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Telecommunications and Media Convergence: Selected Issues for Consideration

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August 14, 2013

Congressional Research Service
7-5700
www.crs.gov
R43178

CRS REPORT
Prepared for Members and
Committees of Congress

c11173008

Summary

The passage of the 1996 Telecommunications Act (P.L. 104-104) resulted in a major revision of the Communications Act of 1934 (47 U.S.C. 151 et seq.) to address the emergence of competition in what were previously considered to be monopolistic markets. Since its passage, however, the advancement of broadband technology to supply data, voice, and video; the growing convergence of the telecommunications and media sectors; and the growth in demand for usable radio-frequency spectrum has led to a consensus that the laws that govern these sectors have become inadequate to address this rapidly changing environment and have, according to a growing number of policymakers, made it necessary to consider revising the current regulatory framework.

This report provides an overview of selected topics that, while far from a definitive list, provide a broad overview of issues that are central to the telecommunications/media convergence debate. The issues covered in this report include broadband deployment, broadband regulation and access, broadcast media ownership rules, funding for the Corporation for Public Broadcasting, emergency communications, legal issues regarding facilities siting, Federal Communications Commission oversight and reform, Internet governance and the domain name system, reauthorization of statutory copyright and communications provisions in the Satellite Television Extension and Localism Act, spectrum policy and wireless broadband deployment, and Universal Service Fund reform.

Rather than addressing the specific legislative, regulatory, and industry activities, this report provides an overview of these major issues. The CRS products listed under “for further information,” found at the end of each issue topic, should be used to expand upon the issue, provide an update of relevant events, track congressional activity, and identify CRS analysts who are knowledgeable in these issue areas. This report will be updated occasionally.

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Introduction

The rapid pace of technological advances, including the shift from voice to data, from wireline to wireless, and from copper to fiber is redefining the parameters of the telecommunications and media markets. As these changes dramatically transform the marketplace, there is a growing consensus that existing laws and regulations be reexamined to address this transformation.

In general terms, the regulatory debate focuses on a number of issues including the extent to which existing regulations should be applied to traditional providers as they enter new markets where they do not hold market power, the extent to which existing regulations should be imposed on new entrants as they compete with traditional providers in the same markets, and the appropriate regulatory framework to be imposed on new and/or converging technologies that are not easily classified under the present framework.

If, and to what extent, the role of the Federal Communications Commission and state regulatory bodies should be modified as networks transition from a circuit-switched to an Internet Protocol network[1] and how to ensure that the core values (e.g., consumer protection, public safety, disability access, and competition) are preserved in this new environment are also being addressed.

How traditional policy goals, such as the advancement of universal service mandates in the provision of telecommunications services and the media market's long-standing policy objectives of localism, diversity of voices, and competition, should be applied, and/or revised, as these markets transform is also under consideration.

The deployment, adoption, and regulatory treatment of broadband technologies continues to hold a major focus in the policy debate. Some policymakers feel it is necessary to take steps to ensure access to the Internet for content, services, and applications providers, as well as consumers, while others feel that such actions will slow deployment of and access to the Internet, and limit innovation. The transition of the Universal Service Fund to the Connect America Fund to support broadband deployment and adoption has generated concerns regarding consequences for small rate-of-return carriers. The impact of broadband deployment on the media sector as consumers change their viewing patterns and adopt new delivery technologies is also central to the debate.

The allocation and regulation of radio-frequency spectrum has also become a crucial component in the policy debate. The ability of new wireless technologies to deliver a variety of communications services and the increasing demand for mobility has placed increased pressure on usable spectrum as consumer demand fuels commercial demand for spectrum. The public sector also requires spectrum for a variety of government and emergency uses. Policymakers are increasingly being called upon to balance the needs of both the public and the private sector.

[1] The circuit-switched network refers to the legacy telecommunications network based on copper wires and switching which was built to handle one-to-one voice communication and is referred to as the public switched telephone network. The Internet Protocol, or IP network, refers to the high-speed next-generation digital network which is capable of handling multimedia as well as voice and more.

Broadband Deployment[2]

Broadband—whether delivered via fiber, cable modem, copper wire, satellite, or wirelessly—is increasingly the technology underlying telecommunications services such as voice, video, and data. Since the initial deployment of broadband in the late 1990s, Congress has viewed broadband infrastructure deployment as a means towards improving regional economic development, and in the long term, to create jobs. According to the Federal Communications Commission's (FCC's) National Broadband Plan, the lack of adequate broadband availability is most pressing in rural America, where the costs of serving large geographical areas, coupled with low population densities, often reduce economic incentives for telecommunications providers to invest in and maintain broadband infrastructure and service. The National Broadband Plan also identified broadband adoption as a problem, whereby one in three Americans have broadband available but choose not to subscribe. Populations continuing to lag behind in broadband adoption include people with low incomes, seniors, minorities, the less-educated, non-family households, and the non-employed.

The 113th Congress may address a range of broadband-related issues. These include the transition of the telephone-era Universal Service Fund to the broadband-focused Connect America Fund, reauthorization of broadband loan programs in the 2013 farm bill, and the development of new wireless spectrum policies. Additionally, the 113th Congress may choose to examine existing regulatory structure and consider possible revision of the 1996 Telecommunications Act and its underlying statute, the Communications Act of 1934. Both the convergence of telecommunications providers and markets and the transition to an Internet protocol (IP) based network have, according to a growing number of policymakers, made it necessary to consider revising the current regulatory framework. How a possible revision might create additional incentives for investment in, deployment of, and subscribership to broadband infrastructure is likely to be just one of many issues under consideration.

To the extent that Congress may consider various options for further enhancing broadband deployment, a key issue is how to develop and implement federal policies intended to increase the nation's broadband availability and adoption, while at the same time minimizing any deleterious effects that government intervention in the marketplace may have on competition and private sector investment.

For Further Information

CRS Report R42524, *Rural Broadband: The Roles of the Rural Utilities Service and the Universal Service Fund*, by Angele A. Gilroy and Lennard G. Kruger.

CRS Report RL30719, *Broadband Internet Access and the Digital Divide: Federal Assistance Programs*, by Lennard G. Kruger and Angele A. Gilroy.

CRS Report RL33816, *Broadband Loan and Grant Programs in the USDA's Rural Utilities Service*, by Lennard G. Kruger.

[2] Lennard G. Kruger, Specialist in Science and Technology Policy, and Angele A. Gilroy, Specialist in Telecommunications Policy, Resources, Science, and Industry Division.

Broadband Access and "Net Neutrality"[3]

As policymakers continue to debate telecommunications reform, a major point of contention is whether action is needed to ensure unfettered access to the Internet. The move to place restrictions on the owners of the networks that compose and provide access to the Internet, to ensure equal access and non-discriminatory treatment, is referred to as "net neutrality." While there is no single accepted definition of "net neutrality," most agree that any such definition should include the general principles that owners of the networks that compose and provide access to the Internet should not control how consumers lawfully use that network, and should not be able to discriminate against content provider access to that network.

A major focus in the debate is concern over whether it is necessary for policymakers to take steps to ensure access to the Internet for content, services, and applications providers, as well as consumers, and if so, what these steps should be. Some policymakers contend that more specific regulatory guidelines may be necessary to protect the marketplace from potential abuses which could threaten the net neutrality concept. Others contend that existing laws and policies are sufficient to deal with potential anti-competitive behavior and that additional regulations would have negative effects on the expansion and future development of the Internet.

What, if any, action should be taken to ensure "net neutrality" has become a major focal point in the debate over broadband regulation. As the marketplace for broadband continues to evolve, some contend that no new regulations are needed, and if enacted will slow deployment of and access to the Internet, as well as limit innovation. Others, however, contend that the consolidation of broadband providers, coupled with their diversification into content, has the potential to lead to discriminatory behaviors which conflict with net neutrality principles. The two potential behaviors most often cited are the network providers' ability to control access to and the pricing of broadband facilities, and the incentive to favor network-owned content, thereby placing unaffiliated content providers at a competitive disadvantage.

The December 21, 2010, adoption, and November 20, 2011, implementation, by the Federal Communications Commission (FCC) of its Open Internet Order has focused attention on the issue. A consensus on the net neutrality issue has remained elusive and support for the FCC's Open Internet Order has been mixed. While some Members of Congress support the action, and in some cases would have supported an even stronger approach, others feel that the FCC has overstepped its authority and that the regulation of the Internet is not only unnecessary, but harmful. Internet regulation and the FCC's authority to implement such regulations, which is currently facing court challenge, is an issue of growing importance in the wide ranging debate over broadband regulation.

For Further Information

CRS Report R40616, *Access to Broadband Networks: The Net Neutrality Debate*, by Angele A. Gilroy.

[3] Angele A. Gilroy, Specialist in Telecommunications Policy, Resources, Science, and Industry Division.

Broadcast Media Ownership Rules[4]

The Federal Communications Commission's (FCC's) broadcast media ownership rules, which place restrictions on the number of media outlets that a single entity can *own or control* in a local market or nationally, are intended to foster the three long-standing goals of U.S. media policy—competition, localism, and diversity of voices. The FCC is statutorily required to review these rules every four years to determine whether they continue to serve the public interest or should be modified or eliminated. One part of these rules, the FCC's attribution rules, identify criteria for determining when an entity holds sufficient ownership or control of a broadcast station that such ownership or control should be attributed to the entity for the purposes of applying the media ownership rules.

In December 2011, the FCC proposed a number of rule changes, which it has not yet adopted. It proposed eliminating its Radio/Television Cross-Ownership rule because it is no longer needed to foster the goals of diversity of voices and localism. It also proposed modifying its Newspaper/Broadcast Cross-Ownership rule to allow certain types of combinations in the 20 largest markets. It proposed a technical change in its Local Television Ownership Rule, but otherwise would continue to prohibit ownership of two stations in a local market unless one is not among the four highest-ranked stations in the market and, after the combination, there would still be eight independently owned and operating commercial full-power television stations. The FCC proposed that its Local Radio Ownership and Dual Network rules be retained as is. The FCC also sought public comment on how to define the criteria for an entity to be eligible for programs intended to promote the diversity of media ownership, and, in particular, to promote ownership by women and minorities.

In recent years, many television stations have entered into sharing arrangements with other stations in their local markets to jointly sell advertising and/or produce local news programming, typically with one station managing that shared operation and perhaps providing most or all of the staffing and other resources. The FCC sought public comment on how, for the purposes of the media ownership rules, to attribute control of a broadcast television station that has entered into such a sharing arrangement. Currently, the only sharing agreement-related attribution rule for television stations covers local marketing agreements in which one station purchases blocks of time from another station in the same market and sells the advertising for the purchased time (that is, the broker station provides both the programming and the advertising) for at least 15% of the brokered station's broadcasting time. The FCC has enforced this as a bright-line rule. As long as (1) the block of time covered by an agreement does not exceed 15% of the brokered station's programming time, and (2) the agreement contains a certification and perhaps other language indicating that the licensee of the brokered station maintains ultimate control over station finances, personnel, and programming, the agreement will not trigger the attribution rule. Other evidence is considered immaterial. As a result, in many cases the FCC has not deemed a station to have control over another station in the same market even if such control is considered to exist, and must be reported, under generally accepted accounting practices. Such agreements create what is known in the industry as "virtual duopolies."

In late 2012, the FCC released (and made available for public comment) a report on broadcast ownership by gender, ethnicity, and race, and invited the public to comment on how its proposed

[4] Charles B. Goldfarb, Specialist in Telecommunications Policy, Resources, Science, and Industry Division.

ownership rule changes might affect female and minority ownership. It delayed adoption of new broadcast ownership rules until those public comments could be analyzed. Responding to that report, the Minority Media and Telecommunications Council asked the FCC for an additional delay so it could conduct a study of the likely impact of the FCC's proposed rule changes on female and minority ownership. The National Association of Broadcasters supports that delay and the FCC has agreed to it. The FCC is expected to adopt new rules later in 2013.

For Further Information

CRS Report R42436, *The FCC's Broadcast Media Ownership and Attribution Rules: The Current Debate*, by Charles B. Goldfarb.

Corporation for Public Broadcasting[5]

Since 1967, the Corporation for Public Broadcasting (CPB) has been the funding vehicle to provide federal support to local public television and radio broadcasting entities through the country. The CPB was created to provide a non-profit entity that could disburse federal grants without political interference, and without direct federal control of who receives the funding.

The CPB receives virtually all of its funding through federal appropriations; overall, about 15% of all public television and radio broadcasting funding comes from the federal appropriations that CPB distributes. CPB's appropriation is allocated through a distribution formula established in its authorizing legislation and has historically received two-year advanced appropriations. On March 22, 2013, President Obama signed a Continuing Resolution (CR) of federal funding for FY2013 into law (H.J.Res. 117, P.L. 112-175). It maintains CPB's advanced appropriations for FY2013 at $445 million from October 1, 2012, through October 1, 2013. However, the federal government is also under a sequestration action mandated under the American Taxpayer Relief Act of 2012 (P.L. 112-40). Under this law, the CPB's appropriation is reduced by 5%, or $22.25 million. Therefore, the CPB has an appropriated budget of $422.75 million for FY2013. On March 26, 2013, the President signed into law the Consolidated and Further Continuing Appropriations Act, 2013 (P.L. 113-6), which provides continuing federal funding, under sequestration limits, through the end of FY2013.

Congressional policymakers are increasingly interested in the federal role in supporting CPB due to concerns over the federal debt, the role of the federal government funding for public radio and television, and whether public broadcasting provides a balanced and nuanced approach to covering news of national interest. It is also important to note that many congressional policymakers defend the federal role of funding public broadcasting. They contend that it provides news and information to large segments of the population that seek to understand complex policy issues in depth, and, in particular for children's television broadcasting, that it has a significant and positive impact on early learning and education for children.

On June 20, 2012, the Corporation for Public Broadcasting released a report, *Alternative Sources of Funding for Public Broadcasting Stations*. The report was undertaken in response to the conference report accompanying the Military Construction and Veterans Affairs and Related

[5] Glenn J. McLoughlin, Section Research Manager, Resources, Science, and Industry Division and Mark Gurevitz, Information Research Specialist, Knowledge Services Group.

Appropriations Act of 2012 (incorporated into the Consolidated Appropriations Act, FY2012, H.R. 2055, P.L. 112-74). The CPB engaged the consulting firm of Booz & Company to explore possible alternatives to the federal appropriation to CPB. Among its findings, the report stated that ending federal funding for public broadcasting would severely diminish, if not destroy, public broadcasting service in the United States.

For Further Information

CRS Report RS22168, *The Corporation for Public Broadcasting: Federal Funding and Issues*, by Glenn J. McLoughlin and Mark Gurevitz.

Emergency Communications[6]

The three pillars of emergency communications are wireless networks for first responders and other emergency personnel; 9-1-1 calls and dispatching; and emergency alerts such as the Emergency Alert System (EAS), delivered over television and radio, and Wireless Emergency Alerts (WEA) on mobile devices. Increasingly, emergency communications rely on using the same network architecture and protocols as the Internet (IP-enabled network) to provide interoperability within and among networks.

Previous Congresses have passed key laws to improve emergency communications. The 113th Congress is likely to continue legislative initiatives and to conduct oversight of programs that are underway in response to earlier legislation. In Title VI (Spectrum Act) of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96), Congress has addressed some of the needs of first responders and 9-1-1 call centers.

To provide seamless communications among first responders and emergency personnel at the scene of a major disaster, for example, Congress included provisions in the Spectrum Act for planning, building, and managing a new, nationwide broadband network for public safety communications, and assigned additional spectrum to accommodate the new network.

The Spectrum Act also has included provisions to improve 9-1-1 services and technology. It re-established the federal 9-1-1 Implementation Coordination Office (ICO) to advance planning for next-generation systems and to administer a grant program. Previously, recognizing the importance of providing effective 9-1-1 service, Congress passed three major bills supporting improvements in the handling of 9-1-1 calls. The Wireless Communications and Public Safety Act of 1999 (P.L. 106-81) established 9-1-1 as the number to call for emergencies and gave the Federal Communications Commission (FCC) authority to regulate many aspects of the service. The NET 9-1-1 Improvement Act of 2008 (P.L. 110-283) required the preparation of a National Plan for migrating to an IP-enabled emergency network. Responsibility for the plan was assigned to ICO, originally created to meet requirements of an earlier law, the ENHANCE 911 Act of 2004 (P.L. 108-494).

EAS messages, a crucial part of emergency alerts, are being incorporated into the Integrated Public Alert and Warning System (IPAWS), which is being built to serve as a communications backbone to receive and relay alerts to designated geographical areas. In addition to broadcast,

[6] Linda K. Moore, Specialist in Telecommunications Policy, Resources, Science, and Industry Division.

satellite, cable, and radio communications through EAS, IPAWS can deliver messages to any IP-enabled network including, for example, electronic highway signs.

In cooperation with wireless carriers, IPAWS is supporting WEA to mobile devices. The development of WEA, originally known as the Commercial Mobile Alert System (CMAS), was mandated by Congress as part of the Warning, Alert, and Response Network (WARN) Act, Title VI of P.L. 109-37.

For Further Information

CRS Report R42543, *The First Responder Network and Next-Generation Communications for Public Safety: Issues for Congress*, by Linda K. Moore.

Facilities Siting—Legal Issues[7]

An integral part of the mission of Congress and the Federal Communications Commission (FCC) to encourage broadband deployment is the effort to increase both wireless and wireline broadband capacity. To that end, both Congress and the FCC have taken steps to streamline the process by which companies providing wired and wireless broadband services may place their equipment on already existing poles or structures designed to host such equipment (known as collocation).

For its part, Congress included Section 704 of the Telecommunications Act of 1996 (47 U.S.C. §224), which governs federal, state, and local regulation of the siting of "personal wireless service facilities." Under Section 704, state and local governments are prohibited from unreasonably discriminating among "providers of functionally equivalent services," nor can they adopt policies that have the effect of prohibiting wireless services. These prohibitions grant states and localities flexibility in deciding where towers should be placed within their communities, while ensuring that these governing bodies cannot prevent the provision of personal wireless services in an area.

Notwithstanding the flexibility for the siting of brand new facilities provided by Section 704, Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) (47 U.S.C. §1455) amended the Communications Act to require state and local governments to grant requests for modifications of existing wireless towers or base stations if the request would not substantially change the physical dimensions of the tower or base station. Presumably, this provision is intended to increase the speed of wireless infrastructure deployment. Section 6409 is not without its ambiguities, however. No definition is provided in the statute for the terms "tower" or "base station." Furthermore, no definition is provided for what it might mean to "substantially change the physical dimensions" of a tower. These ambiguities may cause difficulty in applying the new provision to future collocation requests. They may be resolved either by federal courts during litigation or by the FCC in a declaratory rulemaking to define the terms.

While Congress attempted to streamline the process of collocation on existing wireless towers, the FCC has engaged in a similar effort to streamline the process of collocation of equipment on existing poles owned by utility companies. Section 224 of the Communications Act (47 U.S.C.

[7] Kathleen Ann Ruane, Legislative Attorney, American Law Division.

§224) grants the Commission the authority to regulate the rates, terms, and conditions for pole attachments, which are defined by the statute as "any attachment by a cable television system or provider of a telecommunications service to a pole, duct, conduit, or right-of-way owned or controlled by a utility." In 2011, the FCC issued an order revising its interpretation of Section 224 to allow incumbent local exchange carriers (ILECs) for the first time to share some of the benefits of Section 224; reformulate (i.e., lower) the rates utilities could charge telecommunications carriers, bringing those rates closer to the rates charged to cable providers; and reformulate the timing of the calculation of refunds when attachers are overcharged. (*In the Matter of the Implementation of Section 224 of the Act, Report and Order and Order on Reconsideration*, 26 FCC Rcd. 5240 (April 7, 2011).)

Utility companies challenged the FCC's authority to make these changes, claiming that ILECs were excluded from the definition of telecommunications service providers under Section 224 and could not be eligible for pole attachment rights under Section 224 as a result. The Court of Appeals for the D.C. Circuit disagreed, upholding the FCC's interpretation of the statute. (*American Electric Power Service Corp. v. Federal Communications Commission*, 2013 U.S. App. LEXIS 3924 (D.C. Circuit, 2013).) The court found that while Section 224 did exclude ILECs from the definition of telecommunications carriers, that exclusion only applied to Section 224(e), which permits the FCC to regulate charges for pole attachments to telecommunications carriers when the parties fail to resolve a dispute regarding those charges. The FCC was permitted to interpret Section 224(a), which allows the Commission to regulate pole attachments for providers of telecommunications services more generally, to apply to ILECs.

The utility companies also challenged the FCC's decision to adopt telecom rates that were substantially equivalent to cable rates for pole attachments and the amendments to the calculation of the so-called "refund period." The court accorded deference to the FCC's interpretation of Section 224 in both of those instances, as well, and denied the utility companies' petition to review the FCC's order amending its regulations under Section 224 in full.

For Further Information

CRS Report RS20783, *Broadband Deployment: Legal Issues for the Siting of Wireless Communications Facilities and Amendments to the Pole Attachment Rule*, by Kathleen Ann Ruane.

Federal Communications Commission—Oversight and Reform[8]

The Federal Communications Commission (FCC) is an independent federal agency with its five members appointed by the President, subject to confirmation by the Senate. It was established by the Communications Act of 1934 (1934 Act) and is charged with regulating interstate and international communications by radio, television, wire, satellite, and cable. The mission of the FCC is to ensure that the American people have available—at reasonable cost and without

[8] Patricia Moloney Figliola, Specialist in Internet and Telecommunications Policy, Resources, Science, and Industry Division.

discrimination—rapid, efficient, nation- and world-wide communication services, whether by radio, television, wire, satellite, or cable.

Although the FCC has restructured over the past few years to better reflect the industry, it is still required to adhere to the statutory requirements of its governing legislation, the Communications Act of 1934. The 1934 Act requires the FCC to regulate the various industry sectors differently. Some congressional policymakers have been critical of the FCC and the manner in which it regulates various sectors of the telecommunications industry—telephone, cable television, radio and television broadcasting, and some aspects of the Internet. These policymakers have called for varying degrees and types of reform to the FCC to better reflect the current state of the telecommunications industry. Most proposals fall into two categories: (1) procedural changes made within the FCC or through congressional action that would affect the agency's operations or (2) substantive policy changes requiring congressional action that would affect how the agency regulates different services and industry sectors.

The FCC's budget is derived from regulatory fees collected by the agency rather than through a direct appropriation. The fees, often referred to as "Section (9) fees," are collected from license holders and certain other entities (e.g., cable television systems) and deposited into an FCC account. The law gives the FCC authority to review the regulatory fees and to adjust the fees to reflect changes in its appropriation from year to year. It may also add, delete, or reclassify services under certain circumstances.

For Further Information

CRS Report RL32589, *The Federal Communications Commission: Current Structure and Its Role in the Changing Telecommunications Landscape*, by Patricia Moloney Figliola.

Internet Governance and the Domain Name System[9]

The Internet is comprised of international and decentralized networks largely owned and operated by private sector entities. As the Internet becomes more pervasive in all aspects of society, the question of how it should be governed becomes more pressing. Currently, an important aspect of the Internet is governed by a private sector, international organization called the Internet Corporation for Assigned Names and Numbers (ICANN), which manages the domain name system and Internet addressing. ICANN makes its decisions using a multistakeholder model of governance, in which a collaborative policy development process is open to all Internet stakeholders.

National governments have increasingly recognized the importance of ICANN policy decisions, especially in cases where Internet policy intersects with national laws addressing such issues as intellectual property, privacy, law enforcement, Internet freedom, and cybersecurity. Some governments are advocating an increased level of intergovernmental influence over the way the Internet is governed, while other governments (such as the United States and the European Union) oppose intergovernmental jurisdiction over the Internet. This debate surfaced during consideration of the revised International Telecommunication Regulations (ITR) treaty held by the International Telecommunication Union (a United Nations agency) during the December 2012

[9] Lennard G. Kruger, Specialist in Science and Technology Policy, Resources, Science, and Industry Division.

World Conference on International Telecommunications (WCIT) in Dubai. Ultimately, the United States (and 54 other nations) chose not to sign the final treaty, citing an unacceptable expansion of ITR jurisdiction over the Internet.

As part of its input into the WCIT debate, the 112th Congress unanimously passed S.Con.Res. 50, which expressed the sense of Congress that the Administration should promote a global Internet free from intergovernmental control, and should preserve and advance the successful multistakeholder model of Internet governance. A key issue for the 113th Congress is whether and how the U.S. government should continue to maximize its influence over ICANN's multistakeholder Internet governance process, while at the same time effectively resisting proposals for an increased role by international governmental institutions such as the United Nations. An ongoing concern is, to what extent will future intergovernmental telecommunications conferences constitute an opportunity for some nations to increase intergovernmental control over the Internet, and how effectively will the Administration work to counteract that threat?

For Further Information

CRS Report R42351, *Internet Governance and the Domain Name System: Issues for Congress*, by Lennard G. Kruger.

CRS Report 97-868, *Internet Domain Names: Background and Policy Issues*, by Lennard G. Kruger.

Reauthorization of Statutory Copyright and Communications Provisions in the Satellite Television Extension and Localism Act[10]

The Satellite Television Extension and Localism Act of 2010 (STELA, P.L. 111-175) reauthorized, through December 31, 2014, several provisions in the Copyright Act and in the Communications Act relating to the retransmission of broadcast television signals by satellite television operators. Several of these provisions make it easier for satellite operators to import the programming of distant network television stations to households that cannot receive that programming from a local television station, by creating a low cost compulsory license for the copyrighted works contained in the network programming and by allowing the satellite operator to retransmit the programming without first obtaining the consent of the distant television station. In most other situations, satellite operators (and cable operators) must obtain the prior consent of broadcasters when retransmitting their signals. Other sunsetting provisions, intended to minimize the blackout of broadcast programming, require broadcast stations, satellite operators, and cable operators to negotiate this retransmission consent in good faith.

Congress will have to decide whether it wishes to retain these provisions or modify or eliminate them. This is likely to generate policy debates about statutory copyright licenses and retransmission consent.

[10] Charles B. Goldfarb, Specialist in Telecommunications Policy, Resources, Science, and Industry Division.

There is a separate compulsory license for the retransmission of broadcast signals by cable operators, but that license is created in a statutory provision that is not subject to sunset. Copyright holders generally oppose compulsory licenses because they believe negotiated copyright rates would be higher. They therefore oppose extension of the compulsory satellite license and also would eliminate the compulsory cable license. There would be competitive implications if the satellite copyright license were eliminated, but not the cable copyright license. Currently, there is no statutory compulsory copyright license provision for the retransmission of broadcast signals by online video distributors and therefore online distributors seeking to provide their subscribers with broadcast signals must negotiate copyright fees directly with the copyright holders. This places online video distributors at a competitive disadvantage, and in the debate about the compulsory satellite license they are likely to seek parity with cable and satellite operators.

Cable and satellite operators would prefer not to have to pay retransmission consent fees for the right to retransmit broadcast signals and thus they seek to eliminate the retransmission consent requirement or, at the least, to require that retransmission consent negotiations that hit an impasse be subject to mandatory arbitration and that the contested broadcast signals continue to be retransmitted during the arbitration process. The broadcasters oppose those proposals.

To foster the long-standing goal of localism, in most situations cable and satellite operators are restricted from retransmitting to their subscribers the signals of distant television stations if the same network programming is provided by a local station. But some counties around the country are assigned to local markets for which all the television stations are actually located across the state border, so that they do not receive news, sports, and other programming pertaining to their state. There has been a long, unsettled debate about how to better serve these "orphan counties" that is likely to arise again as Congress addresses reauthorization of these statutory provisions.

For Further Information

CRS Report R41274, *How the Satellite Television Extension and Localism Act (STELA) Updated Copyright and Carriage Rules for the Retransmission of Broadcast Television Signals*, by Charles B. Goldfarb.

CRS Report R42722, *Online Video Distributors and the Current Statutory and Regulatory Framework: Issues for Congress*, by Charles B. Goldfarb and Kathleen Ann Ruane.

Spectrum Policy and Wireless Broadband Deployment[11]

Wireless broadband, with its rich array of services and content, requires new spectrum capacity to accommodate growth. Spectrum capacity is necessary to deliver mobile broadband to consumers and businesses and also to support the communications needs of industries that use fixed wireless broadband to transmit large quantities of information quickly and reliably.

[11] Linda K. Moore, Specialist in Telecommunications Policy, Resources, Science, and Industry Division.

Electromagnetic spectrum, commonly referred to as radio frequency spectrum or wireless spectrum, refers to the properties in air that transmit electric signals and, with applied technology, can deliver voice, text, and video communications. Access to radio frequency spectrum is controlled by assigning rights to specific license holders or to certain classes of users. The assignment of spectrum rights does not convey ownership. Radio frequency spectrum is managed by the Federal Communications Commission (FCC) for commercial and other non-federal uses and by the National Telecommunications and Information Administration (NTIA) for federal government use.

Although radio frequency spectrum (air) is abundant, usable spectrum is currently limited by the constraints of applied technology. Spectrum policy therefore includes making decisions about how radio frequencies will be allocated, who will have access to them, and how technology may enhance service and increase capacity and accessibility.

Spectrum policy issues that may be addressed in the 113th Congress include assuring that new capacity is made available for wireless broadband. Congress may also choose to explore emerging technologies that promise to enhance broadband capacity and spur innovation.

The Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96), signed February 22, 2012, contained provisions in Title VI to increase the availability of spectrum for commercial use. The provisions in Title VI—also known as the Spectrum Act—included expediting auctions of licenses for spectrum designated for mobile broadband; authorizing incentive auctions, which would permit television broadcasters to receive compensation for steps they might take to release some of their airwaves for mobile broadband; requiring that specified federal holdings be auctioned or reassigned for commercial use; providing for the availability of spectrum for unlicensed use; and assigning additional spectrum to support the construction of a new, interoperable broadband radio network for first responders and others. The act also included provisions to apply future spectrum license auction revenues toward deficit reduction and to establish a planning and governance structure to deploy public safety broadband networks, using some spectrum license auction proceeds for that purpose.

For Further Information

CRS Report R40674, *Spectrum Policy in the Age of Broadband: Issues for Congress*, by Linda K. Moore.

CRS Report R42886, *The National Telecommunications and Information Administration (NTIA): Issues for the 113th Congress*, by Linda K. Moore.

Universal Service Fund Reform

Since its creation in 1934 the Federal Communications Commission (FCC) has been tasked with "mak[ing] available, so far as possible, to all the people of the United States ... a rapid, efficient, Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges." (Communications Act of 1934, as amended, Title I §1 [47 U.S.C. 151].) This mandate led to the development of what has come to be known as the universal service concept.

The universal service concept, as originally designed, called for the establishment of policies to ensure that telecommunications services are available to all Americans, including those in rural,

insular, and high cost areas, by ensuring that rates remain affordable. The Telecommunications Act of 1996 (P.L. 104-104; 47 U.S.C., 1996 act) codified the long-standing commitment by U.S. policymakers to ensure universal service in the provision of telecommunications services (§254), and the FCC established, in 1997, a federal Universal Service Fund (USF) to meet the objectives and principles contained in the act. The USF was designed to provide subsidies for voice telecommunications services for eligible high-cost telecommunications carriers (High Cost Program) and economically needy individuals (Low Income Program); access for telecommunications services and broadband access for schools and libraries (Schools and Libraries Program); and access to telecommunications, advanced telecommunications, and information services for public and non-profit rural health care providers (Rural Health Care Program).

One of the major policy debates surrounding universal service in the last decade was whether access to advanced telecommunications services (i.e., broadband) should be incorporated into universal service objectives. With the growing importance and acceptance of broadband and Internet access, gaps in access to such services, particularly in rural areas, generated concern. A growing number of policymakers felt that the USF should play a role in helping to alleviate this availability gap. This debate was put to rest when provisions contained in the American Recovery and Reinvestment Act of 2009 (ARRA) called for the FCC to develop, and submit to Congress, a national broadband plan (NBP) to ensure that every American has "access to broadband capability." (American Recovery and Reinvestment Act of 2009, P.L. 111-5, §6001 (k)(2)(D).) This plan, Connecting America: The National Broadband Plan, submitted to Congress on March 16, 2010, called for the USF to play a major role in achieving this goal. However, with the exception of funding for schools and libraries and rural health care providers, the USF was not designed to directly support broadband.

The FCC, in an October 2011 decision, adopted an order that calls for the USF to be transformed, in stages, over a multi-year period, from a mechanism to support voice telephone service to one that supports the deployment, adoption, and utilization of both fixed and mobile broadband. More specifically, the High Cost Program is to be phased out and a new fund, the Connect America Fund (CAF), which includes the targeted Mobility Fund and new Remote Areas Fund, is to be created to replace it; and the Low Income, Schools and Libraries, and Rural Health Care programs are to be modified and given wider responsibilities.

This transition is a vast undertaking and has caused considerable debate as policymakers balance the myriad goals and objectives to modernize the USF. As the USF undergoes this major and unprecedented transition it is anticipated that Congress will continue to assess the impact of these reforms and the FCC's progress in their implementation.

For Further Information

CRS Report R42524, *Rural Broadband: The Roles of the Rural Utilities Service and the Universal Service Fund*, by Angele A. Gilroy and Lennard G. Kruger.

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