographic areas to be covered by the transition plans proposed by individual licensees. Instead of having each transition plan cover one of the 52 Major Economic Areas in the United States, the FCC decided that each transition plan would cover one of the 493 Basic Trading Areas. The FCC extended the deadline for submitting transition "Initiation Plans" to January 19, 2009, with transitions to be completed generally within 21 months of the filing of a plan. In recent years the FCC has embarked on numerous other reallocation and rebanding initiatives.[102]

### 3. State and Local Siting Authority; Pole Attachments

While wireless service is within the FCC's exclusive jurisdiction, pursuant to § 704 of the Telecommunications Act, state and local governments have limited authority over the placement of certain wireless facilities, subject to obligations not to unreasonably discriminate among wireless service providers or to prohibit or effectively prohibit the provision of wireless service.

The Pole Attachments Act, codified as § 224 of the Telecommunications Act,[103] provides that utilities must allow telecommunications carriers access to their poles, ducts, conduits and rights of way on a nondiscriminatory basis, thereby providing a right of way for attachment of antennas for wireless telecommunications carriers.[104] The Telecommunications Act further provides that state or local zoning authorities have jurisdiction over "the placement, construction, and modification" of necessary

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102 *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order, 21 FCC Rcd 5606 (2006).

103 47 U.S.C. § 224.

104 *See Nat'l Cable & Telecomms. Ass'n v. Gulf Power Co.*, 534 U.S. 327, 332, 338-41 (2002) (interpreting § 224 to apply to the equipment of wireless telecommunications service providers).

infrastructure for wireless service, provided that the state and local authorities do not "unreasonably discriminate among providers of functionally equivalent services" or use their powers effectively to prohibit wireless service.[105]

### 4. E911

Enhanced 911 (E911) is 911 service in which the 911 caller's telephone number and information on the caller's location are automatically provided to 911 dispatchers. The FCC has required CMRS providers to upgrade to E911 service in two phases. Phase I of E911 implementation requires a CMRS carrier to be able to supply to a "public safety answering point," such as a 911 operator, the caller's telephone number and the location of the antenna that received the call. Phase II requires the CMRS carrier to provide more precise location information for the caller. Phase II was to be fully implemented by the end of 2005, but the FCC granted waivers and extensions to smaller, so-called "Tier III" CMRS carriers of no more than 500,000 subscribers.[106]

Currently, CMRS providers must provide E911 location by latitude and longitude, with a level of accuracy for 67% of calls that varies from 50 to 150 meters, depending on whether the location technology used is handset- or network-based. In June 2007, the Commission proposed to require a uniform E911 location accuracy standard for both handset- and network-based technologies and to adopt more stringent compliance testing regulations.

### 5. Unlicensed Spectrum: WiFi/WiMax/Bluetooth/Ultra Wideband/RFID

Some of the greatest growth in wireless services in recent years has been through the use of spectrum that does not require an FCC license. Part 15 of the FCC's rules and regulations[107] allows unlicensed spectrum operations in designated frequency bands. Operation under Part 15 is generally limited to low powered transmitters and is secondary to licensed operations, which means that Part 15 operators cannot cause any interference to, and must accept interference from, licensed operations. Among the more significant Part 15 services are:

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105 47 U.S.C. § 332(c)(7).

106 *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Order, 20 FCC Rcd 7709 (2005) ("Tier IV" CMRS carriers have 100,000 or fewer subscribers).

107 47 C.F.R. pt. 15.

WiFi ("Wireless Fidelity") using the 2.4 GHz and 5 GHz bands, allows wireless broadband connections in "hot spots" either for free or as a subscription-based service over a distance of up to about 100 yards. Wi-Fi is typically used for local area networks.

WiMax ("Worldwide Interoperability for Microwave Access"), by contrast, has a range of up to 30 miles and greater bandwidth than WiFi. WiMax may provide a wireless alternative to both cable modem and DSL service. (See Section IV(E)). WiMax service may be rolled out in both unlicensed (5 GHz) and licensed (2.5-2.69 and 3.3-3.8 GHz) bands.

Bluetooth has a range of no more than a couple of meters and uses unlicensed 2.4 GHz spectrum. It has been used principally for applications connecting two pieces of hardware, such as cell phones with ear buds and computers with printers.

RFID ("Radio Frequency Identification") technology, which combines an often wafer-thin and tiny tag and a reader, has enormous commercial potential for inventory control (replacing barcodes, but uniquely identifying each *item* within a product line), marketing (in tracing who buys what), traffic circulation (automated toll booths), security, and other applications. The tag is either "active" (battery-powered and radiating its identification data on to the reader) or "passive" (reflecting its identification data to the reader when probed by the reader's radio emissions). RFID technology's potential is readily acknowledged, but it has also generated privacy concerns.

### E. Broadband, VoIP, and the Internet

In the introduction, we discussed how the legal and regulatory structure in place since the Mann-Elkins Act and the Communications Act has been increasingly stressed by converging services and technologies. The focal point of that stress is broadband service.

Broadband, which the FCC has defined broadly to include any service that delivers an information-carrying capacity in excess of 200 kbps in at least one direction, is revolutionizing the communications industry across all service sectors. Its promise is based on several factors. In most advanced broadband services, data is transmitted in "packets" of bytes of data. These packets are constructed according to several protocols, or standards, that ensure that the receiving end of the network through which they are transmitted can read what the sender intended. That is because, unlike analog voice communications, "packet-switched" networks can break up and separately route individual packets of data and coherently reassemble them at the end of the transmission. The result is that the network's capacity can be used to maximum efficiency, each co-axial or fiber optic cable at any given moment containing packets of information from many different messages and senders, mixing them up, transmitting them and then separating and reassembling them at the other end. By contrast, analog voice telephony

networks, called "circuit-switched," require a separate channel or circuit to be dedicated to a single call for the call's duration, obviously permitting much less traffic capacity per available bandwidth than packet-switched networks allow.

Packet-switched networks can operate this way because each packet contains both a "header," containing addressing information, or where the packet is to go and how it is to be reassembled; and a "payload," containing the message itself. For example, the Transmission Control Protocol/Internet Protocol ("TCP/IP") is composed of packets with headers usually containing 20 bytes. The header allows the data switching devices in the network, called "routers," to know where to forward the packet. Another protocol used for both voice and frame relay data applications is asynchronous transfer mode ("ATM"), which uses a 5 byte header and 48 byte payload. Other well-known protocols are "Ethernet," a standard for local area networks, or "LANs," and Synchronous Optical Network, or SONET, used in fiber optic data networks.

Not only do packet-switched networks make more efficient use of available bandwidth than do circuit-switched networks, but they also permit different uses and advanced applications of available bandwidth. This capability is what enables the line-sharing unbundling that became an issue in the FCC efforts to promote local competition pursuant to §§ 251(c) and (d) of the Telecommunications Act (see Section IV(A)(2)). Finally, digital transmissions are much less susceptible to signal degradation over distance or caused by network architecture.

### 1. Regulatory History: The Computer Inquiries

Beginning in 1966, the FCC examined the convergence of telecommunications and computer technology in a series of administrative proceedings called the "Computer Inquiries." In the *First Computer Inquiry* decision, in 1971,[108] the FCC distinguished between communications services in which information was transmitted unaltered, as with simple voice telephony, and data processing services, in which information was stored, retrieved, or altered before, after, or during transmission. Communications services were subject to Title II common carrier regulation, while data processing services were not. Common carriers were required to provide "maximum separation" between ordinary communications services and data processing services in order to prevent them from using revenues from their regulated but market-dominant common carrier activities to subsidize and unfairly compete in data processing activities. For

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108 *Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities*, Final Decision and Order, 28 F.C.C.2d 267 (1971), *aff'd in part and rev'd in part sub nom. GTE Serv. Corp. v. FCC*, 474 F.2d 724 (2d Cir. 1973), *decision on remand*, 40 F.C.C.2d 293 (1973).

"hybrid" services that combined communications and data-processing functions, the Commission decreed a case-by-case analysis to classify the service as regulated or nonregulated based on whether it was "primarily" or "essentially" data processing or communications.

This formula was updated and the case-by-case approach to "hybrid" services was eliminated in the *Second Computer Inquiry* in 1980.[109] The FCC established a new, ostensibly "bright line" distinction between a regulated "basic" services, in which the transmitted information was not processed or altered in transmission, and a nonregulated "enhanced" services, in which processing altered the transmission.[110]

Under both the First and Second *Computer Inquiries*, the FCC required that a carrier make available to competing information service providers, on a common carrier basis, the same types of underlying facilities as the carrier used in providing its own enhanced service offerings. In this manner, the FCC believed it would stimulate competition in enhanced services.

The Telecommunications Act preserves the distinction drawn by the FCC, separately defining "Telecommunications Service,"[111] which corresponds with "basic services," and "Information Service,"[112] which corresponds with "enhanced service." The former is subject to common carrier regulation; the latter is not.

The rise of the Internet as a medium of mass communication has increasingly blurred the supposedly "bright line" distinction made by the Telecommunications Act between Telecommunications and Information Service and has resulted in a series of controversial FCC and court rulings.

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109 *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Final Decision, 77 F.C.C.2d 384 (1980), *reconsideration*, 84 F.C.C.2d 50 (1981), *further reconsideration*, 88 F.C.C.2d 512 (1981), *aff'd sub nom. Computer & Commc'ns Indus. Ass'n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *aff'd on second further reconsideration*, 56 Rad. Reg. 2d (P&F) 301 (1984).

110 In the *Third Computer Inquiry*, *Amendment of Section 64.702 of the Commission's Rules and Regulations*, Report and Order, 104 F.C.C.2d 958 (1986), the FCC attempted to relax its *Second Computer Inquiry* structural separation requirements, which mandated "separate" subsidiaries for non-regulated activities, and replace them with non-structural safeguards. The U.S. Court of Appeals for the Ninth Circuit overturned the FCC, ruling that no justification for the relaxation of the structural separation requirement had been shown (*California v. FCC*, 905 F.2d 1217 (9th Cir. 1990)). But separate subsidiaries were never restored.

111 47 U.S.C. § 153(46).

112 47 U.S.C. § 153(20).

### 2. *Brand X* and Regulatory Parity

The U.S. Supreme Court's decision in *National Cable & Telecommunications Ass'n v. Brand X Internet Services* (2005) ("*Brand X*"), in June 2005[113] ended a controversy that split the U.S. Circuit Courts of Appeals and the FCC over whether Cable Operators should have to open their cable modem broadband networks to competitors. The case turned on whether the FCC had correctly classified cable modem broadband service as an Information Service, as opposed to a Telecommunications Service under the Telecommunications Act. The Court came down squarely on the side of the Cable Operators and the FCC, reversing and remanding a decision of the U.S. Court of Appeals for the Ninth Circuit. The decision represents a loss for ISPs that wanted that access and for state and local regulators that hoped to regulate and tax cable modem service, which has emerged as the most popular way to gain broadband access to the Internet, as broadband itself is displacing dial-up telephone modem access.

The cable modem controversy began in 2000 when, in *AT&T v. City of Portland*, the Ninth Circuit held that cable modem service was Telecommunications Service and that the networks should be forced to grant open access to ISPs and other competitors, a common carrier paradigm.[114] In 2002, in the "Cable Modem Declaratory Ruling," the FCC cast its vote the other way, ruling that cable modem service was an "Information Service," therefore not Telecommunications Service and not subject to common carrier regulation.[115] In 2003, in *Brand X Internet Services v. FCC*, the Ninth Circuit, following its prior decision in *City of Portland*, held again that cable modem service was Telecommunications Service and that the FCC had erred in classifying it as an Information Service.[116]

The Supreme Court reversed the Ninth Circuit decision and held that cable modem service is Information Service and not Telecommunications Service, and therefore eliminated any potential of subjecting cable modem service to common carrier regulation. The Court rejected arguments that common carrier regulation should be imposed because the service may be functionally indistinguishable from other services that are subject to Title II regulation. The Court also explicitly upheld the right and jurisdiction of the FCC

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113 545 U.S. 967 (2005).

114 *AT&T v. City of Portland*, 216 F. 3d 871 (9th Cir. 2000).

115 *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002).

116 *Brand X Internet Servs. v. FCC*, 345 F.3d 1120 (9th Cir. 2003), *cert. granted*, 543 U.S. 1018 (2004).

to implement regulations pursuant to the laws that it is charged with administering, so long as the regulations are "reasonable."

The FCC followed *Brand X* with an August 2005 order reclassifying DSL service as an Information Service, thereby achieving regulatory parity (at least on the specific service level) for the two competing broadband services.[117] The FCC also eliminated the remaining *Third Computer Inquiry* requirements that the telephone company make available to competitors the same underlying facilities as it used in providing its own DSL service. In subsequent orders, the FCC extended the same treatment to broadband over power line ("BPL")-based Internet access and wireless broadband services.

### 3. VoIP Rulings

Nowhere is the blurring of the Information Service and Telecommunications Service regulatory classifications more obvious than in the case of VoIP telephony – voice telephone calls carried by Internet Protocol – which competes with ordinary voice service. Confronted with a variety of regulatory issues involving these services, the FCC has alternately (1) avoided the issues, (2) sliced and diced some forms of VoIP telephony into regulated and nonregulated subclassifications, and (3) exercised its "ancillary" jurisdiction over Information Service to impose certain regulatory obligations on VoIP service providers without conclusively determining their "regulated" or "nonregulated" status for purposes of traditional Title II regulation.

In February 2004, the FCC ruled that Pulver.com's "Free World Dial-Up" service, which essentially allowed computer-to-computer telephone-like calls between broadband subscribers without accessing the public switched telephone network, or "PSTN," was a nonregulated Information Service subject to exclusive federal jurisdiction.[118]

In November 2004, the FCC issued a declaratory ruling in response to a petition by Vonage Holdings Corp., the largest U.S. VoIP provider. Vonage filed its petition to overturn a decision by the Minnesota Public Utilities Commission that Vonage's service was telephone service subject to state regulation. The FCC ruled in Vonage's favor, holding that Vonage's VoIP service is interstate service subject to exclusive federal jurisdiction, preempting the Minnesota PUC's authority. At the same time, however, the

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117 *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, Universal Service Obligations of Broadband Providers*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005).

118 *Petition for Declaratory Ruling that Pulver.com's Free World Dialup is Neither Telecommunications nor a Telecommunications Service*, Memorandum Opinion and Order, 19 FCC Rcd 3307 (2004).

FCC avoided any ruling on whether Vonage's VoIP offering was Telecommunications Service or Information Service.[119]

The FCC is also in the process of facilitating for VoIP operators the process by which telephone numbers are obtained for distribution to the operator's subscribers. Blocs of numbers are generally obtained by carriers from the North American Numbering Plan Administrator ("NANPA") and then assigned by carriers to their subscribers. Until 2005, NANPA would grant number blocs only to carriers with state operating certificates, requiring a VoIP provider to enter into an arrangement with an ILEC or CLEC to obtain numbers. In 2005, however, the FCC granted a waiver to SBC's (now AT&T) Internet service arm, allowing it to obtain numbers directly from NANPA for VoIP service, pending a final disposition of numbering procedures for all IP-enabled services.[120]

Beginning in 2005, the FCC issued a series of decisions in which it imposed on VoIP providers many of the same regulations applicable to telecommunications carriers – still without making any final determinations as to whether the VoIP services in question were Telecommunications Service or Information Service. As authority for these steps, the FCC in some cases relied on its "ancillary" jurisdiction under Title I of the Communications Act, and in others cited specific Telecommunications Act provisions authorizing the FCC to apply its regulations to non-carrier entities.

The first of these decisions involved 911 emergency calling. In June 2005, the FCC extended some E911 obligations (see Section IV(D)(4)) to all VoIP providers interconnecting to the PSTN.[121] Interconnected VoIP providers must now provide a limited E911 service for free to their subscribers and notify subscribers of any E911 service limitations. Two years later, in June 2007, the Commission proposed to require VoIP service providers to use automated location technology to identify the locations of "nomadic" E911 callers, and to impose a single, uniform E911 location accuracy standard on both CMRS providers and VoIP service providers.

Meanwhile, in September 2005, the FCC extended CALEA obligations (see Section IV(A)(1)(c)) to facilities-based broadband ISPs and to interconnected VoIP providers, finding that Congress intended CALEA to apply to a broader definition of "carriers" than

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119 *Vonage Holding Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, Memorandum Opinion and Order, 19 FCC Rcd 22404 (2004), *aff'd sub nom. Minn. Pub. Utils. Comm'n v. FCC*, 483 F.3d 570 (8th Cir. 2007).

120 *Administration of the North American Numbering Plan*, Order, 20 FCC Rcd 2957 (2005).

121 *IP-Enabled Services*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245 (2005).

that contained in the Communications Act.[122] In June 2006, the FCC imposed § 254 universal service contribution requirements on interconnected VoIP providers.[123] In April 2007, the FCC extended the scope of its § 222 CPNI privacy and security regulations to cover VoIP providers as well as carriers.[124] Finally, in June 2007, the FCC brought VoIP providers under the same disability access requirements that are applicable to carriers pursuant to 47 U.S.C. § 255.[125]

### 4. Cable-Telco Competition and "Net Neutrality"

The emergence of AT&T (in the wake of SBC's acquisitions of AT&T (and adoption of its name) and Bell South) and Verizon (in the wake of its acquisition of MCI), along with the far smaller Qwest Communications, as the principal surviving ILECs has set the stage for their competition with the also-consolidated leading Cable Operators. Cable companies have begun to provide telephone service, as well as broadband Internet access service, to their customers over the same facilities used to deliver video services. An early issue in the cable-telco competition is "franchise relief," in which ILECs seek to challenge, in whole or in part, imposition on the ILECs of local cable franchise requirements that they view as unreasonable burdens on their ability to compete with incumbent cable franchisees to offer a full array of voice and data telephony, video and broadband service to subscribers.

In March 2007, the FCC adopted rules to implement § 621(a)(1) of the Communications Act.[126] Section 621(a)(1) prohibits franchising authorities from unreasonably refusing to award competitive franchises for the provision of cable services. Finding that "the current operation of the local franchising process in many jurisdictions [unreasonably] impedes . . . cable competition and accelerated broadband deployment," the FCC preempted certain practices of local franchising authorities (LFAs), including (1) failure to decide an ILEC's competitive cable TV application within 90 days, (2) unreasonable

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122 *Communications Assistance for Law Enforcement Act and Broadband Access and Services*, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 14989 (2005), *aff'd sub nom. Nuvio Corp. v. FCC*, 473 F.3d 302 (D.C. Cir. 2006).

123 *Universal Service Contribution Methodology*, Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd 7518 (2006), *aff'd sub nom. Vonage Holdings Corp. v. FCC*, 489 F.3d 1232 (D.C. Cir. 2007).

124 *Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 6927 (2007).

125 *IP-Enabled Services*, Report and Order, WC Docket No. 04-36, FCC 07-110, 2007 WL 1744291 (F.C.C.) (June 15, 2007).

126 47 U.S.C. § 541(a)(1).

build-out mandates, (3) imposition of supplemental costs and fees exceeding the statutory five percent cap on franchise fees, and (4) imposition of unreasonable public, educational, and government ("PEG") and institutional networks ("I-Nets") requirements, and (5) refusal to grant a cable TV franchise based on issues related to Internet access or other non-cable services. The FCC sought additional comment on whether the same guidelines should apply to incumbent Cable Operators' renewal applications, and whether they should affect most-favored-nation clauses included in existing franchises.[127] The FCC now appears to be on the verge of extending that relief to incumbent Cable Operators.

The emergence of large ILECs and Cable Operators on the broadband infrastructure side, and of large broadband content and applications providers such as Google, Yahoo!, Amazon, and eBay, has engendered a debate in Congress, industry, and at the FCC over whether owners and operators of the broadband infrastructure should be compensated for the content/applications providers' use of it, and if so, how. In essence, the content/applications providers have urged Congress and the FCC to implement rules that would block broadband providers from imposing premium pricing and prioritizing some content/applications providers' Internet traffic at the expense of others. The broadband providers have resisted the imposition of such regulation.

The term "network neutrality," often shortened to "net neutrality," emerged as a catchword for proponents of the imposition of rules favoring the content/applications providers' position. At the heart of the "net neutrality" debate, which has also spilled over into the wireless world, are the opposing visions of telecommunications as a common carrier service in the nature of a public utility versus the private, proprietary network-based paradigm.

In 2005, the FCC issued an Internet Policy Statement setting forth certain principles to guide its policy towards Internet and broadband competition:

- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to access the lawful Internet content of their choice.

- . . . consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.

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127 *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 5101 (2007).

- . . . consumers are entitled to connect their choice of legal devices that do not harm the network.

- . . . consumers are entitled to competition among network providers, application and service providers, and content providers.[128]

In April 2007, the Commission issued an NOI in which it sought information on the behavior of broadband market participants, including: (1) how broadband providers are managing Internet traffic on their networks today; (2) whether providers charge different prices for different speeds or capacities of service; (3) whether FCC policies should distinguish between content providers that charge end-users for access to content and those that do not; and (4) how consumers are affected by broadband market practices. In addition, the Commission sought comment on whether it should add a nondiscrimination principle to its 2005 Internet Policy Statement and, if so, how it should define "nondiscrimination" and what the statement should say.

Meanwhile, in February 2007, Skype Communications filed a petition at the FCC seeking a ruling that these four principles applied to wireless as well as wireline networks – and specifically, that mobile service subscribers have a right to choose their own terminal equipment (i.e., handsets, PDAs, laptops, etc.) and software applications. Skype urged the FCC to require wireless carriers in the United States to allow interconnection of any equipment meeting reasonable technical standards, and to prohibit carriers from subsidizing or discriminating in favor of their own handsets and applications. Skype analogized its petition to the FCC's 1968 *Carterfone* decision,[129] which gave telecommunications consumers, for the first time, a right to connect their own, non-Bell telephones to Bell's wireline telecommunications network. Wireless carriers opposed Skype's petition. While asserting that they do not actually prevent customers from connecting their own handsets, carriers also argued that they have a right to control interconnection because they (1) are not monopolies; (2) have a right to protect their network investments by limiting others' ability to get a "free ride"; and (3) need to protect the technical integrity of their networks.

Later in 2007, content/applications providers and other groups raised the wireless net neutrality banner in comments on the FCC's 700 MHz spectrum auction proposals. In July 2007, the FCC adopted modified "open access" rules for part of the 700 MHz spectrum. See Section IVD(2).

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[128] *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Policy Statement, 20 FCC Rcd 14986, 14988 (2005).

[129] *Use of the Carterfone Device in Message Toll Telephone Service*, 13 F.C.C.2d 420 (1968).

In September 2007, the DoJ weighed in on the broadband infrastructure side of the net neutrality debate, warning the FCC, in comments submitted in the FCC proceeding, against imposing rules that would block the imposition by broadband providers of premium pricing on content/application providers to prioritize Internet traffic. The DoJ's comments, *inter alia*, took the position that prohibiting broadband providers from charging content/applications providers directly for faster, more reliable service "could shift the entire burden of implementing costly network expansions and improvements onto consumers."[130]

At this time, however, net neutrality remains a wide-open debate. It is unresolved to what extent, if any, net neutrality principles will be effectively applied in either the wireline context or in wireless contexts outside the designated portion of the 700 MHz spectrum. It also remains to be seen what net neutrality principles will actually mean in practice in those areas where they do apply.

## F. Satellites

### 1. A Brief History

The first man-made satellite, Sputnik I, was a two-foot diameter, 184-pound metal sphere launched into orbit by the Union of Soviet Socialist Republics on October 4, 1957, thereby inaugurating the space age. The United States launched its first satellite, Explorer I, on January 31, 1958. In 1962, AT&T launched Telstar I, the first telecommunications satellite, in sub-geostationary orbit. The first geostationary telecommunications satellite, Hughes' Syncom, followed in 1963. Syncom 3 broadcast the 1964 Olympic Games live. On April 6, 1965, the United States launched the first COMSAT satellite, "Early Bird" (INTELSAT I). A discussion of COMSAT and INTELSAT is at subsection 4, *infra*.

### 2. Orbits and Bands

Among other means of categorization, communications satellites are known by the orbits they keep. Most common are geostationary ("GEO")[131] or geosynchronous[132] satellites,

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130 U.S. Dep't of Justice, *Broadband Industry Practices*, Ex Parte Filing at 4 (Sept. 6, 2007), *available at* http://www.usdoj.gov/atr/public/comments/225767.pdf.

131 A *geostationary* orbit is synchronized with the earth's rotation and has a period equal to a sidereal day, 23 hours, 56 minutes and 4.1 seconds (as opposed to the solar day of 24 hours). The orbit must be "prograde," eastward, as is the earth's rotation and have a nearly zero eccentricity, or angle to the earth's equator. In other words, the orbit is circular above the equator. GEOs tend to be the heaviest and most costly satellites, largely because of the weight and costs of the satellites' station-keeping thrusters and on-board fuel. These factors also increase launch and weight cost, and in turn increase insurance costs.

which orbit at a fixed altitude above the equator of 35,786 km (22,235 miles) with an orbital period equal to the earth's rotation about its axis, and, in the GEO case (also known as the "Clarke Orbit," after the science-fiction writer Arthur C. Clarke, who is credited with inventing the idea of communications satellites in geostationary orbits), remain apparently "stationary" above a fixed point on earth. As their names suggest, low-earth orbit and mid-earth orbit satellites ("LEOs" and "MEOs", respectively) orbit lower,[133] and therefore faster, than GEOs, and do not remain above a fixed point on earth (the familiar analogy of twirling a stone on a string explains enough about orbital mechanics for this purpose: the longer the string between the hand and the stone, the slower the orbit. When the string is shortened, the stone goes around faster in its "lower orbit."). LEO and MEO projects consist of "constellations" of multiple satellites. LEOs come in three types: "Big LEOs," for use in real-time voice communication as well as data transmission; "Little LEOs," to be used for delayed communications, such as data storage, messaging, and paging; and "Broadband LEOs," for use in high-speed data networking and voice communication. MEOs can be used for voice, data, fax, and other services; probably the best known application is the U.S. military's Global Positioning System ("GPS"), which is widely used for civil navigation use. Yet other categorizations are "Fixed Satellite Service," or "FSS," and "Mobile Satellite Service," or "MSS." The "Fixed" and "Mobile" designations refer to whether the earth stations in contact with the satellite are mobile or not (the satellite itself is *always* in motion). MSS employs both GEO and LEO satellites, depending on the operator.

LEOs and MEOs are held by their proponents to be more suitable for mobile communications than are GEOs. The high fixed orbit of GEOs usually requires large earth station antennas unsuitable for handheld communication devices and caused perceptible lapse rates (called "latency") for voice telephony and two-way data transmission, although improving data compression and caching technologies are narrowing these GEO disadvantages. The reason LEO and MEO projects require constellations of satellites is that their lower, faster orbits do not provide as much, or as continuous, coverage of a given area on earth as does a GEO, requiring the satellites to hand off the signal from one to another to maintain coverage as they pass overhead. LEO or MEO orbit is lower, easier, and therefore less expensive, to reach than geostationary or geosynchronous orbit. These constellations also provide redundancy; the loss of any one

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[132] A *geosynchronous* orbit also has a period equal to a sidereal day and must be prograde. However, the orbit may be eccentric; inclined at any angle to the earth's equator. The orbital appearance of an inclined orbit as seen from an earth station is a "figure 8," a track known to astronomers as an "analemma."

[133] LEOs orbit at altitudes between 750 and 2,500 km with orbital periods of up to two hours; MEOs orbit at up to 15,000 km with four- to nine-hour periods.

LEO or MEO is not likely to be catastrophic to its network, and may not result in any perceptible degradation of service to a given user. The loss of a single LEO or MEO is also not necessarily financially catastrophic, in that it can either be fully insured at affordable levels or its total or partial loss can be absorbed by the project while service continues. The loss of a GEO is likely to be more burdensome to its owners and operators on both a network-service and a financial-insurance basis (although the emergence, in the last few years, of several large global FSS operators as a result of industry consolidation has reduced this GEO disadvantage as well). Finally, despite the satellites' relatively short service life, the LEO and MEO models theoretically allow for gradual, planned obsolescence and a replacement program that can avoid network disruption and be treated as an operating expense.

Satellites are also known by their bands. "Bands," as in the case of terrestrial wireless (see Section IV(D)), are designated ranges of electromagnetic spectrum, or radio frequencies, over which the satellites receive "uplinked" signals and transmit "downlinked" signals (usually, the uplink and downlink frequencies are different to avoid interference). These frequencies are designated by regulatory authorities, but are in fact intrinsically suitable for different functions. The frequency ranges given are approximate and not subject to universal agreement. The letter designations do not stand for anything, with the exception of "SHF" ("Super High Frequency") and "EHF" ("Extremely High Frequency"). The commonly used satellite bands are:

| Fixed Earth Stations | Common Use | Downlink Frequency (MHz) | Uplink Frequency (MHz) |
|---|---|---|---|
| C-band | FSS Voice, Data, Video | 3,700 – 4,200 | 5,925 – 7,075 |
| Ku-band | FSS Data, Video | 10,700 – 12,200 | 14,000 – 14,500 |
| Ka-band | FSS Broadband | 17,700 – 20,200 | 27,500 – 30,000 |
| Mobile Earth Stations | | | |
| L-band | MSS Maritime | 1,530 – 1,544 | 1,626.5 – 1,645.5 |
| L-band | MSS Aeronautic | 1,545 – 1,559 | 1,646.5 – 1,660 |
| Fixed and Mobile Earth Stations | | | |
| X-band | Military | 7,250 – 7,750 | 7,900 – 8,400 |

| Fixed Earth Stations | Common Use | Downlink Frequency (MHz) | Uplink Frequency (MHz) |
|---|---|---|---|
| SHF | Military | 20,200 – 21,200 | 30,000 – 31,000 |
| EHF | Military | | 43,500 – 45,500 |
| EHF | Military and Commercial | 39,500 – 40,500 | 50,400 – 51,400 |
| Space Research and Intersatellite | | | |
| S-band | MSS, Space Research | 2,025 – 2,110<br>2,200 – 2,290 | |

Finally, satellites also come in "bent-pipe" and "on-board processing" or "on-board logic" varieties. The bent-pipe system uses the satellite as a simple relay device for signals to and from the earth, without extensive on-board data processing of those signals. The advantage of the bent-pipe system is that there is less to go wrong in inaccessible orbit; a problem or obsolescence in the system's computers will occur on the ground, where it can be readily and inexpensively fixed, replaced, or updated. In addition, satellites with on-board data processing are heavier, and therefore more expensive, to launch and insure and are more subject to in-flight obsolescence. Despite its advantages, the bent-pipe system is not always possible; for constellations of LEO and MEO satellites in which signals may need to be transmitted not merely from each satellite to and from the ground, but "handed off" directly between neighboring satellites in the constellation, sophisticated on-board data processing capability is sometimes unavoidable.

### 3. Satellite Design

Communications satellites are essentially radio transceivers and supporting equipment in orbit above the Earth. Satellites typically consist of a main "bus": the frame or body of the satellite; a power source, usually the characteristic wing-like solar panels; rechargeable batteries that are fed by the power source; an on-board computer for self-monitoring; an "Attitude Control System," for maintaining, with small rocket engines, the satellite's attitude, or orientation, in space; and a radio transmitter, receiver, and antennas.

The satellite also carries its payload: transponders. Transponders are radio devices that accept the uplinked signal received by the satellite's receiving antenna, filter and amplify the signal, convert the frequency of the received signal as necessary, and transmit the

signal back to earth through the transmitting antenna. Modern satellites carry many transponders, and the number and type of transponders, which each operate in one of the frequency bands described above, dictate the amount and type of communications traffic that the satellite can uplink and downlink. Transponder capacity is often expressed in 36 MHz equivalents. A 36 MHz transponder can typically carry one analog television channel or between four and twelve digital television channels; as noted in Section IV(E), digital transmission is far more efficient use of bandwidth than is analog. Transponder capacity is also expressed in "throughput." A typical 36 MHz transponder can throughput 45 megabits of data per second (45 Mbps).

As important as the satellite, which is sometimes called the "space station" or "space segment" of the satellite system, is the transmitting and receiving apparatus on the ground, called the "earth station" or "earth segment." Earth stations are familiar from the satellite "dishes" that serve as uplink/downlink antennas. In bent-pipe systems, as noted, the earth station will also consist of computer equipment for processing the signal. In addition, specialized earth stations maintained by the satellite operator have computerized "tracking, telemetry, and control" ("TT&C") apparatus for monitoring and controlling the satellite's orbit, attitude, and functions. "Teleports" are earth stations with multiple antennas that serve satellite services customers that do not operate their own earth stations.

Satellites are launched by "launch vehicles," the rockets that lift off from locations like Cape Canaveral, Florida and Kourou, French Guiana. A launch vehicle bears the responsibility for boosting its satellite payload above the earth's orbit, protecting it during the ascent, and achieving the "escape velocity," 40,320 km/hr (25,039 mph), necessary to place the satellite in its LEO, MEO, or "transfer orbit," an elliptical orbit used for inserting the satellite into GEO orbit.

Although satellites can be, and are, used for point-to-point communications, because of their coverage of a wide swath of territory on the ground (called a "footprint" because of its characteristic shape when plotted on a map), most of their successful commercial applications to date have been point-to-multipoint transmissions.

### 4. Regulatory Scheme

As orbiting radio transmitters and receivers, communications satellites are subject to Communications Act Title III requirements. Most satellites do not operate on a common carrier basis, and are therefore not subject to Title II requirements. Other than Title III, the main body of law and regulation for satellites is to be found in the FCC's rules and regulations, specifically Part 25, 47 C.F.R. Under the rules and regulations, in addition to their Title III obligations, satellite projects are required to obtain a "space station"

license, launch authorization, and an "earth station" license from the FCC.[134] These applications are relatively complex and require, *inter alia*, radio frequency data, orbital location data, spacecraft data, financial qualifications of the applicant, and other information.[135] In 2003, the FCC adopted the "Third Satellite Licensing Reform Order."[136] The reform order consolidated and standardized much of the data on satellite applications and implemented a streamlined form for routine earth station applications.

The 1962 Satellite Act[137] established COMSAT, a then quasi-public entity charged with the development of a commercial satellite system. COMSAT was considered a communications common carrier under the Satellite Act. In 1973, INTELSAT was formed, from predecessors dating back to 1964, as an international organization with commercial aims. COMSAT became the U.S. INTELSAT signatory. The Open-market Reorganization for the Betterment of International Telecommunications Act (the "ORBIT" Act)[138] eliminated ownership restrictions on COMSAT and required INTELSAT's privatization, as well as that of INMARSAT ("International Maritime Satellite Organization"), founded in 1979 as another intergovernmental organization. In October 2004, the Orbit Act was amended to permit INTELSAT's and INMARSAT's dilution of ownership to proceed not merely by initial public offering, but by private equity purchase.

Orbital "slots" for GEO satellites are awarded by the International Telecommunications Union (see Section IV(H)(1), and, in the United States, licensed by the FCC. Satellites are required by the FCC to be spaced at no less than two degrees of arc separation to avoid interference. In practice, each two-degree spacing is about 1,000 miles of distance in GEO orbit, and a system called "co-location" (different from collocation between wireline telephone companies) permits placement of more than one satellite, operating on different bands, in each orbital slot.

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134 47 C.F.R. §§ 25.102, 25.114, 25.115.

135 47 C.F.R. § 25.113.

136 *Amendment of the Commission's Space Station Licensing Rules and Policies; 2000 Biennial Regulatory Review – Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations*, Third Report and Order and Second Further Notice of Proposed Rulemaking, 18 FCC Rcd 13486 (2003).

137 Pub. L. No. 87-624, 76 Stat. 419 (1962), codified at 47 U.S.C. § 701 *et seq*. (1990).

138 Pub. L. No. 106-180, 114 Stat. 48 (2000), adding 47 U.S.C. § 763a.

### 5. New Services

DBS service has emerged as a competitor to cable service, and the two major U.S. operators, Echostar and DirecTV, have rapidly added subscribers. In contrast to FSS operators, DBS operators provide a retail service to consumers, rather than selling wholesale to media companies and other intermediaries.

The Satellite Home Viewer Act of 1988 ("SHVA") amended the U.S. Copyright Act of 1976 to establish a mandatory licensing and royalty scheme for DBS retransmissions of "superstation" and network broadcast signals.[139] However, DBS providers complained that because SHVA did not require licensing of local broadcasts, it did not allow them to compete with Cable Operators. The Satellite Home Viewer Improvement Act of 1999 ("SHVIA") permitted DBS providers to carry local broadcast channels for the first time.[140] SHVIA also required satellite companies to carry all local channels in any market in which they carry any local channels by 2002, mirroring cable "must-carry" rules. The Satellite Home Viewer Extension and Reauthorization Act of 2004 ("SHVERA")[141] extended the mandatory licensing scheme of SHVA and SHVIA and amended rules for DBS provision of both analog and digital signals of network and local broadcasters.

Digital Audio Radio Service ("DARS") is satellite-transmitted radio service, offering digital quality programming nationwide and operated by two U.S. licensees, XM Satellite Radio and Sirius Satellite Radio.[142] DARS service uses satellite links to terrestrial "repeaters" to boost signal gain.

Ancillary terrestrial component ("ATC") is a planned (licensed, but not yet operational) service to allow MSS operators to use terrestrial repeaters and other hardware and software devices to obtain and boost coverage signals in low coverage or blocked areas, such as high-density urban areas, where the high margin subscriber base spends virtually all its time. Under some ATC business plans, MSS signals would be accessed by a chip in otherwise ordinary-looking handsets that also offered conventional terrestrial wireless service.

MSS telephony and Earth imaging service gained national attention in 2005 as a result of their relevance in the wake of Hurricane Katrina. MSS telecommunications was for a

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139 Pub. L. No. 100-667, 102 Stat. 3935, Title II (1988), codified at 17 U.S.C. §§ 111, 119.

140 Pub. L. No. 106-113, 113 Stat. 1501, Appendix I (1999).

141 Pub. L. No. 108-447, § 210, 118 Stat. 2809 (2004).

142 On February 19, 2007, XM and Sirius announced they had entered a merger agreement. As of this writing, the proposed merger is under review by the FCC and the DoJ.

time the only service, landline or wireless, available to disaster recovery teams. Earth imaging provided high resolution images of flooded areas for disaster rescue and recovery.

Digital Multimedia Bandwidth ("DMB") and digital video broadcast ("DVB") service are new packet-switched, point-to-multipoint digital data and video transmission services. DVB uses an MPEG-2 packet format with 16-byte header packets and can accept digital video, audio and analog streams on the uplinks. This emerging service has also developed a downlink standard called "Return Channel via Satellite, or "RCS," to lower the cost of ground station terminals. DVB-RCS service may enhance satellite competition with terrestrial providers.

## G. Submarine Cable

### 1. Regulatory Scheme

Submarine cable service is actually older than the two telecommunications "Ur" inventions, the telephone and the radio. The first submarine cable was laid for telegraph service in 1866. Submarine cables are composed of "wet plant" – fiber optic cable laid under the ocean, and "dry plant" – cable joining the wet plant and connected to a landing station and thence, by another section known as the "backhaul," to a gateway facility from which interconnection to the PSTN is made. Submarine cables have traditionally been owned and operated by consortia of market-dominant carriers. In recent years, these systems have encountered new competition from "private" submarine cable systems. In these systems, two or more carriers own a cable through a joint venture.

The Submarine Cable Landing License Act of 1921 (the "Submarine Cable Act")[143] imposes a federal license requirement to land or operate a submarine cable connecting the United States with any foreign country or connecting one part of the United States with another part. The Submarine Cable Act, *inter alia*, permits the President or his designee to enquire whether the withholding or revocation of a submarine cable license will aid in the procurement of reciprocal rights in foreign countries or promote national security.[144] In addition, the Submarine Cable Act provides that the license granted may not be exclusive.[145]

Submarine cable operators can provide service on a common carrier or non-common carrier basis. As with other communications common carriers, submarine cable operators

143 47 U.S.C. §§ 34-39.

144 47 U.S.C. § 35.

145 47 U.S.C. § 35.

providing service on a common carrier basis must offer service on a reasonable and nondiscriminatory basis, pay regulatory fees, make certain reports, and comply with Communications Act § 214. In exchange for these obligations, the operator is a beneficiary of Telecommunications Act § 251, which grants interconnection and collocation rights to the facilities of ILECs and other local exchange carriers. Conversely, if a submarine cable operator operates on a non-common carrier basis, it foregoes both the § 251 rights and the common carrier obligations; in other words, it can pick and choose the traffic to be carried on its cable.

### 2. IRUs

The term indefeasible rights of use, or "IRUs," as used in the context of telecommunications, originated in a series of decisions in the 1960s related to international submarine cables and subsequently to satellite earth station ownership.[146] In 1986, the FCC issued an R&O that established formal policies regarding transfers of IRUs.[147] The term "IRU" refers to a form of ownership of transmission facilities in which the IRU holder enjoys most of the indicia of ownership, except the right to manage or control the operation of the facility itself. The FCC typically describes an "IRU interest" in a telecommunications facility as

> a form of acquired capital in which the holder possesses an exclusive and irrevocable right to use the facility and to include its capital contribution in its rate base, but not the right to control the facility or, depending on the particular IRU contract, any right to salvage. The IRU, like other capital investment interests, also can provide certain tax and collateral asset advantages. The holder of an IRU shares in maintenance expenses and any future capital contributions.[148]

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146 *See* Stuart Z. Chiron & Lise A. Rehberg, *Fostering Competition in International Telecommunication*s, 38 Fed. Comm. L.J. 1, 11 n.42 (citing *Authorized Entities and Authorized Users Under the Communications Act of 1962*, Memorandum Opinion and Statement of Policy, 4 F.C.C.2d 421 (1966).

147 *International Communications Policies Governing Designation of Recognized Private Operating Agencies, Grants of IRUs in International Facilities and Assignment of Data Network Identification Codes,* Report and Order, 104 F.C.C.2d 208 (1986) ("*International Communications Policies*").

148 *American Telephone and Telegraph Company Application for authority to acquire and operate the interests of Comsat International Communications, Inc., MCI International, Inc. and RCA Global Communications, Inc. in the Etam, Jamesburg, and Roaring Creek international earth stations and to offer earth station services under tariff to authorized users,* Memorandum Opinion and Order, 4 FCC Rcd 2327, 2329 n.7 (1989); *see also International Communications Policies,* 104 F.C.C.2d at *4 n.28; *Reevaluation of the Depreciated-Original-Cost Standard in*

The IRU concept is now commonly employed not only in ownership/use arrangements for submarine cable and satellite earth station facilities, but in ownership/use arrangements for fiber optic and other types of telecommunications facilities.

IRUs allow a carrier to hedge against market pressures that could deprive it of capacity on the cable when needed. They also allow the network owner to sell capacity and provide for a steadier revenue stream than occasional or "as needed" service contracts would allow. Because IRUs are so long term, they are often capitalized by their holders. They are also often paid for through substantial up-front payments. Moreover, the FCC typically treats the holder of an IRU as a facilities-based carrier. In other words, though facially leases, IRUs present many indicia of fee ownership.

With the burst of the telecommunications bubble in 2002, IRUs became a controversial feature of certain distressed telecoms. When the grantor or holder of an IRU becomes bankrupt, the question arises whether the IRU is an executory contract that the bankruptcy debtor may assume or reject pursuant to § 365 of the Bankruptcy Code.[149] When an executory contract such as a true lease is rejected under § 365, it is treated as a pre-petition claim and forces the creditor to seek redress as a general unsecured creditor.[150] The grantor of the IRU is therefore exposed to considerable risk when the IRU holder becomes bankrupt. On the one hand, until the bankruptcy debtor seeks to assume or reject the IRU (or the grantor requests the Bankruptcy Court to compel the debtor to make that decision), it cannot resell the capacity represented by the IRU, since the right to use is irrevocable and exclusive. On the other hand, it runs the risk of rejection, reduction to unsecured creditor status, and the possibility of being forced to try to mitigate its damages under unfavorable market conditions.

Since the examination of IRUs by bankruptcy courts is a recent phenomenon, assumptions about whether bankruptcy courts will interpret IRUs as a sale or lease must be made based on treatment of contracts in other contexts. Among the factors courts have used in making the sale or lease determination are: whether the full price is paid at the outset; whether the right to use the asset during its lifetime is exclusive or irrevocable; who bears the risk of the asset's loss; whether the "lease" is for the expected life of the asset; whether the "lessee" has the right to purchase the asset for a nominal fee at the end

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*Setting Prices For Conveyances of Capital Interests in Overseas Communications Facilities Between or Among U.S. Carriers*, Report and Order, 7 FCC Rcd 4561 n.1 (1992).

149 11 U.S.C. § 365.

150 Lessees of real property leases and timeshare interests receive special statutory protection under 11 U.S.C. § 365 whereby they may treat the debtor-landlord rejection as a termination of the lease and assert a claim as an unsecured creditor, or they may elect to retain their right to remain in possession for the balance of the term. *See* 11 U.S.C. § 365(h), (i).

of the "lease" term with a minimal reversionary interest in the grantor; whether the "lessee" capitalizes rather than expenses the asset; and whether the two parties have ongoing obligations to each other.

Accordingly, parties wishing to maximize the chances that an IRU would be considered by a bankruptcy court to be a sale rather than a true lease will provide in the IRU for full upfront payment by the holder to the grantor; an irrevocable right of use for the expected life of the cable with minimal reversionary rights in the grantor; and for maintenance, technical support, and other executory functions to be performed by the grantor, if any, to be pitched out to a separate agreement, preferably between the holder and a different entity than the grantor, rather than being contained in the IRU itself.

In addition, IRUs have been exposed as the occasional vehicle for "capacity swaps" between companies supposedly operating on an arms' length basis, in a manner reminiscent of the land flips of the Savings and Loan crisis of the 1980s. In this iteration of an old scam, companies concerned about overbuilt, underused networks apparently entered into reciprocal capacity swaps through IRUs in which each company, by reason of the IRU, is able to claim a greater use of its network assets than is the case, with positive, but spurious, ramifications for its balance sheet, stock price and debt service.

## H. International Telecommunications Regulation

### 1. The ITU and the WTO

The United States traditionally considered telecommunications a natural monopoly and utility and barred foreign ownership of radio and broadcast facilities. Although foreign ownership restrictions have been eased, they continue to exist. The United States also imposes restrictions on non-U.S. investment in and export of technology with national security implications.

The International Telecommunications Union ("ITU") is a treaty-based United Nations agency with its headquarters in Geneva, Switzerland, through which member states seek to coordinate telecommunications standards and services such as satellite orbital slots and radio frequencies.

The ITU's convening of the 2007 World Radiocommunication Conference ("WRC-07") in Geneva from October 22-November 16, 2007 is the major current event on the international communications schedule. WRC-07 is scheduled to consider an array of spectrum allocation and rebanding issues, including terrestrial interference with the satellite C-Band and FSS above 3GHz generally, FSS and MSS below 3 GHz, sharing of the 2,500 MHz Band between satellite and terrestrial service, spectrum requirements for

global broadband satellite systems, and identification of global harmonized FSS bands for use of Internet applications.

The FCC has engaged in a process of administrative rulemakings pursuant to the Telecommunications Act intended to facilitate the entry of foreign investors. Key to this process have been the FCC's 1997 companion orders implementing the World Trade Organization ("WTO") Basic Telecommunications Agreement. In 1997, the FCC implemented the WTO Basic Telecommunications Agreement through two companion orders, the "Foreign Participation Order," which liberalized foreign ownership rules for telecommunications sector investment by WTO members in the United States,[151] and the "DISCO II Order," which liberalized entry into the U.S. market for WTO member satellite operators and carriers.[152]

### 2. Communications Act Provisions

Two provisions of the Communications Act, as amended by the Telecommunications Act and implemented by the FCC, particularly affect non-U.S. acquisition and investment activity in the U.S. telecommunications sector: §§ 310[153] and 214.[154]

Section 214 of the Communications Act provides an international service authorization procedure for U.S. operations of non-U.S. carriers or their affiliates.[155] Pursuant to the Foreign Participation Order, the FCC has, for WTO member § 214 applications, abandoned the former "effective competitive opportunities" ("ECO") test, a case-by-case analysis previously used to examine equivalent access, or reciprocity, for U.S. carriers in the applicant's home country, in favor of a rebuttable presumption of entry eligibility. The Foreign Participation Order put in place post-entry safeguards, in the form of quarterly traffic and revenue reporting and dominant carrier and international settlement rate benchmark classifications, to ensure that reciprocal competitiveness and access exist. An expedited § 214 application procedure now exists for both facilities-based carriers and

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151 *Rules and Policies on Foreign Participation in the U.S. Telecommunications Market*, Report and Order and Order on Reconsideration, 12 FCC Rcd 23891 (1997) ("*Foreign Participation Order*").

152 *Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, Report and Order, 12 FCC Rcd 24094 (1997).

153 47 U.S.C. § 310.

154 47 U.S.C. § 214.

155 47 U.S.C. § 214.

resellers.[156] For non-WTO member § 214 applications, the ECO test remains in place. The Foreign Participation Order standard also applies to WTO member applications for cable landing licenses and applications to exceed the § 310(b)(4) ownership limits (see below).

In 1999, the FCC adopted rules for streamlined processing of § 214 international authorizations. Under the revised rules,[157] approximately 99% of 214 applications are eligible for streamlined processing; waiting periods are reduced from 35 to 14 days; the streamlined process may be used whether or not public comments have been filed; prior approval of *pro forma* assignments and control transfers are no longer required; authorized carriers may provide service through wholly-owned subsidiaries without prior approval; the streamlined process may be used to obtain the same authorization that any affiliate with the same ownership has already obtained; the authorization to use International Simple Resale (see Section IV(H)(5)) is simplified; any authorized facilities-based carrier may use any non-licensed submarine cable system without prior approval; and the rules and applications procedures for § 214 authorizations are simplified.

The FCC considers national security, law enforcement, foreign policy, and trade policy concerns when analyzing a transfer of control or assignment application in which foreign investment is involved. The Commission defers to the Executive Branch's expertise on national security and law enforcement issues.[158] Typically, when a Section 214 application is filed with the FCC where foreign investment is involved, the application will be reviewed by the Executive Branch as coordinated by the Department of Homeland Security, the DoJ, and the Federal Bureau of Investigation. These three agencies are informally referred to as "Team Telecom."

Pursuant to the DISCO II Order, WTO member satellite operators are presumptively entitled to offer service in the U.S. market for fixed and mobile services without satisfying an ECO test. The presumption is rebuttable upon a showing of competitive harm in the U.S. satellite market. The FCC may also impose conditions on license grants to address competitive concerns and deny applications that pose serious competitive risks. DBS and DARS services are subject to more restrictive entry conditions under DISCO II by imposition of the so-called "ECO-Sat" test. Under ECO-Sat, a non-U.S.

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156 *Streamlining the International Section 214 Authorization Process and Tariff Requirements*, Report and Order, 11 FCC Rcd 12884 (1996).

157 *1998 Biennial Regulatory Review – Review of International Common Carrier Regulations*, Report and Order, 14 FCC Rcd 4909 (1999).

158 *Foreign Participation Order*, 12 FCC Rcd 23891, 23918, ¶ 59,23919-21, ¶¶ 61-66 (1997); *recon. denied*, 15 FCC Rcd 18158 (2000).

satellite operator must affirmatively demonstrate that U.S. satellite operators have effective competitive opportunities, not only in the non-U.S. operator's home market, but in all "route markets" that the operator intends to serve from U.S. earth stations. ECO-Sat is not applied to WTO member route markets served by non-WTO member-licensed satellites; however, the test is applied for non-WTO member route markets.

Section 310 concerns foreign ownership restrictions applicable to FCC licenses. An FCC radio license is required for broadcast and common carrier wireless activities in the United States. Pursuant to § 310(a) and (b)(1) and (2), non-U.S. governments, corporations organized under the laws of non-U.S. governments and non-U.S. persons may not own or hold broadcast or common carrier radio licenses. In addition, pursuant to § 310(b)(3), U.S. corporations may not own or hold FCC broadcast and common carrier radio licenses if more than 20% of their capital stock is owned or controlled by non-U.S. governments, non-U.S. corporations, or non-U.S. persons. Under § 310(b)(4), a U.S. corporation directly or indirectly controlled by any other corporation may not hold such licenses if more than 25% of the controlling corporation's capital stock is owned or controlled by non-U.S. governments, non-U.S. corporations, or non-U.S. persons *if* the FCC finds that the public interest will be served by the refusal or revocation of such a license. The conditional element of § 310(b)(4), previously generally ignored by the FCC, was given new life by the Foreign Participation Order.

The restrictions have been held to apply to general and non-insulated partners in limited partnerships.[159] It should be noted that § 310 restricts only certain enumerated FCC licenses and permits controlled under Title III of the Communications Act; theoretically, if a wireline telephone company could function without a radio license, its ownership would not be restricted. Similarly, IP technology projects are not subject to such a restriction. A non-U.S. company would nevertheless require a § 214 authorization for U.S. operations.

In 2004, the FCC's International Bureau released new guidelines on criteria used to evaluate common carrier and aeronautical radio licenses and their permitted use pursuant to § 310.[160]

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159 *See, e.g., Cellwave Tel. Servs. L.P. v. FCC*; 30 F.3d 1533 (D.C. Cir. 1994); *Moving Phones P'ship L.P. v. FCC*, 998 F.2d 1051 (D.C. Cir. 1993).

160 *Foreign Ownership Guidelines for FCC Common Carrier and Aeronautical Radio Licenses*, 19 FCC Rcd 22612 (2004); *Erratum*, 21 FCC Rcd 6484 (2006).

### 3. Foreign Investment Controls: Exon-Florio and CFIUS

There is no general law regulating foreign investment in the United States. The most important law affecting foreign investment generally is the Exon-Florio amendment to the 1988 Omnibus Trade Bill ("Exon-Florio").[161] Exon-Florio authorizes, and in some cases mandates, the President of the United States to review, on national security grounds, mergers, acquisitions, and takeovers of U.S. businesses by non-U.S. persons. The investigation is mandatory when the acquirer is "an entity controlled by or acting on behalf of a foreign government" and when the acquisition could "affect" U.S. national security.[162] This definition, it should be noted, could apply to many non-U.S. telecoms, including ones not majority state-owned, but in which the non-U.S. government retains a minority "golden share," signifying control equivalent to majority status or veto rights. Conversely, Exon-Florio implicates even minority investments when effective control of the target is gained. Exon-Florio review is in practice conducted under delegated executive authority by an inter-agency panel, the Committee on Foreign Investment in the United States ("CFIUS"). The twelve CFIUS members include the Secretaries of the Treasury (who chairs the Committee), State, Defense, Homeland Security, and Commerce, the Attorney-General, the U.S. Trade Representative, and the Chair of the Council of Economic Advisers.

Upon receipt of notice of a transaction, CFIUS has 30 days to decide whether to conduct an Exon-Florio review. If CFIUS decides to review the transaction, it then has 45 days to review and render a decision. The President then has 15 days to review and approve the CFIUS decision. Information submitted during the review process is confidential. Executive authority under Exon-Florio may be exercised only if the President finds that: (i) there is credible evidence that the non-U.S. entity "might take action that threatens to impair the national security;"[163] and (ii) other statutory authorities, including the International Emergency Economic Powers Act,[164] do not provide adequate protection for national security. Upon such findings, the President may prohibit or suspend a proposed transaction, or order divestiture of a completed one. No judicial review is permitted. Because transactions *not* reported to CFIUS may be subsequently reviewed at any time and the divestiture sanction imposed, without the possibility of judicial review, voluntary Exon-Florio reporting in the early stages of a transaction that would grant control to a non-U.S. person and that may implicate security concerns is sound practice.

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161 Pub. L. No. 100-418, 102 Stat. 1425, 50 U.S.C. § 2170.

162 50 U.S.C. App. § 2170(b).

163 50 U.S.C. App. § 2170(e).

164 50 U.S.C. §§ 1701-1706.

As of this date, more than 1,500 notices have been filed with CFIUS. Twenty-five transactions have required an investigation (four since September 11, 2001, more than in the preceding ten years combined). Of those twenty-five, twelve were sent to the President for a decision, and one of those was blocked. Thirteen transactions have been voluntarily withdrawn.[165]

CFIUS review entered the public consciousness for the first time in recent memory in early 2006, when the Bush Administration approved a transaction to transfer management control of several U.S. ports, including the Port of New York, to DP World, a state-owned company of the United Arab Emirates. The usual review process confidentiality was observed. The resulting Congressional and public uproar caused the UAE-based company to withdraw from the deal (one of the thirteen voluntarily withdrawn) and prompted calls to overhaul the entire CFIUS review process to achieve greater transparency. The 2006 merger between Alcatel S.A., the French telecommunications equipment maker, and Lucent Technologies, which included the military-sensitive Bell Labs, also prompted CFIUS review concerns.

In February 2007, spurred primarily by the DP World transaction, the U.S. House of Representatives and, in June 2007, the U.S. Senate each passed CFIUS reform legislation.[166] While the bills did not include provisions that would have ranked countries according to their relationship with the United States and deemed propensity to divert sensitive U.S. technologies, their provisions include "evergreen" provisions permitting the U.S. Government to unwind previously cleared and closed transactions if the parties ever intentionally violate the conditions upon which CFIUS approval was originally granted. Thus, the safe harbor for cleared transactions that were voluntarily reported would vanish, raising the interesting question of whether, under the law of unintended consequences, the bills' enactment will actually disincentivize parties to voluntarily report their pending transactions to CFIUS. Reconciliation of the two bills is pending.

### 4. Technology Export Controls: ITAR and EAR

Although the United States does not generally restrict export of technology, limits have been imposed on technology exports considered to have security implications. Certain telecommunications and aerospace equipment and components, as well as information security software, including encryption products, are considered to implicate national security and are therefore subject to export restriction. Where technology export

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165 Organization for International Investment, Fact Sheet, Committee on Foreign Investment in the United States (CFIUS), http://www.ofii.org/fact_figures/cfius.cfm (last visited Sept. 22, 2007).

166 S. 3549, H.R. 5337.

restrictions apply, acquisition of a U.S. company by non-U.S. persons may breach export controls.

The scope of restriction depends on relevant Export Administration Regulations ("EAR") of the U.S. Department of Commerce Bureau of Industry and Security (formerly the Bureau of Export Control)[167] or the International Traffic in Arms Regulations ("ITAR") of the U.S. Department of State Directorate of Defense Trade Controls.[168]

Violations of the EAR and ITAR carry both civil and criminal penalties.[169] Certain technologies, deemed to be vital to national security or anti-terrorism measures, may be completely restricted from export to a short list of countries that the U.S. Government considers to be engaged in state-sponsored terrorism. Others require an individual exporter's license for export. Even where a license is not required because a general license is already in place, some telecommunications and information technologies are subject to reporting requirements and to governmental review to obtain the necessary export license exemption.

The October 1998 U.S. military budget bill required the Clinton Administration to shift control of satellite technology exports to the State Department from the Commerce Department, thereby supposedly tightening control of technology transfers. The State Department, by law, considers only security issues when reviewing technology transfers. The Commerce Department is more concerned with business and trade development. Therefore, communications satellites and launch vehicles are currently subject to ITAR.

The January 3, 1999 Report of the Select Committee of the U.S. House of Representatives (the "Cox Report,")[170] charged the People's Republic of China with engaging in a systematic campaign of espionage to appropriate U.S. missile and thermonuclear weapon technology. According to the Report, part of the Chinese campaign occurred when two U.S. satellite manufacturers analyzed three launch failures involving Chinese-manufactured Long March rockets and satellites manufactured by the U.S. Companies, and recommended improvements to the rockets without required State Department export licenses and in violation of ITAR. According to the Cox Report, the

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167 15 C.F.R. pt. 730 *et seq*.

168 22 C.F.R. pt. 120 *et seq*.

169 In one case, a U.S. aerospace manufacturer and China's leading aviation company were charged with export violations in the 1994 sale of nineteen machine tools for $5 million, some of which the Chinese recipient shipped to a cruise missile factory. *See McDonnell Douglas Faces Export Charges*, Fin. Times, Oct. 20, 1999, at 12.

170 H.R. Rep. No. 105-851, *available at* www.house.gov/coxreport.

assistance given by the two U.S. companies had applications to ballistic missile launchings.

The United States is a participant in the Wassenaar Arrangement, a multinational arrangement on export controls for conventional weapons and sensitive dual-use goods and technologies.[171] Pursuant to the Wassenaar Arrangement and in part at the urging of the global e-commerce sector, the United States, in 1998, began to liberalize its export restriction policy on cryptographic technologies. Current EAR make so-called "mass market" encryption products with symmetric algorithms exceeding 64 bits eligible for export to the twenty-five nations of the E.U., Australia, Japan, New Zealand, Norway, Switzerland, the Czech Republic, Poland, and Hungary following a 30-day Bureau of Industry and Security review pursuant to a filed "classification request." Encryption products do not require authorization when exported to Canada. There are no post-export reporting or license requirements for such products following the review, meaning that export may proceed without notification of formal approval.

Export of "information security" evaluation and production equipment to subsidiaries of U.S. companies outside the United States, E.U. governmental and non-governmental end-users and other country non-governmental end-users is also allowed, with the exception of enumerated terrorism-sponsoring countries. There is provision for *de minimus* treatment for mass market software programs such as e-mail, browsers, games, office applications, and utilities intended for desktop or laptop CPUs. Telecommunications service providers, ISPs, and financial institutions may export retail encryption commodities and software to provide services to their own affiliates, commercial firms, and non-governmental end-users without a license, but will require a license for non-retail products to non-approved governmental end-users.

Federal encryption limits have been the subject of court challenges based upon the free speech guarantees of the First Amendment to the U.S. Constitution. In one instance, the U.S. Court of Appeals for the Ninth Circuit held that the EAR violated the First Amendment because they prohibited export of encryption software without a license.[172] The Court's holding was based on its finding that because software programmers could read and write source code, and could therefore express ideas to each other by means of source code, that those expressions were constitutionally protected speech.[173]

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171 The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies. *See* www.wassenaar.org.

172 *Bernstein v. U.S. Dep't of Justice*, 176 F.3d 1132 (9th Cir. 1999).

173 *Id.*

### 5. The International Settlements Policy

The International Settlements Policy ("IS Policy") consists of a series of administrative decisions dating back to 1936, and currently is articulated in the FCC's 2004 International Settlements Policy Reform Report and Order. The IS Policy was originally designed to prevent foreign carriers, which were at the time generally state-owned monopolies, from taking advantage of the competitive marketplace in the United States by playing one U.S. carrier off against another. Since the U.S. carriers effectively had no choice of a foreign carrier to terminate their calls in a given country, they were subject to discriminatory pressures to pay higher rates for termination of international calls originating in the United States by foreign carriers that could not themselves be discriminated against. This practice was known as "whipsawing." The IS Policy discouraged whipsawing by requiring: (i) the equal division of accounting rates between the U.S. carrier and the foreign carrier; (ii) U.S. carriers not to accept or pay discriminatory terms and conditions (meaning the same accounting rate, with the same effective date) for the termination of U.S.-originated traffic in overseas markets; and (iii) proportionate return of inbound traffic. Under the IS Policy, all accounting rate agreements are publicly filed with the FCC.

Because of changing competitive conditions, the FCC developed exceptions to the IS Policy for U.S. carriers to route overseas traffic without being subject to the IS Policy's requirements of equal division of accounting rates, nondiscriminatory terms, and conditions and proportionate return of inbound traffic. The most important of these exceptions is the International Resale Order[174] that established International Simple Resale ("ISR").

ISR permits authorized U.S. carriers to route switched traffic over international private lines interconnected to the PSTN. The IS Policy requirements are not imposed. ISR is permitted only on routes to WTO member countries where the settlement rates for at least 50% of the U.S.-originated traffic are at or below the appropriate benchmark or where the foreign carrier offers equivalent resale options. For non-WTO countries, both requirements must be met.

The scheme of the IS Policy was radically altered by a 1999 order.[175] In broad terms, the revised IS Policy: (i) eliminates the IS Policy for arrangements with foreign carriers

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174 *Regulation of International Accounting Rates*, First Report and Order, 7 FCC Rcd 559 (1991).

175 *1998 Biennial Regulatory Review Reform of the International Settlements Policy and Associated Filing Requirements*, Report and Order and Order on Reconsideration, 14 FCC Rcd 7963 (1999).

lacking market power; (ii) eliminates the IS Policy for arrangements with all foreign carriers (whether lacking or possessing market power) on routes for which rates to terminate at least 50% of U.S. calls are at least 25% lower than the rate for that route adopted in the FCC's Settlement Rate Benchmarks Order;[176] (iii) eliminates as superfluous the so-called Flexibility Policy, another exception to the IS Policy regime; (iv) allows confidential filings with dominant carriers on routes for which the IS Policy is removed; and (v) simplifies accounting rate filing procedures.

In its 2004 order, the FCC reformed its rules to remove the IS Policy from benchmark-compliant routes, but retained the benchmark policy as it applies to non-compliant routes. The FCC also expressed concern about the increasingly high mobile termination rates that are being charged to U.S. carriers and their effect on U.S. consumers.

In August 2005, the FCC issued on NOI responding to new concerns about whipsawing.[177] The NOI seeks comment on practices that would permit a faster, more aggressive response to whipsawing practices and questioning existing settlement rates.

## V. Communications Transactions

Communications transactions take a variety of forms. The transaction structure should be driven by the business needs and objectives of the parties. Although tax, accounting, securities, corporate governance, communications, antitrust and other regulatory considerations can affect structure, they should not dictate it to the detriment of business needs and objectives. Rather than present a comprehensive overview of general transaction structuring and documentation issues, this section will highlight considerations likely to arise in the communications sector. In particular, securities law will not be examined as being outside of this paper's scope. If a company being acquired is a public company, has U.S. shareholders, or if an acquiring company is issuing securities as acquisition consideration, there will be a substantial U.S. securities law overlay to the transaction. However, the securities issues that arise do so in the main irrespective of whether the transaction is in the communications sector or any other industry. Moreover, adequate treatment of securities law issues would require treatment no less detailed than this paper in its own right.

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176 *International Settlement Rates*, Report and Order, 12 FCC Rcd 19806 at 15, 30-32 (1997).

177 *Modifying the Commission's Process to Avert Harm to U.S. Competition and U.S. Customers Caused by Anticompetitive Conduct*, Notice of Inquiry, 20 FCC Rcd 14096 (2005).

## A. Transaction Structures

Communications transactions may fall into the general merger and acquisitions ("M&A") categories of stock purchases, asset purchases, and statutory mergers. Joint venture structures are also common, with joint ventures embodied in commercial agreements or in juridical entities such as corporations, partnerships, limited partnerships ("LPs"), and limited liability companies ("LLCs"). Strategic alliances, which generally are looser relationships, are common as well. Communications transactions that do not involve combinations or formal partnering of companies may take the form of either strategic investments (by companies vertically or horizontally aligned with the investment target), financial investments (by individual investors, private equity firms, or divisions of larger financial institutions), or other private or public offerings of equity and debt securities. Finally, communications services and equipment may be procured or outsourced through commercial arrangements.

### 1. Mergers and Acquisitions

Mergers and Acquisitions is a catch-all term used collectively to refer to a variety of transactions by which one business entity (the "Purchaser") acquires all or the majority of the stock or assets of another (the "Target"). Negotiated (as opposed to hostile) acquisitions are essentially contractual arrangements, involving an acquisition agreement that routinely contains certain elements. Among these are a description of the basic transaction contemplated by the agreement; the acquisition consideration or purchase price and ways in which it may be adjusted; "conditions to closing," the failure of which to be satisfied relieves the beneficiary party from its obligations to close; representations and warranties by Target and Purchaser that a certain state of affairs exists as of the date of the agreement's signing, as of the date of the transaction's closing, and in some cases, for a defined period of time after closing; and affirmative and negative covenants, promises by Target and Purchaser either to do something or refrain from doing something in order to produce or preserve a certain state of affairs. There are also generally termination provisions, choice-of-law provisions and dispute resolution provisions, among others.

A "leveraged buyout" ("LBO") involves a the purchase of a business by a private equity firm Purchaser that itself offers a relatively low percentage of the purchase price in the form of equity and the balance in the form of debt, which is secured and to be serviced by Target's own expected revenues. Because of the low equity/high leverage model pursued by LBO firms, successful LBOs can produce very large returns for Purchaser. However, the model leaves Target burdened by a heavy debt load. Frequently, the LBO plan is to restructure Target and sell non-core or less profitable businesses in which it is engaged, in order to retire some of the debt. At times, the LBO firm acts in concert with a group of

Target's managers, funding them in their takeover of Target in exchange for some of the equity, the consideration for which is their expertise in running the Target and indispensability post-acquisition. This form is called a "management buyout, or "MBO."

A stock acquisition is ostensibly the simplest transaction form. It can be accomplished as simply as by Purchaser's executing one stock purchase agreement with Target's shareholders. Target is generally not a party to the agreement. Complications arise when there are multiple Target shareholders and when not all agree to the transaction. In such cases, state corporation statutes provide for squeeze-out rights and appraisal remedies. Following the transaction, Target becomes a subsidiary of Purchaser. All other things being equal, Target shareholders generally prefer the stock purchase form because Purchaser succeeds to all of Target's assets and liabilities. By contrast, Purchasers generally do not prefer stock purchases for the same reasons and because they receive no tax "step-up" of assets, even if the fair market value of those assets is usually greater than Target's basis in them (see Section V(B)(2)).

In an asset acquisition, the transaction is usually directly between Purchaser and Target. Target does not become a subsidiary of Purchaser; it continues to be owned by its current owners, who do not directly receive the acquisition consideration in the absence of a Target dividend or liquidation. In general, the asset acquisition is a preferred structure for a Purchaser, because it can pick and choose among Target's assets rather than take (and pay for) assets and assume liabilities it may not want, as it does in a stock acquisition. Targets generally do not prefer asset sales, for the same reasons and because of tax considerations (*Id.*).

By contrast, "mergers" are a transaction form created and governed by state corporation statutes such as the Delaware General Corporation Law ("DGCL").[178] The use of a statutory merger provides both ease and established legal certainty. When the certificate of merger is filed with the Secretary of State of the state of incorporation, one company merges into the other, the first company's legal existence ends, and title to its assets (and liabilities) transfer automatically to the surviving company. Dissident shareholders are bound by the transaction, although, as in stock acquisitions, they may receive a better price than selling shareholders, through squeeze-out rights and appraisal remedies. In a "forward" merger, Target merges directly into Purchaser; Purchaser is the surviving entity, and Target ceases to exist. In a "reverse" merger, Purchaser merges into Target and it is Purchaser that ceases legally to exist.

In a "triangular" merger, Purchaser forms a subsidiary ("Subsidiary") (or a pre-existing one is used) in order to serve as a vehicle for the merger, resulting in the "triangle" of

178 Del. Code Ann. tit. 8.

Purchaser, Target, and Subsidiary. In a "forward triangular merger," Target merges into Subsidiary, leaving Subsidiary as the surviving entity and subsidiary of Purchaser.

In the case of a "reverse triangular merger," Subsidiary merges into Target, and Target is the surviving entity, becoming a subsidiary of Purchaser. The reverse triangular merger form allows Purchaser to remain separate from, and structurally unaffected by, the core transaction, while allowing Target, which is generally not a shell company as Subsidiary is, to become an intact operating subsidiary of Purchaser. The reverse triangular merger form also often permits Purchaser to take control of Target without triggering anti-assignment provisions in third-party contracts to which Target may be bound. The need to obtain third-party consents and the assignment clauses of agreements to which Target is a party can be a significant factor. Some third-party agreements can represent so much of Target's value that a failure to obtain the third party consent could derail the transaction. Obviously, the obtaining of such consents is a critical condition to closing for Purchaser and review of material third-party agreements and their assignment clauses is a critical due diligence item.

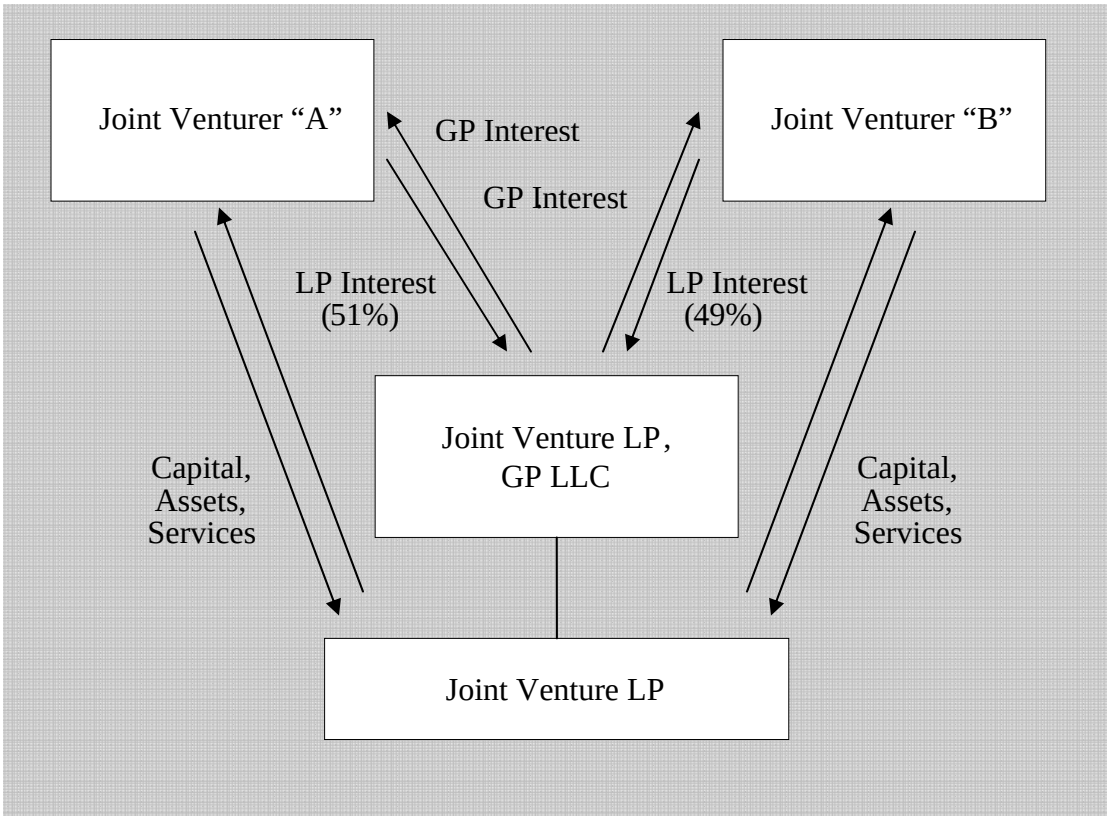
The merger consideration can be composed of cash, equity, and/or debt (convertible or not) securities or a combination thereof. In a "cash election" merger, Target's shareholders are given the option of receiving cash, stock or a combination of cash and stock for their shares. Where not all the merger consideration is cash, parties also allocate risk through adjustable pricing formulas. In a "fixed-exchange" ratio, each of Target's shares is converted into a fixed number of Purchaser's shares based on a negotiated "exchange ratio." Fixed-exchange ratios are most common in "merger of equals" transactions, since both parties equally share the risk of movement in Purchaser's share price. The formula is also common in telecommunications sector, based on perceived sector volatility and Purchaser's resulting position that volatility risk in its stock price should be shared.

In a "fixed-value" transaction, it is the exchange ratio that floats. The formula usually provides for measuring Purchaser's stock price during a negotiated period of days or weeks prior to closing or meeting of Target's stockholders to approve the transaction. A fixed-value pricing formula is used to insulate Target's shareholders from market risk prior to closing. The formula is used when one party is clearly Purchaser and the other clearly Target, rather than in "merger of equals" contexts. Also, hostile bidders use fixed-value structures because they have more appeal for Target shareholders. In either the fixed-exchange or fixed-value scenario, the party bearing the risk of a decrease in stock price may seek to limit its risk through use of collars, caps, and floors that limit the transaction's potential volatility.

### 2. Joint Ventures

Joint ventures generally are formed when two or more parties have a limited but continuing business purpose that justifies a formal mechanism of cooperation, but does not justify a full business combination. As with mergers and acquisitions, the term is a catch-all for a variety of transactions. A joint venture can be as simple as a contract to collaborate, with no new business entity formed. An example might be an agreement to pool resources for the joint distribution of each company's products, including the renting of warehouse space, employment of personnel, engagement of accountants, and other attendant details.

More classically, though, joint ventures involve the formation of a new business entity, sometimes a corporation, but often an LP or an LLC, in order to take advantage of pass-through taxation rules and avoid taxation at the joint venture level (see Section V(B)(2)). Because joint ventures are so common in telecommunications transactions, and because the form is less familiar than standard stock and asset acquisitions and mergers, a sample (and simple) joint venture structure is presented here.




In this joint venture structure, the two joint venturers, "A" and "B," have formed a joint venture by creating an LP through the execution of an LP agreement and the filing of a

certificate with the Secretary of State of the state under whose law the LP is formed. The joint venturers receive "limited partnership interests" much like shares in a corporation.

An LLC formed under the same or another state's law will serve as the necessary general partner ("GP") of the LP and the sole entity with both day-to-day managerial power over the LP's affairs and unlimited liability for the LP's liabilities. A and B will have limited liability in respect of their LP interests, just as though they were shareholders in a corporation. However, unlike in the case of a corporation, under Internal Revenue Code "check-the-box" rules (see Section V(B)(2)) the joint venture will not be taxed at the entity level – that is, the LP level – and tax income and losses will flow through directly to the limited partner level. The form not only allows the joint venturers to avoid entity level tax but to take advantage of early stage losses to offset against profits of other business operations and thereby reduce taxes.

Although A holds a majority interest in the LP, A and B can negotiate to protect B's minority interests by providing "super-majority" or unanimity vote requirements for specified partnership actions in the LP agreement and the GP operating agreement and by side agreements that provide for ancillary obligations of A and B to provide services, goods, or capital to the joint venture or to each other under specified circumstances.

### 3. Strategic and Financial Investments

Strategic and financial investments play a significant role in the incubation of early stage telecommunications service providers, equipment manufacturers, and applications developers. A strategic investment denotes a minority investment (hence, not an acquisition) in a company's stock by another company that is vertically or horizontally integrated in Target's supply chain. For example, an equipment manufacturer might invest in the manufacturer of, or holder of intellectual property rights to, a component strategically important to the investor's own products. While a return on investment may be a goal, the real driver of the investment is the investor's desire to take a proprietary interest in Target for strategic reasons. This may be motivated by the desire to assure supply or preferential pricing of Target's products or to prevent competitors from having such access. In such cases, the strategic investment may be the prelude to a full acquisition further down the road.

By contrast, a financial investment also denotes a minority investment, but in this case by a company not in Target's business or in any other business other than investing. These are so-called "private equity" firms, including venture capital funds, mezzanine lenders, buyout firms, and "hedge funds," an ill-defined group employing a wide variety of investment strategies. Financial investors seek return on investment only (although, an investor's other holdings in an industry or perception of that industry can imbue a given

investment with "strategic investment" attributes), and generally focus upon the "exit" event, generally either an initial public offering ("IPO") or a sale to another company. Occasionally, a private equity firm for a time pursues a "buy-and-hold" strategy, whereby some of the expected return on investment is obtained from Target's operating profits.

Strategic and financial investments are often made through the use of preferred stock, which provides liquidation preferences, preemptive (antidilution), and other rights; convertible preferred stock, which converts to common stock at a specified conversion rate upon certain events, such as an initial public offering; and convertible debt instruments, that pay interest which is tax deductible for the issuer but which also converts to stock upon the occurrence of specified events. Representation on Target's board, rights upon registration of Target's stock and other issues are dealt with in shareholders' agreements, registration rights agreements, voting agreements, and other ancillary documents.

Regulatory issues as well as business or economic considerations can influence the decision of what investment instrument to use. For example, the foreign ownership restrictions of Communications Act § 310 generally prohibit a non-U.S. entity's investment in a Target broadcast or common carrier radio licensee above the § 310(b)(3) and (4) limits (see Section IV(H)(2)). However, the FCC generally has treated convertible debt instruments as not activating the § 310 prohibitions as would an equivalent equity stake, even if the investment, on an as-converted basis, would breach § 310.

#### 4. Telecommunications Service and Outsourcing Agreements

Telecommunications services are provided by a carrier or a service provider to a "customer," which may be an end-user subscriber, such as a business enterprise, another carrier, or other communications provider, such as a Cable Operator that wants to offer VoIP service to its subscribers. Depending upon the range and complexity of the services being provided, such arrangements may be denominated as "outsourcing" transactions. If more than one service is offered, or additional services during the life of the agreement are contemplated, the arrangement may be structured as a master services agreement providing general terms with schedules annexed to it setting forth specified services.

Issues often highly negotiated include pricing and payment terms; "MAC" or "MARC" clauses (minimum annual commitment or minimum annual revenue commitment, by which the customer agrees to pay a specified amount for service each year of the agreement's term) and the penalties for a MAC or MARC "shortfall"; adjustments to the MAC or MARC, such as in the case of a business downtown for customer or technological change; service outages and credits for them; installation and uninstallation

charges; service level agreements that establish specific metrics that the service provider must meet and associated financial penalties that are triggered if the metric is not met; warranty, indemnification, and limitation of liability provisions; and termination rights.

## B. Tax and Accounting Issues

### 1. Tax-Free Reorganizations

Tax considerations frequently influence transaction structure. Section 368(a)(1) of the U.S. Internal Revenue Code (the "Tax Code")[179] provides seven means for structuring "tax-free" business combinations (the term "tax-free" is something of a misnomer compared to "tax-deferred"; the methods provided, when properly followed, allow Target and its shareholders to avoid treating the acquisition consideration as income. However, income or capital gains tax are generally assessable when the stock received by Target and its shareholders in the acquisition is eventually sold). The forms are known by the letters, A-G, of the subsection pertaining to them. Generally, § 368 tax treatment is available only if the business combination provides a continuity of interest of Target's and Purchaser's shareholders in the combined company, meaning in practice that at least a majority of the acquisition consideration must be in stock, there must be a continuation post-acquisition of Target's business enterprise, and there must be a valid business purpose to the transaction (not mere tax avoidance). Each subsection's special requirements must also be followed.

If the transaction qualifies under one of the § 368 subsections, Target's shareholders do not recognize the gain (or loss) on the exchange of their stock for Purchaser's stock and owe no tax until their later disposition of the stock they received as consideration. Target itself recognizes no gain (or loss) on the transfer of its assets and liabilities. Non-stock consideration (cash or debt) paid by Purchaser as part of the acquisition consideration may be taxable to Target's shareholders if it exceeds their basis in Target's stock, and Target shareholders carry over their Target stock basis to the Purchaser stock basis they receive. Purchaser also benefits by assuming Target's tax basis in the stock or assets it receives, and recognizes no gain (or loss) on any stock it issues as part of the acquisition.

Tax Code § 351 also provides "tax-free" treatment for qualifying transfers of property to a corporation in exchange for the corporation's stock when the transferors are in control of the corporation immediately after the transfer. Section 355 of the Tax Code also provides "tax-free" treatment for qualifying "spin-offs" of Target's businesses.

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### 2. Other Tax Issues

As noted in Section V(A)(1), Purchasers do not prefer the stock purchase format, all other things being equal, because they receive no stepped-up basis in Target's assets, even though the fair market value of those assets may exceed Target's basis in them. Under certain circumstances, though, the Tax Code's § 338/338(h)(10) election allows Purchaser and Target to treat a stock purchase as an asset purchase to give Purchaser the stepped-up basis with no material tax consequences for Target.

By contrast, asset sales are generally disfavored by Target and its shareholders, not merely because Purchaser can pick and chose among assets and liabilities to be acquired, but because it results in two levels of taxation for Target – first on the gain on the sale of assets over Target's basis in them, then at Target shareholder level when the asset sale proceeds are distributed (net of corporate tax). In addition, some states impose "transfer taxes," a kind of sales tax on asset transfers.

As noted, in Section V(A)(2), LPs and LLCs are popular in various telecommunications transactions because, under IRS "check-the-box" rules, they provide the limited liability of corporations to their owners (limited partners in the case of LPs; "members" in the case of LLCs) with the pass-through, lack of entity-level, taxation of partnerships.

### 3. Accounting Issues

In 2001, the Financial Accounting Standards Board ("FASB") issued new M&A accounting regulations in the form of (a) Statement of Financial Accounting Standards ("SFAS") 141, "Business Combinations"; and (b) SFAS 142, "Goodwill and Intangible Assets." The new rules eliminated the "pooling of interests" method of accounting for M&A, leaving the "purchase" method of accounting the only method available for acquisitions commenced after June 30, 2001 where control (more than 50% of the voting stock) of the target company is obtained (the "equity" and "cost" accounting methods are still used when less than 50% of the Target is acquired, as in strategic and financial investments).

Purchase accounting is basically cost accounting; the Target's acquired assets are carried on the Purchaser's books at the price paid, subject to adjustments like depreciation, a significant factor in the case of telecommunications equipment. Liabilities assumed expressly or by operation of law are accounted for at fair market value. Any excess of acquisition consideration over asset cost and liability fair market value is recorded as "good will" and must be amortized (deducted) from net income over a period not to exceed forty years, so that the more goodwill generated in a transaction, measured by acquisition consideration over fair market value, the lower will be net income for up to the next forty years. Goodwill must be tested annually for impairment; if the fair value of

goodwill is less than recorded value, an impairment loss is recognized on the income statement. Under the now-eliminated pooling method, a Purchaser could record Target's assets and liabilities at the same value as reflected on Target's books, with no need to amortize good will and no consequent depressing effect on net income. This explains the popularity pooling accounting had with "dot-coms" and other start-ups seeking new rounds of investment and high valuations.

## C. Antitrust/Competition Issues

Antitrust law in the context of telecommunications mergers and acquisitions review is focused on the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended ("Hart-Scott-Rodino")[180] and on § 7 of the Clayton Act.[181]

### 1. Hart-Scott-Rodino

Hart-Scott-Rodino requires the parties to certain qualifying acquisitions of any voting securities or assets of the acquired party to notify the U.S. Federal Trade Commission ("FTC") and DoJ of the transaction and await the expiration of a mandatory waiting period (30 days generally, 15 days in the case of a cash tender offer) prior to the closing. Hart-Scott-Rodino reporting obligations arise when: (a) either the acquiring or the acquired party is engaged in U.S. commerce or in an activity affecting U.S. commerce; and (b) either (i) as a result of the transaction the acquirer would hold voting securities or assets of the target in excess of $239.2 million or (ii) as a result of the transaction the acquirer would hold voting securities or assets of the target in excess of $59.8 million and the acquirer or target company has total assets or annual net sales of $12 million or more and the other company has total assets or annual net sales of $119.6 million or more (the foregoing dollar thresholds are subject to annual indexing, as announced by the FTC and published in the Federal Register). It is important to note that the qualification "voting securities" exempts bonds, notes, mortgages, and similar instruments and is limited to securities allowing the owner or holder to vote for directors, or analogous persons in the case of unincorporated entities. Also, rules and regulations assess the total asset and annual net sales thresholds with reference not only to the party to the transaction, but to the total assets or annual net sales of companies or individuals under an "ultimate parent entity" with "control" established by 50% ownership of voting rights or rights to distribution.

A joint venture in which a juridical entity is formed to embody the joint venture can activate Hart-Scott-Rodino's reporting requirements, because the statute treats each joint

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180 15 U.S.C. § 18a.

181 15 U.S.C. § 18.

venture participant as an acquiring party and the joint venture entity that is formed as an acquired party.

The formation of a general partnership or an LP or transfer of less than all of the interests in a partnership ordinarily does not require a Hart-Scott-Rodino filing, subject to the rule concerning acquisition of the voting securities for any issuer included in the partnership. By contrast, transfer of all of a partnership's interests is considered an asset acquisition and is reportable under Hart-Scott-Rodino. The formation of an LLC may trigger Hart-Scott-Rodino reporting obligations if two or more pre-existing, separately controlled businesses are contributed and at least one of the members controls the LLC, in that it has a 50% "membership interest" or a right to 50% of the LLC's assets on dissolution.[182] Post-formation acquisitions of LLC interests are not reportable except in certain circumstances in which the acquisition is treated as a new LLC formation.

Exemptions from the Hart-Scott-Rodino filing requirement exist, notably for transactions in the ordinary course of business, acquisitions of certain voting securities or non-U.S. assets of a non-U.S. entity, and in the case of an acquisition of 10% or less of an issuer's voting securities that is made strictly for investment purposes. During the mandatory waiting period, the FTC or DoJ may request from the parties additional documentation and extensions of the waiting period. Once documentation requests have been fully complied with, upon a finding that the proposed acquisition violates § 7 of the Clayton Act, discussed below, the FTC or DoJ may move within twenty days for an injunction to block the proposed acquisition.

### 2. The Clayton Act

Section 7 of the Clayton Act prohibits acquisitions, directly or indirectly, of the whole or any part of the stock or assets of any company if "the effect of such acquisition, of such stocks or assets, or of the use of such stock by the voting or granting of proxies or otherwise, may be substantially to lessen competition, or to tend to create a monopoly."[183] Pursuant to § 11 of the Clayton Act, the FCC has jurisdiction to enforce compliance with § 7 of the Clayton Act when it is applicable to "common carriers engaged in wire or radio communication or radio transmission of energy."[184] The FCC, in performing Clayton Act review, may have access to the documentation produced to the DoJ in the Hart-Scott-Rodino reporting process, but conducts its own evidentiary hearings as well.

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182 FTC Notice of Amendment of Formal Interpretation 15, 16 C.F.R. § 803.30, July 1, 1999.

183 15 U.S.C. § 18.

184 15 U.S.C. § 21.

In practice, compliance and enforcement review of communications sector mergers and acquisitions is performed concurrently by the DoJ and the FCC, a seemingly redundant time-and expense-consuming process that has generated a great deal of industry and congressional complaint. However, the two agencies have different mandates and agendas in performing their respective reviews, notwithstanding the common statutory foundation. The DoJ in its review process employs the 1992 Joint DoJ/FTC Horizontal Merger Guidelines (revised in 1997),[185] which provide for measurement of specific product and geographic markets to determine the extent to which the proposed transaction will increase market concentration and decrease competition. Under the Horizontal Merger Guidelines, the primary analysis is based upon the ability of consumers in a given market to switch to other goods or services, whether supplied in that market or otherwise. The Horizontal Merger Guidelines also provide for consideration of whether the merger would promote efficiency gains that could not reasonably be achieved by the parties through other means and whether, if the merger is not allowed, one of the parties would be likely to go out of business, depriving the market of its assets in any event. On March 27, 2006, the FTC and DoJ jointly released a "Commentary on the Horizontal Merger Guidelines."[186]

The FCC tends to focus on more strategic, less compartmentalized trends within the telecommunications industry and employs a "public convenience, interest, or necessity" standard to determine whether approval should be granted. In a general sense, the DoJ performs a "negative" review to determine whether competition will be decreased by the proposed acquisition; the FCC performs a "positive" review to determine whether the public interest will be served by the proposed acquisition. Clearly, notwithstanding the common statutory foundation of the Clayton Act and the data developed by Hart-Scott-Rodino reporting, the approaches taken before the DoJ and the FCC may be markedly different.

### 3. State Review

State public service/public utility commissions are often empowered to review proposed mergers and acquisitions on competition grounds for intrastate wireline communications. Telecommunications mergers and acquisitions are subject to state regulatory review in every jurisdiction in which Target has operations, and are subject to heightened scrutiny in jurisdictions in which the two have overlapping operations and exercise market power. State public utility commissions usually require the filing of applications and tariffs as

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185 57 Fed. Reg. 41552-01.

186 U.S. Dep't of Justice & Federal Trade Commission, *Commentary on the Horizontal Merger Guidelines*, (2006), *available at* http://www.ftc.gov/os/2006/03/Commentaryonthe HorizontalMergerGuidelinesMarch2006.pdf.

part of the approval and certification process. See Section V(D) for the FCC's role in review of mergers and acquisitions.

## D. Communications Regulatory Issues

If Target in a proposed transaction possesses FCC-issued licenses or authorizations, and if the transaction will result in a change in the control of Target, the transaction must receive the advance approval of the FCC. While the specifics vary with the specific license or authorization type, the general FCC procedure is to file license or control transfer applications, following which there is a public notice of acceptance, a period for comments and petitions to reject, a further period for opposition to comments and petitions, replies, and then FCC Bureau or FCC action, followed by notification of approval or rejection.

Ownership restrictions and attribution rules for broadcasters and Cable Operators (see Sections IV(B)(3) and IV(C)(2)) can affect transaction structure, requiring divestitures or other accommodations to remain under the limits. The foreign ownership restrictions of Communications Act § 310 must also be observed (see Sections IV(H)(2) and V(A)(3)).

## E. Corporate Governance Issues

In general, approval of the board of directors of each party to the transaction, and certainly of Target, will be required. However, in certain cases, Purchaser may not need board approval if the transaction is not a material one for it, if it is made in the ordinary course of business, or does not require the Purchaser to issue stock as acquisition currency. Mergers require board approval of both parties under state corporation statutes.

Whether shareholder approval is required and whether by a simple majority or a super majority depends on the state of incorporation involved, the corporate charter and the form of transaction being undertaken. For example, in a stock purchase, the Target may not even be a party to the Agreement; the agreement of its shareholders to sell their shares constitutes their "approval." For publicly listed companies, the relevant stock exchange may also require shareholder approval.

A public company stock purchase or merger may be accomplished by a tender offer (when cash acquisition consideration is offered to the Target's shareholders) or an exchange offer (when Purchaser's stock is offered). In either case, the process is strictly regulated by the securities laws and regulations. Both methods have been associated with "hostile" (not negotiated) acquisitions and with negotiated acquisitions as a method of "mopping up" minority shareholders.

In either a negotiated or hostile acquisition context, and in the case of either a private or public company Target, Target's board of directors operates under a significant burden of fiduciary duty to Target itself and to Target's shareholders. These duties vary depending on Target's state of incorporation, and are most developed in the widely-used incorporation locale of Delaware.

The duties show up in M&A agreements in the form of "fiduciary out" clauses, providing the Target with the ability to walk away from a pending acquisition (sometimes avoiding break-up fees), when a more lucrative option presents itself and directors' fiduciary duties require them to accept it instead of the pending deal. Counseling a Target's board of directors faced with competing offers in the fulfillment of their fiduciary duties demands intimate knowledge of the corporation law of the state of the Target's incorporation and the jurisprudence developed under it.

## F. Bankruptcy Acquisitions

In the case of bankruptcy reorganizations under Chapter 11 of the U.S. Bankruptcy Code,[187] the debtor company ("Debtor") may wish (or be compelled by its Bankruptcy Trustee) to monetize assets to raise cash for its reorganization. The Bankruptcy Code provides two methods for selling assets: pursuant to a reorganization plan under § 1129 *et seq.* of the Bankruptcy Code or irrespective of a plan pursuant to § 363 of the Bankruptcy Code.

Section 363 provides a mechanism for sales by a Debtor "out of the ordinary course of business." Section 363 sales are subject to public hearings or auctions at which the prospective Purchaser runs the risk of being outbid, and are subject to the bankruptcy court's approval. Thus, § 363 sales typically proceed with an initial prospective purchaser of the debtor's assets being used as a "stalking horse" by Debtor and creditors to serve as the opening bid seeking better offers. The result, even when the stalking horse is the ultimately successful bidder, is often a substantially higher offer.

Acquisitions of communications assets in bankruptcy pursuant to § 363 may offer several advantages. First, the process is quicker than a plan of reorganization. Second, in a § 363 sale, Purchaser is not depending on a vote of Debtor's creditors to approve its acquisition. Third, a would-be Purchaser may be able to obtain bid protection that improves its chances of being the successful purchaser or at least compensate it if it overbids. Fourth, depending on the terms of sale, Purchaser may be able to cherry-pick the assets it wishes, which in any event may be available at distressed prices. Finally, the purchase will be judicially washed of Debtor's potential liabilities.

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The acquisition process a § 363 sale, once the bid has been won, parallels an acquisition outside of bankruptcy. However, the deal documents will provide for the bidding and auction process and bankruptcy court approval of the final sale. The documents may also address issues of concern to creditor and the bankruptcy court, and certain representations, warranties, conditions to closing, due diligence fees, breakup fees, and other deal terms commonly used by purchasers for their own protection in non-bankruptcy acquisitions will need to be approved by the bankruptcy court to be effective. Although Purchaser may be loath to part with various deal protections, it may be motivated by its recognition that the bankruptcy court may view contingencies in the proposed acquisition documents as not making its offer the "highest and best" bid available, assuming that the price offered for the assets is comparable, and may, as a consequence, lose the deal to a more certain offer.

## VI. Conclusion: A Look Ahead

At the beginning of this paper, we stated that the rapid and accelerating pace of change in the communications sector in the little more than a decade since the Internet's mass market emergence and passage of the Telecommunications Act, and even in the five years since the first version of this paper appeared, necessitated its full rewrite to remain both relevant and accessible. We hope we have made good on that undertaking. We who provide goods and services in the communications sector or invest in, lend to, or advise it, are lucky to live in exciting times.

From our point of view, the assurance of a continued challenge to remain relevant and accessible in this most rapidly evolving of business and technology sectors is a happy one. We feel sure that you, the reader, feel the same way.

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