Lasering in on the Federal Communications Commission: Can the FCC Regulate Laser Communications?

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LASERING IN ON THE FEDERAL COMMUNICATIONS COMMISSION: CAN THE FCC REGULATE LASER COMMUNICATIONS?

JOEL THAYER*

ABSTRACT

The United States is in the midst of a “spectrum crunch.” The phrase describes the phenomenon involving more telecommunication devices’ dependence on a finite resource: the electromagnetic spectrum—a resource containing radio signals that most wireless telephony devices use, including cell phones and tablets. Mostly, these devices operate on two types of wavelengths: radio waves and microwaves. As consumers grow more reliant on these devices in their daily life, the need to explore other waves of spectrum becomes much more apparent. Market players in the telecommunications field have started looking into this “spectrum crunch” issue and are reacting accordingly. Laser communication technology, a technology using infrared and light spectrum, could be the next feasible solution in resolving this market concern. However, this potential market transition leaves some question as to which agency is best suited to regulate it.

Under the Communications Act of 1934 (“Communications Act” or the “Act”), the Federal Communications Commission (“FCC” or the “Commission”) traditionally regulates the telecommunications market and, by extension, some devices using the electromagnetic spectrum. However, does the FCC’s congressional delegation pursuant to the Communications Act give the Commission the authority to regulate entities using laser technology, or is the

* Joel Thayer: American University Washington College of Law, J.D. (2015); California State University, Fullerton, B.A. (2011). Thank you to my family for their ongoing support, Professor Pamela Meredith for the inspiration for and guidance on this article, and to the Intellectual Property Brief and its staff for their superior work in the publishing process.
scope of its authority limited to those entities using radio or microwaves?

This Article contends that the FCC may have such authority to regulate said entities because the Communications Act is not necessarily limited to those devices using only wires or radio waves. This understanding stands on three pillars: (1) the explicit mention of the FCC regulating facilities-based entities using the electromagnetic spectrum; (2) there is no clear definition in the statute or rules that the term “electromagnetic spectrum” is limited to only radio and microwaves in the Communications Act; and, (3) assuming the courts find that the FCC’s dominion over laser frequencies is limited under the Communications Act, services provided by laser communication satellites could fall within the definition of an “advanced telecommunication” under the Telecommunications Act of 1996 (“Telecommunications Act” or the “1996 Act”) pursuant to its ancillary jurisdiction.

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INTRODUCTION

In almost every field, new technologies are essential to market growth. The telecommunications industry is no different; innovative technologies are the driving force for a sustainable and thriving marketplace. As cellular phones, tablets, and other wireless devices become ubiquitous to the average consumer, the need for more available spectrums is rising. Traditionally, mobile communication has used two types of wavelengths—radio waves and microwaves—and both are nearing capacity in terms of availability. Colloquially, the Commission calls this phenomenon the “spectrum crunch.”

The Commission has increasingly attempted to ameliorate this issue in a variety of ways. For example, the FCC is attempting to conduct a Broadcast Incentive Auction to reutilize and redistribute spectrum for other commercial use. The goal is to attract broadcasters to sell back some of their radio spectrum in the 600 MHz band to the FCC so that it may auction it off to wireless carriers. However, there is no escaping the undeniable truth: the industry must start looking to other wavelengths on the electromagnetic spectrum to meet the public demand for more quality wireless services. The developments from laser communication providers, specifically those demonstrated by Laser Light Communications, might be the next realistic option for the industry in addressing this problem, because it uses virtually untapped wavelengths within light frequencies and independent from traditional radio frequency bands most telecommunications carriers use. Laser communications carriers provide similar services as other traditional telecommunications services (e.g., cell phones, broadband, etc.). The implications of carriers using the light spectrum could lead to better

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service for cell phones or faster Internet speeds because of the variety of spectrum bands will relieve the pressure off of those carriers using radio waves to transmit signals.

Although the Commission has had long-standing regulatory authority over radio and microwave frequencies, it is unclear as to whether it will have similar authority for laser technologies, which does not use either of those frequencies. Moving toward devices using laser frequencies that operate mostly on light and infrared waves might cause some concern from a regulatory standpoint. For instance, assuming market participants mass produce these laser technologies for commercial use, how would they be regulated under the FCC’s current legal framework? Would these technologies require a new classification from the Act that would require congressional action? This paper attempts to address these legal and regulatory concerns.

This Article holds that if the market included devices using laser satellites, the Commission would be the appropriate agency to regulate these services as opposed to antitrust-based agencies, such as the Federal Trade Association or the Antitrust Division in the Department of Justice. This is because such devices would provide interstate-telephony services to the public, falling within the Commission’s “duties and purposes” under Section 151 of the Communications Act. These laser satellite services would also meet the definition of a “telecommunication” under Section 3 of the Act. Moreover, if courts limit the Act’s definition of “telecommunications” to only those technologies using radio or wire due to Section 151’s explicit mention of said modes of transmission, then the Commission could attempt to assume authority over laser communications by defining it as an “advanced telecommunication” under Section 706 of the Telecommunications Act.

This Article also focuses on whether the Commission can impose obligations for services provided by these laser-based entities, and if so, to what extent. It is clear that if a laser satellite signal were to cause interference to devices using radio waves, the Commission would have authority to intervene. However, can it regulate the actual telephony services provided by laser communication satellites? The answer is a reserved “yes,” but only insofar as the Commission follows the proper procedures to promulgate rules to that effect. As a disclaimer, Congressional action in clarifying the agency’s role in the matter is preferred, but, assuming there is none, the Commission has the regulatory infrastructure to regulate this technology in a limited capacity.

To make this argument, the Article will be broken up into four parts.

Part I gives a very brief description of how laser communications currently function. Part II provides some background on the types of authority delegated to the Commission by Congress in regulating the telecommunications market. Part III examines what it means for the Commission to have “authority” and whether laser communications fits into any of those categories. Finally, Part IV concludes that the Commission may have authority under its ancillary jurisdiction to promote “advanced telecommunications” under Section 706 of the Telecommunications Act with statutory grounding in Section 303(y). However, using the proper rulemaking procedures, the Commission must first add laser frequencies to the meaning of “the electromagnetic spectrum.”

I. WHAT IS A LASER COMMUNICATION

Generally, laser communications is a space-based technology using different spectrums of light to transmit signals from a satellite to a terrestrial receiver. Laser technology has many different uses, ranging from providing telecommunications to law enforcement. One publication reports that lasers operating at near-infrared waves may be more efficient at transmitting signals than radio waves and it might even “outperform” them. The publication credits this to the way light waves are packed.

This section intends to illuminate some advances in laser communication technology. It will use examples from both the public and private sectors to establish how fast this technology is developing. Additionally, due to this rapid development, it expresses the urgency for the Commission to start considering its regulatory authority over technologies using this mode of transmission.

5. See id.
6. See id. (“Lasers can transmit data at rates 10 to 100 times faster than radio. By encoding information into laser-based communications, future satellites, rovers and astronauts could not only send back postcard snapshots from their destinations, but also stream high-quality video from across the solar system.”).
A. The Public Sector

In 2011, the National Aeronautics and Space Administration ("NASA") announced it planned to test laser communications systems in space.8 NASA called this initiative the Laser Communication Relay Demonstration ("LCRD"). LCRD consisted of three main parts: a commercial satellite and two ground stations in Hawaii and California.9 The satellite used invisible, near-infrared lasers to transmit communications signals from it to the two terrestrial stations.10

However, engineers have not yet perfected the technology. For instance, clouds and inclement weather have been known to have an adverse effect on the technology’s ability to transmit information; NASA is currently attempting to sort through the issue with more tests under LCRD.11 By contrast, radio and microwaves have little difficulty transmitting information through cloudy or inclement weather.12 Nevertheless, LCRD contributes to the rapid progress of this technology in the communication’s sphere and demonstrates the government’s interest in promoting its growth.

B. The Private Sector

Not only the public sector engages in these trailblazing efforts. One company in particular has been leading the charge in advancing laser communication devices: Laser Light Communications ("Laser Light"). In its mission statement, Laser Light aspires to be the first Optical Satellite Service ("OSS") provider in telecommunications bringing high-bandwidth data and next-generation cellular services using optical wave technology.13 Laser Light’s system is comprised of medium-earth orbit satellites with an operating system capacity of 6 Tbps, including sat-sat optical crosslinks and sat-ground optical up/down links at speeds of +200 Gbps, without using any radio frequency spectrum.14 This means consumers who purchase these services from a laser communications carrier will have comparable broadband speeds to other consumers using fiber-optic cables. Thus, this technology provides more variety in carriers to increase consumer to choice.

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8. See Hadhazy, supra note 4.
9. See id.
10. See id.
14. See id.
With these innovations currently in the development stage from the private sector, it becomes imperative that the Commission start strongly considering its regulatory dominion over this technology. This begs the question, under the current rules, would Laser Light need to get a license from the Commission if it wanted to provide telecommunications services? This Note contends that, in the status quo, Laser Light is not obligated to get such a license. Until the Commission decides to perform the proper rulemaking procedures satisfying the Administration Procedures Act (“APA”), then it does not regulate laser communications. Therefore, Laser Light would not need a license from the FCC to provide its service.

Assuming the Commission performs the proper procedures, would it pass judicial review? The following sections address this question.

II. THE COMMISSION’S AUTHORITY TO REGULATE THE TELECOMMUNICATIONS MARKET

Before delving into whether the Commission has authority over laser communication, it is important to explain where the Commission derives its authority in the first place. This section focuses on where Congress delegated authority to the Commission under both the Communications Act and Telecommunications Act. Additionally, this section contains a brief discussion of judicial review if stakeholders were to challenge the Commission’s rules.

The Commission is authorized to regulate “interstate and foreign commerce in communication by wire or radio” from Section 151 of the Act.\textsuperscript{15} Under the statute, the agency is tasked with “execut[ing] and enforc[ing] the provisions of [the Act].”\textsuperscript{16} It is important to note that this provision is only limited to the Communications Act and does not extend to other acts by which the Commission derives authority (e.g. Telecommunications Act of 1996) because of the previously quoted language in Section 151.\textsuperscript{17}

Although the statute explicitly references communications by “radio or wire,” courts have not limited the Commission’s authority to only those technologies because of the amendments provided in the 1996 Act.\textsuperscript{18} Moreover, in the “Goals” section of the Senate Report for the 1996 Act, the act “intended the Commission to establish a national policy framework de-

\textsuperscript{15} See 47 U.S.C. § 151.
\textsuperscript{16} Id.
\textsuperscript{17} See id.
\textsuperscript{18} See In re FCC 11-161, 753 F.3d 1015, 1035 (10th Cir. 2014) (expanding the Commission’s authority to broadband services so long as an entity received a subsidy from the Universal Service Fund (USF)); see generally In re UPH Holdings, Inc., 516 B.R. 873 (W.D. Tex. 2014) (extending the Commission’s regulatory history of expanding its authority to other technologies).
signed to accelerate rapidly the private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition.” Based on this language, it does not appear Congress was entirely interested in preserving or favoring a particular technology. The language implies that Congress’s focus was on the telecommunications service rather than the technology it uses to transmit the signals in advancing their goal.

A. Direct Authority

The Commission gets its direct authority over the telecommunications industry from the last sentence of Section 227 of the Act. Section 227 states, “The Commission shall prescribe regulations to implement the requirements of this subsection.”

To trigger the Commission’s Section 227 authority, the rule must govern business practices concerning telecommunications. A “telecommunication” is “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.” Additionally, the Act defines a “telecommunications service” as “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.” One should notice that there is no mention of a particular technology or direct references to wire or radio in either the definition of telecommunications or telecommunications services. However, Section 151 may pose a limitation because it explicitly references those mediums; therefore, the Commissions must overcome this hurdle when promulgating rules under this section.

B. General Authority

The Commission receives its general authority from two sections of the Act: Sections 201(b) and 303(r). These statutes give the Commission the ability to regulate the industry in a more comprehensive manner as opposed to the aforementioned direct authority under Section 227.

Section 201(b) serves as the necessary and proper clause for the Commission, because it allows the Commission to adopt rules “necessary and

21. See id.
22. Id. § 153(50).
23. Id. § 153(53).
proper in the public interest . . .”24 However, it does not provide direct authority; it only permits the Commission to impose obligations on companies in order to provide competitive rates to consumers. The Commission uses this section to prescribe certain rules pertaining to adapting new technologies.25

For instance, the writers of both Acts could hardly have anticipated the rapid consumer adoption of Voice of Internet Protocol (“VoIP”) services that later encouraged the Commission to develop rules, such as the VoIP symmetry rule.26 Section 201(b) permits the Commission to make such rules so long as it is a logical outgrowth from a statute within the four corners of the Acts. If consumers universally adopt laser communications as a choice platform, the Commission would most likely use this type of general authority as a legal justification. However, if it decides to use this provision to promulgate rules for laser technologies, the Commission may run into an issue under judicial review, because, assuming a court sees this as a limitation, this section explicitly mentions, “communications by wire or radio subject to this chapter.”27 Yet, this limitation is only applicable to the Communications Act of 1934 and does not extend to the Telecommunications Act of 1996 because it is abrogated by the phrase “subject to this chapter.” This Article expands on this in more detail when discussing the Commission’s authority under Section 706 of the Telecommunications Act.28

Section 303, collectively, describes the overall powers and duties of the Commission’s authority over radio communications. Among those duties, the Commission has the “authority to allocate electromagnetic spectrum so

24. See id. § 201(b) (“The Commission may prescribe such rules and regulations as may be necessary in the public interest to carryout the provision.”).

25. AT&T Corp. v. Iowa Utilities Bd., 525 U.S. 366, 383 (1999) (“[Section] 201(b) explicitly gives the FCC jurisdiction to make rules governing matters to which the 1996 Act applies . . . For even though ‘Commission jurisdiction’ always follows where the Act ‘applies,’ Commission jurisdiction (so-called ‘ancillary’ jurisdiction) could exist even where the Act does not ‘apply.’ The term ‘apply’ limits the substantive reach of the statute (and the concomitant scope of primary FCC jurisdiction), and the phrase ‘or to give the Commission jurisdiction’ limits, in addition, the FCC’s ancillary jurisdiction.” This case holds the Commission may adapt its rules to fit address a particular circumstance so long as it is in the “public interest.”).

26. See 47 C.F.R. § 51.913(b). This rule permits a local exchange carrier (LEC) “relevant inter-carrier exchange charges by it and/or its VoIP partner” for services “functionally equivalent” to an incumbent local exchange carrier’s access service. See also In the Matter of the Connect America Fund et al., WC Docket No. 10-90 et al., Order, 27 FCC Rcd. 2142, 2143, at para. 3 (2012).

27. See § 201(b).

28. See infra Part IV.A.
as to provide the flexibility of use.”  

For instance, section 303(r) delegates general authority to the Commission. This statute permits the Commission to develop rules and regulations and “prescribe restrictions . . . as may be deemed necessary to carry out the provisions of [Section 303].”  

Additionally, under Section 303(y), the Commission has this authority so long as it meets the requirements set forth within this subsection.

Although Title III only refers to radio spectrum in its other subsections, this Article contends that Congress made a conscious choice in writing “electromagnetic spectrum” in section 303(y) instead of specifying radio to give the Commission the ability to regulate other spectrum bands. Much like Section 201, this perceived limitation is only subject to the Communications Act. Even if courts recognize such limitations, they may still validate laser communications regulated under Section 303(y) because the text does not clarify that the “electromagnetic spectrum” only refers to radio waves. However, under this approach, the Commission may be limited to regulating the allocation of the electromagnetic spectrum and not necessarily regulating laser communication services. If this were the case, the following allocation requirements for the electromagnetic spectrum must be met: (1) the allocation is consistent with international agreements the United States is party to; (2) all rules provide proper public notice and are made available for public comment; (3) the allocation is in the public interest; (4) rules do not deter public investment of technological development; and (5) there would be no harmful interference among users.

B. Ancillary Jurisdiction

The Commission may employ its ancillary jurisdiction where “[i]t has subject matter jurisdiction over the communications at issue and the assertion of jurisdiction is reasonably required to perform an express statutory obligation.”  

Meaning, if the Commission has an expressed statutory obligations from various titles from either the Act or 1996 Act, then it may

29. See § 303(y).


31. See id.

32. See Southwestern Cable, Inc. v. FCC, 392 U.S. 157, 178 (1968) (“It is enough to emphasize that the authority which we recognize today under [Section] 152(a) is restricted that reasonably ancillary to the effective performance of the Commission’s various responsibilities . . . . The Commission may . . . issue ‘such rules and regulations and prescribe such restriction and conditions, not inconsistent with law’ as ‘public convenience, interest, or necessity requires.’ ”); see also In The Matter of Implementation of Section 255 and 251(A)(2) of the Communications Act of 1935, as enacted by the Telecommunications Act of 1996, WT Docket No. 96-198, Report and Order and Further Notice of Proposed Rule-making, 16 FCC Rcd. 6417, 6454, at para. 95 (1999).
make rules as deemed necessary to accomplish those obligations. Some scholars argue that the Commission may even use ancillary jurisdiction as a mechanism to increase competition by adding new technologies.\textsuperscript{33}

However, the D.C. Circuit greatly limited this type of jurisdiction in \textit{Comcast v. FCC}.\textsuperscript{34} Here the court held that the Commission’s ancillary jurisdiction did not apply to Internet service providers’ (“ISPs”) network management practices.\textsuperscript{35} Although this provides a limitation on the Commission’s ancillary authority in terms of what economic behaviors it can control, the court only took exception to the FCC’s attempt to control the business practices of ISPs. Moreover, it acknowledged the Commission’s “broad and adaptable” jurisdiction over emerging technologies.\textsuperscript{36} Therefore, the court did not limit the FCC’s ancillary jurisdiction because of the technological mediums used, but rather the level of control the Commission has on particular business transactions that the Acts do not directly address. It is therefore possible for the Commission to include laser communications under this type jurisdiction so long as it has statutory grounding in the Communications Act, which it may have under Section 303(y).

\textbf{C. Scope of Authority Under Judicial Review}

Generally, the Commission uses an informal rulemaking process when promulgating rules. Under Section 553 of the APA, the FCC must provide a proper notice and comment period before it promulgates any rule with the effect of law.\textsuperscript{37}

If a stakeholder chooses to challenge an agency’s rule, the stakeholder must show the rule is “arbitrary or capricious” under Section 706 the Administrative Procedure Act.\textsuperscript{38} Courts measure whether the Commission has


\textsuperscript{34} See 600 F.3d 642 (D.C. Cir. 2010).

\textsuperscript{35} See id. at 661 (“It is true that ‘Congress gave the [Commission] broad and adaptable jurisdiction so that it can keep pace with rapidly evolving communications technologies.’ It is also true that ‘[t]he Internet is such a technology,’ indeed, ‘arguably the most important innovation in communications in a generation.’ Yet notwithstanding the ‘difficult regulatory problem of rapid technological change’ posed by the communications industry, ‘the allowance of wide latitude in the exercise of delegated powers is not the equivalent of untrammeled freedom to regulate activities over which the statute fails to confer . . . . Commission authority . . . . Because the Commission has failed to tie its assertion of ancillary authority over Comcast’s Internet service to any “statutorily mandated responsibility.”’ (internal citations omitted)).

\textsuperscript{36} See id.

\textsuperscript{37} See 5 U.S.C. § 553(b) (2014).

\textsuperscript{38} See id. § 706(2)(A) (holding in overruling an agency’s action, the rule or its process must be found “arbitrary, capricious, an abuse of discretion, or otherwise not in accord-
met this standard by using the analytical framework established in *Chevron v. Natural Resources Defense Council, Inc.* 39

In *Chevron*, the U.S. Supreme Court set out a two-step process in determining the level of deference the Commission, or any agency, has to promulgate a rule. Courts determine: (1) if Congress was unclear as to its intent on a particular issue, has it given expressed statutory authority to the agency to address the ambiguity; and (2) was the agency’s rule a “reasonable interpretation” of that statute.40 The test for a “reasonable interpretation” is whether the promulgated rule is arbitrary or capricious.41 If the answers to both inquiries are ‘yes,’ then the court must give full deference to the agency’s interpretation.42 Courts give agencies highly deferential treatment because of their particular expertise in such matters.43

III. THE COMMISSION’S CURRENT AUTHORITY AND DOES IT EXTEND TO LASER COMMUNICATIONS

For the Article’s purposes, the term “authority” means under what circumstances the Commission has any element of control over the economic behavior of the telecommunications industry. When most44 discuss whether the FCC has authority to regulate such behaviors, they are generally referring to three titles in the Communications Act: (1) Title II, which creates authority over telecommunications services; (2) Title III, which allows the Commission to distribute radio station licenses; and (3) Title VI, which permits the Commission to impose obligations for multi-channel video programming distributors (“MVPD”) (e.g., Time Warner Cable).

This section of the Article examines the traditional ways in which the Commission has the authority to impose obligations on certain carriers based on the types of services each provide. This section is necessary to advance a discussion as to whether the Commission has regulatory authori-

40. See id. at 844–45.
41. See id.
42. See id.
43. See id. at 865–66 (“Perhaps that body consciously desired the Administrator to strike the balance at this level, thinking that those with great expertise and charged with responsibility for administering the provision would be in a better position to do so; perhaps it simply did not consider the question at this level; and perhaps Congress was unable to forge a coalition on either side of the question, and those on each side decided to take their chances with the scheme devised by the agency.”).
44. E.g., Lawrence J. Spiwak, *What Are the Bounds of the FCC’s Authority Over Broadband Service Providers*, 18 No.7 J. INTERNET L. 1, 15 (2015) (discussing the FCC’s direct jurisdiction of broadband providers under Title II, Title III, and Title VI).
ty over laser communication because obligations imposed by the Commission are dependent upon the type of service the company provides. Meaning, if the laser satellite company decides to provide cellular service, it would be more akin to “common carrier” obligations in Title II of the Act as opposed to obligations for MVPDs in Title VI.

The point of this section is to evaluate what provisions in the Communications Act would be applicable to laser communications, and to determine those that must be excluded due to the specific mention of radio or wire.

A. Title II

To trigger Title II obligations, the carrier must be providing telecommunications services. “Telecommunications services” are defined in the Communication Act as the “offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.”45 The Act defines “telecommunications” as “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.”46 One should notice that the Act makes no mention that only radio or wire transmissions qualify as a “telecommunications” service and even goes as far as to say, “regardless of the facilities used.”47 However, there is explicit mention of both radio and wire technologies within the defined obligation of this Title. Therefore, if the Commission designates laser communication services as a telecommunications service, then, under the Act, the Commission may subject a laser satellite providing such services to “common carrier” obligations with no explicit mention of wire or radio.

Although, there are many provisions that would apply to this definition, the focus will be on the most relevant provisions. As it relates to this topic, “relevant provisions” mean those provisions that create barriers for entering laser satellite carriers providing telecommunications services to consumers.

1. Discrimination and Preferences Obligations

Section 202 of the Communications Act prohibits every common carrier from “mak[ing] any unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services” against any other communications service. Moreover, a Common Carrier cannot give “any undue or unreasonable preference or advantage to any particular person, class of persons, or locality, or to subject any particular person, class

46. Id. § 153(50).
47. See id.
of persons, or locality to any undue or unreasonable prejudice or disadvantage.48 These obligations intend to promote access, and reasonable economic rates for service from the carriers to consumers. In a laser communications context, this would mean that Laser Light’s satellite could not be used to disrupt the signal for one of its telecommunications services because its other services are more profitable. Moreover, Laser Light could not discriminate against lower-income areas where it is economically feasible for it to provide service. If a satellite carrier were to engage in these types of practices, it would be subject to a forfeiture penalty under the Section 202 of the Communications Act.49

2. Universal Service Fund Implications

If the Commission designates a laser communications satellite as a common carrier under the Act, it would be subject to Universal Service obligations due to the 1996 Act expanding Universal Service obligations to wireless and satellite carriers.50 Common carriers are subject to Section 254 of the Communications Act, if it provides telecommunications services. Section 254 requires telecommunications carriers providing interstate telecommunications services to contribute to the Universal Service Fund (“USF”).51 USF is a source of funding that the Commission uses to provide certain telephony services to low-income citizens and high-cost rural areas in the country. Assuming the Commission performs the necessary rulemaking, laser telecommunications would be subject to USF contribution requirements.52

B. Title III

Title III governs over radio station licenses. This section poses an analytical paradox for the Commission to regulate laser communications. In that, although Title III serves as the Commission’s greatest statutory barrier for regulating laser communication, it may also serve as its legal justification to do so under Section 303(y). However, that will be further discussed in the Article’s Section 706 analysis. This section contends that this Title, as a whole, will be difficult to pass under judicial review, if challenged, without the authority provided from Section 706 of the Telecomm-

48. See id. § 202(a).
49. See id. § 202(c) (“Any carrier who knowingly violates the provisions of this section shall forfeit to the United States the sum of $6,000 for each such offense and $300 for each and every day of the continuance of such offense.”).
52. See generally In re FCC 11-161, 753 F.3d 1015 (10th Cir. 2014).
munications Act.\textsuperscript{53}

However, there is one section of this Title applicable to laser communications, Section 302a, which permits the Commission to make “reasonable regulations” on devices to prevent “harmful interference” to licensed radio stations.\textsuperscript{54} This section would allow the Commission to at least impose standards on the actual laser satellite ensuring that its signals would not interfere with other radio stations. Moreover, it would permit the Commission to establish rules on laser satellites when it causes said interference. The Commission would not need much justification for regulating such interactions between laser satellites based on this language: “[t]he Commission may . . . make reasonable regulations . . . governing the interference potential of devices which in their operation are capable of emitting radio frequency energy by radiation, conduction, or other means . . . .”\textsuperscript{55} Meaning, if a device has an electronic pulse and could potentially interfere with radio transmissions, the FCC can regulate the device, ensuring it will not harm other devices. A laser satellite probably falls into this category when disrupting signals, because it exudes electronic signals that have the potential to adversely affect other FCC licensed devices.

\textit{C. Title VI}

This subsection outlines the basic obligations that the Commission requires of MVPDs. An MVPD is any cable or satellite company that buys or produces programming, which then sells bundled programming to individual TV households.\textsuperscript{56} If a laser satellite company decided to provide such services, it would be subject to, at least, these provisions. The definition of an MVPD is technology-neutral, and the added provisions concern-

\begin{itemize}
\item \textsuperscript{53} See infra Part IV.A. This Article contends that the Commission may hold authority under Section 706 of the Telecommunications Act of 1996 by using Section 303(y) as authority to allocate spectrum for “advanced telecommunications.” Moreover, this Article finds that courts may view the definition of “telecommunications” from the Communications Act of 1934, and by extension Section 303(y), as limited to technologies using wire or radio. This Article contends that this limitation does not extend to the Telecommunications Act of 1996, because of the phrase “of this Act” in Section 153 of the Communications Act.
\item \textsuperscript{54} 47 U.S.C.A. § 302a(a) (2010) (permitting the Commission to regulate the interfering signals from devices that fall out of its regulatory purview).
\item \textsuperscript{55} See id.
\item \textsuperscript{56} See 47 U.S.C. § 522(13) (“the term ‘multichannel video programming distributor’ means a person such as, but not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, or a television receive-only satellite program distributor, who makes available for purchase, by subscribers or customers, multiple channels of video programming.”); see also Bruce M. Owen, \textit{Consumer Welfare and TV Program Regulation}, Mercatus Ctr. Geo. Mason Univ. 8 (2012), available at http://mercatus.org/sites/default/files/Consumer-Welfare-TV-Program-Regulation.pdf.
\end{itemize}
ing Digital Satellite Broadcasters ("DBS") make regulation more likely for laser satellites selling bundled programming. For these reasons, it is important to highlight the relevant provisions of this title.

1. How MPVDs are Regulated

MPVDs run under a "dual revenue" economic model. They receive income from subscription fees and advertisers. The organization of this section will consist of a discussion on specific types of MVPDs with their corresponding regulations, and how the rules affect entrance into the market and market behavior. Due to the nature of the MVPD competitive landscape, there may be some overlap in regulation, meaning there are some rules and regulations applicable to all MVPDs without much distinction between cable and satellite.

For an MVPD company to enter into the market, the company must adhere to all rules and regulations stipulated by the FCC and Congress. This section focuses on what MVPDs must do to gain access into the local market.

a. Franchising and Licensing for Digital Broadcasting Satellites

All MVPDs must obtain franchising agreements with state and local authorities before they can provide video services. This gives state or local governments some control as to which companies can enter their local market by granting such agreements. Any franchising authority may award one or more franchising agreements in their respective jurisdictions


58. MVPD economic infrastructures are in two tiers: horizontal concentration and vertical integration. Horizontal concentration is a description of MVPDs’ relationship amongst them describing the reasons as to why some MVPDs compete with one another and others do not by examining the geographical footprint. Vertical integration focuses on common ownership of entities that deliver video programing and entities supplying video programing. See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Fourteenth Report, Media Bureau Docket No. 07-269, at 38-42 (rel. Jul. 20, 2012) found here: https://apps.fcc.gov/edocs_public/attachmatch/FCC-12-81A1.pdf [hereinafter Competition Report].

59. The FCC defines “franchise” as “an initial authorization, or renewal thereof (including a renewal of an authorization which has been granted subject to section 546 of this title), issued by a franchising authority, whether such authorization is designated as a franchise, permit, license, resolution, contract, certificate, agreement, or otherwise, which authorizes the construction or operation of a cable system.” 47 U.S.C. § 522(9).

60. See id. §§ 522(10), 541(a).

61. See id.
with a caveat that none of the franchises be exclusive to any particular entity. The term “franchising authority” is defined as “[a]ny governmental authority empowered by federal, state, or local law to grant a franchise.” The FCC allows the individual States to distribute political jurisdiction in any way they see fit. Consequently, some States vest franchising authority in localities of varying levels, while others reserve franchising authority at the state level, referred to as a Local Franchising Authority (“LFA”). If the FCC denies an MVPD a second franchise, said MVPD can appeal the franchising authority’s decision pursuant to Section 555.

The FCC recognized the possible issue with allowing LFAs to possess too much authority. In response, the FCC adopted Section 621(a)(1) of the Telecommunications Act in 2007. This added measure prevents LFAs from being too discriminatory and exclusive to entering companies. This provision could be of great use for a start-up laser satellite MVPD when providing bundled services to a saturated market.

To foster a more competitive market, cable and satellite companies are statutorily subjected to financial burdens, such as requiring a compulsory signal carriage, or “must-carry” channels. The FCC mandates cable and satellite companies to reserve up to one-third of their channel capacity to local terrestrial broadcast television stations. Supporters of this licensing scheme claim that compulsory licenses help cable and satellite companies balance the cost of providing must-carry channels by obtaining legislative and regulatory benefits.

Those opposing the must-carry channel requirement claim they overly favor marginal television broadcasters rather than the actual licensee. Opponents of must-carry channels claim the obligation is unnecessary, and, in lieu of the must-carry channels, the companies can use the additional

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62. See id. § 541(a)(1).
63. Id. § 522(10).
64. See Competition Report, supra note 58, at ¶ 47.
66. See Competition Report, supra note 58, at ¶ 47.
67. See id.
68. See 47 C.F.R. § 76.56 (2012).
70. See Frieden, supra note 69, at 234–35.
71. Id. (stating marginal broadcasting stations, such as home shopping networks and broadcasters operating in a foreign language, are the source of opposition for the compulsory license system).
video content to provide shows people want to watch, thus maximizing the amount of profit out of the carriage of such programming.\textsuperscript{72} Stakeholders have challenged the constitutionality of these must-carry provisions twice in the United States Supreme Court.\textsuperscript{73} The Supreme Court held the provisions constitutional.\textsuperscript{74}

\textit{b. Syndicated Network Regulations}

\textit{i. Network Non-duplication}

Like must-carry requirements, network non-duplication exists as a regulatory protection to keep broadcasters profitable.\textsuperscript{75} The FCC requires a commercial television station, serving at least one thousand subscribers, to self-govern its licensed video content from illegal distribution under its network non-duplication provision.\textsuperscript{76} For cable companies to have the provision enforced, the television broadcaster must notify the cable community unit\textsuperscript{77} located in whole or in part within the geographical zone within the scope of their license.\textsuperscript{78} In addition, “a community unit is not required to delete the duplicating network programming of any television broadcast station which is significantly viewed in the cable television community pursuant to § 76.54.”\textsuperscript{79}

\textit{ii. Syndicated Exclusivity}

Syndicated exclusivity is a form of protection geared towards broadcasters and networks ensuring others are not using their content outside the scope of the contracted license. Parties who possess syndicated exclusivity entitlement are those “entitled to exercise exclusive rights pursuant to this Section [76.122] for a period of one year from the initial broadcast syndication licensing of such programming anywhere in the United States; provid-

\textsuperscript{72} See Christopher S. Yoo, Rethinking the Commitment to Free, Local Television, 52 EMORY L.J. 1579, 1658–59 (2003).


\textsuperscript{74} See Turner Broadcasting Sys. v. FCC., 520 U.S. 180, 19-01 (1997) (holding that Congress has a compelling governmental interest in preserving the must-carry provision to advance the government’s goal of promoting a free and equal market).

\textsuperscript{75} See DeFrancia, supra note 73, at 37.

\textsuperscript{76} 47 C.F.R. § 76.122(c).

\textsuperscript{77} Although the FCC recognizes minor cable communities, for the purposes of this Article, the reader should assume all discussions are in reference to major cable communities as defined in section 76.51. Id. § 76.51.

\textsuperscript{78} Id. § 76.92(a).

\textsuperscript{79} See id. § 76.92(f).
ed, however, that distributors shall not be entitled to exercise such rights in areas in which the programming has already been licensed. Once a distributor obtains a license to video content, it is entitled to use its exclusive right to said content for a period of one year from the initial broadcasting syndication licensing, so long as it does not exercise its right in areas outside the scope of its programming’s licensed area. This obligation may be problematic for laser satellites, because their technologies might not be ready to control their signals from going into other markets. As a consequence for not policing their signals, the FCC may be able to impose forfeiture penalties for such violations.

iii. Compulsory License

One of the seminal inquiries in the compulsory licensing debate is its relationship to copyright and whether it is enough to constitute an exclusive right. In that, a compulsory licensing paradigm limits the amount of deference between the agreeing parties as to their ability to negotiate how the licensee’s content is distributed and accessed. For example, the statutorily mandated must-carry stipulations may place the MVPD at a disadvantage when negotiating because those channels take up air space that could otherwise be used for more profitable programming. Nevertheless, laser satellite MVPDs would be subject to this licensing scheme under a compulsory license paradigm.

iv. Retransmission consent

Retransmission consent would be the biggest obligations for a laser satellite MVPD, because it can be overly burdensome due to all of the Commission’s regulatory requirements. It serves two purposes: (1) protect the broadcaster; and, (2) protect the copyrights transmitted through the signal. It is considered an alternative to the must-carry provisions provided that all transactions are conducted in good faith. The Cable Act established the regulatory scheme for retransmission consent in 1992 with Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable

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80. See id. § 76.103(a).
81. Id. § 76.103(b).
83. See id.
Originally, Congress adopted retransmission consent regulation “to allow broadcasters to negotiate for compensation of the value of their signals.” Under the 1992 Cable Act, statutory provisions allow television broadcasters to elect to proceed under retransmission consent pursuant to Section 325 of the Cable Act, or follow the must-carry requirements of Sections 338 and 614 of the Act. The Commission commented on Congress’s intention in its Notice for Proposed Rulemaking, quoting, “Congress intended ‘to establish a marketplace for the disposition of the rights to retransmit broadcast signals; it is not the Committee’s intention in this bill to dictate the outcome of the ensuing marketplace negotiations.’”

The Omnibus Broadcasting Initiative (“OBI”) found there was an increase in broadcasters electing to follow retransmission consent regulation, and that only thirty-seven percent of stations elected must-carry regulation to reach their MVPD customers in 2009. OBI credits this trend to broadcasters declining revenue under must-carry obligations. In the event where a retransmission consent agreement cannot be made between a broadcaster and an MVPD, the MVPD cannot rebroadcast the broadcaster’s signal. The MVPD must have the broadcaster’s consent to rebroadcast the signal under Section 325(b)(1)(A) of the Act.

OBI notes that retransmission consent agreements allow broadcasters to charge local stations “per subscriber” fees and retain carriage rights for additional content “owned by such stations or affiliated media conglomerates.” SHVIA affords DBS systems mandatory carriage obligations, giv-


86. See id.

87. See id. at ¶ 5; see also 47 U.S.C. §§ 325(b), 338, 534 (2014); see generally id. § 614.


90. See id. (“To offset declining revenues and to capitalize on the popularity of their content, broadcasters have increasingly begun to waive their rights to must-carry and, instead, to negotiate retransmission consent agreements with MVPDs.”).

91. See 47 U.S.C. § 325(b)(1) (“No cable system or other [MVPD] shall retransmit the signal of a broadcasting station, or any part thereof, except (A) with the express authority of the originating stations, ...”).

92. OBI Paper, supra note 89, at 8 (giving examples of such rights as “cable networks and multi-cast channels”).
ing them “a statutory copyright license to retransmit local broadcast stations to subscribers in the station’s market,” i.e. “local-into-local” services. These local-to-local services force the satellite carrier to carry any qualified local television in its respective Designated Market Area (DMA), which elected for mandatory carriage. However, if the station’s programming is duplicative from another station not in its DMA, or if the stations do not provide a good quality signal to the carrier’s local receive facility, then it is exempt from this requirement.

As in cable, broadcasters have the option of using retransmission consent provisions as an alternative to mandatory coverage for DBS, provided the broadcaster has given the necessary consent for its copyrighted signal. Section 325(b)(2) gives five exceptions to retransmission restrictions for DBS stations:

1. if the retransmission signals comes from a noncommercial television broadcast station;
2. to retransmission of the signal of a television broadcast station outside the station’s local market by a satellite carrier directly to its subscribers, if the station was considered a superstation by May 1, 1998, if the station is protected under a statutory license of Section 119 of Title 17 of the United States Code, and the satellite carrier complies with any network nonduplication and syndicated exclusivity;
3. if the subscriber receiving the signal is located outside of the DBS’s local market and resides in an unserved household;
4. if the signal is picked up by another form of a MVPD other than a DBS signal; or
5. if a retransmission signal protected under a Section 122 statutory license under Title 17 of the United States Code was attained during the first six months of the enactment of 1999 SHVIA.

All negotiations concerning retransmission consent must be in “good faith” as defined in Section 325 of the Act. A retransmission consent negotiation in good faith is any agreement between the television broadcasters and MVPD that considers “the impact that the grant of retransmission consent by television stations may have on the rates for the basic service tier,” and “[ensuring] that the regulations prescribed under this subsection do not conflict with the Commission’s obligation under [S]ection 623(b)(1) to ensure that the rates for the basic service tier are reasonable.”

93. See Notice of Proposed Rulemaking, supra note 85, at ¶ 6.
94. See ¶ 338.
95. See id. § 325(b)(2)(A)–(E).
96. Id. (b)(3)(C)(iii).
97. See id. § 325(b)(3)(A).
thermore, good-faith-retransmission-consent negotiations apply to all transactions occurring between broadcast television stations and MVPDs (terrestrial or satellite).  

Section 325, provides an exception under subsection (b)(3)(C)(ii) after its conjunction stating “it shall not be a failure to negotiate in good faith if the television broadcast station enters into retransmission consent agreements containing different terms and conditions, including price terms, with different [MVPDs] if such different terms and condition are based on competitive marketplace considerations.”  

Meaning if a laser satellite company services California, it cannot enforce rates on its NBC Murrieta station, a much smaller market, based solely on rates it charges its NBC Beverly Hills station, a much larger market, because good faith is predicated on the transaction being relevant to the market the signal will be broadcasted.

The Commission greatly relied on Section 8(d) of the Taft-Hartley Act and labor law precedents for its good faith bargaining requirement standards. The Commission has a two-part framework to determine whether the transaction is within the scope of good faith. First, the Commission refers to its seven objective good faith negotiation standards to see if it is a per se breach. Second, if the licensee meets the statutory standards, then the Commission may consider a party’s failure to negotiate retransmission consent in good faith based on the totality of the circumstances. If the Commission finds that the parties could not make an agreement in good faith, then it will instruct the parties to renegotiate in accordance with the Commission’s good faith standards as defined in Section 325(b)(3)(C).

Although the statute does not define an authority to impose damages, the Commission has assumed direct authority as it has in all matters under the Communications Act. The Commission has noted that the statute does

98. See Notice of Proposed Rulemaking, supra note 85, at ¶ 8.
101. See Notice of Proposed Rulemaking, supra note 85, at ¶ 10; see also 47 C.F.R. § 76.65(b)(1)-(2) (2013).
102. Id. § 76.65(b)(1).
103. Id. § 76.65(b)(2).
104. See Order, supra note 100, at ¶ 8.
105. See Notice of Proposed Rulemaking, supra note 85, at ¶ 10 (“While the Commission did not find any statutory authority to impose damages, it noted “that, as with all violations of the Communications Act or the Commission’s rules, the Commission has the authority to impose forfeitures for violations of Section 325(b)(3)(C).”.)
not give it authority to impose intrusive regulations on the transacting parties to conduct good faith retransmission consent agreements and may only intervene when contracting parties have compromised its good faith standard.\textsuperscript{106} Congress intended the Commission to “develop and enforce a process that ensures that broadcasters and MVPDs meet to negotiate retransmission consent and that such negotiations are conducted in an atmosphere of honesty, purpose, and clarity of process.”\textsuperscript{107} The Commission has noted that there is little precedent regarding good faith rule violations and cited to only one filing of a party dealing in bad faith.\textsuperscript{108}

Retransmission consent regulations have a direct impact on MVPD consumers, as well. For example, when high-profile cases arise, the result generally ends in carrier impasses, most notably the dispute between Cablevision System Corp. (“Cablevision”) and News Corp.\textsuperscript{109} The controversy was the result of the two companies’ failure to agree on an extension or renewal agreement for two Fox-affiliated television stations and one MyNetwork TV-affiliated television station, which expired on October 15, 2010.\textsuperscript{110} As a result, Cablevision was subjected to a carriage stalemate which adversely affected Cablevision’s subscribers, because, as part of the impasse, Cablevision had to forfeit its carrier rights until an agreement was met, which did not happen until October 30, 2010.\textsuperscript{111} In the interim, Cablevision subscribers were not able to watch the Major League Baseball National League Championship Series, the first two games of the World Series, National Football League regular season games, and all regularly scheduled programs on these channels.\textsuperscript{112} Outcomes, such as these, have a direct cost to MVPD provider, and the consumer. It is something laser communication MVPDs should consider when providing this service.

IV. CAN THE COMMISSION REGULATE LASER COMMUNICATION UNDER SECTION 706 OF THE TELECOMMUNICATIONS ACT OF 1996?

This paper proposes using the Commission’s ancillary authority under Section 706 to allocate electromagnetic spectrum under Section 303(y). These provisions used in conjunction act as an affirmative authority to govern over laser communications when used to encourage more “advanced communication” deployment.

\textsuperscript{106} See Order, supra note 100, at ¶ 23.
\textsuperscript{107} See id.
\textsuperscript{108} See Notice of Proposed Rulemaking, supra note 85, at ¶ 12 (citing to Letter to Jorge L. Bauermeister, 22 FCC Rcd 4933 (MB 2007)).
\textsuperscript{109} See id. at ¶ 15.
\textsuperscript{110} See id.
\textsuperscript{111} See id.
\textsuperscript{112} See id.
A. Section 706

The Commission could classify laser communications as an “advance communication” under Section 706.\footnote{See 47 U.S.C. § 1302(a) (1995)} The Commission has traditionally used this authority to encourage broadband deployment and, also, for its so-called “net neutrality” rules.\footnote{See Preserving the Internet, GN Docket No. 09-191, et al., Report and Order, 25 FCC Rcd 17905, 17969 (2010) [hereinafter First Open Internet Order] (“Under Section 706(a), the Commission must encourage the deployment of such capability by ‘utilizing, in a manner consistent with the public interest, convenience, and necessity,’ various tools including ‘measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.’” For the reasons stated in Parts II.A, II.D and III.B, above, our open Internet rules will have precisely that effect.”).} Of note, there is no formal definition of “advanced telecommunications.”\footnote{Neither in the Communications Act nor in the Telecommunications Act’s definitions section provides a formal definition of an “advanced telecommunications.” See supra Part V.A, text and accompanying notes.} Neither does the Section provide an explicit nor implicit limitation on the Commission’s ability to include laser communications as an advanced telecommunication.

Section 706 of the 1996 Act is broken up into two sections: Sections 706(a) and (b). There is some confusion in the courts as to whether both sections act as independent authorities or whether subsection (a) is merely a policy statement and, when not followed, triggers the authority under subsection (b). The most recent “net neutrality” controversy best illustrates these two schools of thought.\footnote{Compare Verizon v. F.C.C., 740 F.3d 623 (D.C. Circuit 2010) (claiming that 706(a) and (b) are not independent authorities), with In re FCC 11-161, 753 F.3d at 1053 (holding 706(a) and (b) are independent authorities).}

To give a brief historical overview, the Commission used Section 706 as its legal justification over broadband providers in its First Open Internet Order.\footnote{See First Open Internet Order, supra 114, at 17968.} The First Open Internet Order imposed three duties on broadband providers: (1) they could not block bits from content providers (i.e., non-blocking rule); (2) they could not discriminate against certain bits (i.e., non-discriminatory rule); and (3) they must disclose the treatment of bits to the Commission upon a complaint (i.e., the transparency rule).\footnote{See id. at 3.}

As it related to the Commission’s First Internet Order, Verizon challenged the Commission’s Section 706 authority in the D.C. Circuit.\footnote{See Verizon, 740 F.3d at 623.} The Court struck down the non-blocking and non-discriminatory rules, because these rules were more akin to “common carrier” obligations under Title II
of the Act and, at the time, broadband services were designated as “information services” subject to Title I obligations under its ancillary authority.\(^\text{120}\) However, the D.C. Circuit upheld the Commission’s transparency rule, which gave the Commission ancillary jurisdiction to request information from broadband providers regarding how they maintain their networks.\(^\text{121}\) More importantly, the D.C. Court held that both Sections 706(a) and (b) provided enough ambiguity for the Commission to determine what type of authority Section 706 provides.\(^\text{122}\)

The Tenth Circuit affirmed the Commission’s 706 authority, as it relates to USF programs.\(^\text{123}\) The Court held that Section 706(a) is not an independent grant of authority, but a direction for the Commission to use its forbearance and other authority granted elsewhere in the 1996 Act.\(^\text{124}\) The Tenth Circuit upheld the Commission’s conclusion that Section 706(b) is an “additional source of support” to impose a broadband requirement to its high-cost program.\(^\text{125}\) Furthermore, to the extent the Commission relies on Section 706(b) to support said requirement, the Court held Section 706(b) is not contrary to Section 254 in terms of potential uses for USF funds to provide “telecommunications services.”\(^\text{126}\) The Tenth Circuit expanded the Commission’s authority by allowing it to mandate carriers to provide such service to promote a particular initiative in the public interest, in this case, broadband deployment.

Using this analytical framework and examining the plain language of the statute, one could conclude that laser communication services could be included in the Commission’s initiative to “encourage the deployment . . .

\(^{120}\) Cf. Nat’l Cable & Telecom. Ass’n v. Brand X Internet Serv., 545 U.S. 967 (2005) (Breyer, J., concurring) (giving the Commission full deference to designate Internet services as an “information service” under Title I of the Act).

\(^{121}\) See Verizon, 740 F.3d at 664 n. 8.

\(^{122}\) See id. at 641 (“Contrary to Verizon’s arguments, we believe the Commission has reasonably interpreted section 706(b) to empower it to take steps to accelerate broadband deployment if and when it determines that such deployment is not ‘reasonable and timely,’ to be sure . . . the provision may certainly be read to accomplish as much, and given such ambiguity we have no basis for rejecting Commission’s determination that it should be so understood.”).

\(^{123}\) See In re FCC 11-161, 753 F.3d at 1055.

\(^{124}\) See id. at 1041 (“The [APA] directs us to ‘hold unlawful and set aside agency action and conclusion found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law’ . . . . Under the arbitrary and capricious standard, ‘a reviewing court may not set aside an agency rule that is rational, based on consideration of the relevant factors and within the scope of the authority delegated to the agency by [706].’ ”).

\(^{125}\) See id. at 1054.

\(^{126}\) See id.
of advanced telecommunications capability to all Americans." According to the statute, the Commission may regulate such entities assuming it has the proper "regulatory jurisdiction over [those] telecommunications services." The next subsection addresses this point.

1. Encouraging more laser communication deployment is in the public interest, which triggers the Commission's ancillary jurisdiction under Section 706.

The Commission may have Section 706 authority under its ancillary jurisdiction. As previously stated, the Commission attains ancillary jurisdiction when "[it] has subject matter jurisdiction over the communications at issue and the assertion of jurisdiction is reasonably required to perform an express statutory obligation." Section 706(a) clearly sets out an affirmative obligation to "encourage the deployment" of advanced telecommunications. This obligation must fall within the "public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment." Looking at the plain meaning of the statutory language, one can infer from the disjunctive phrase that all the Commission needs to show is that its objective falls into at least one of the listed justifications under Section 706.

For instance, it has become clear in the telecommunications market that there is a limited amount of an invaluable resource: the amount of radio spectrum for cell phones. Assuming the Commission satisfies its APA obligations, it would not be too difficult for the Commission to establish that deploying more technologies using a different band of the electromagnetic spectrum is in furtherance of the "public interest" or "promot[ing] competition," triggering its ancillary authority under Section 706.

Moreover, there is nothing in the ordinary language of the statute explicitly listing a particular technology. As a general policy, the Commission tends to be technology neutral in all of its issues, and thus the statute as a whole fits this description.

128. See id.
129. See Southwestern Cable, Co., 392 U.S. at 178; see also supra Part III.C.
131. See id.
133. 47 U.S.C. § 1302(b).
134. E.g., Tom Wheeler, Technology Transitions: Consumers Matter Most, FEDERAL
Section 706(b) may give the Commission the authority to impose obligations on laser communications carriers to fulfill its policy goals. The section clearly sets out an obligation for the Commission to “take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.”135 Adding another competitor in the wireless marketplace, such as a laser communications carrier, could serve as a measure in furtherance of the agency’s policy, but the proper procedure must be in place.

Initially, the statute requires the Commission to put out a Notice of Inquiry to “determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.”136 The Commission should direct its Notice of Inquiry at ameliorating the spectrum crunch and ask whether adding laser frequencies to assist in solving this problem is a viable option. The notice should also address whether the Commission is required to trigger its ancillary jurisdiction to promote “advanced communications” under Section 706,137 and has statutory ground to regulate the technology under Section 303(y):

(y) Have authority to allocate electromagnetic spectrum so as to provide flexibility of use, if—(1) such use is consistent with international agreements to which the United States is a party; and (2) the Commission finds, after notice and an opportunity for public comment, that—(A) such an allocation would be in the public interest; (B) such use would not deter investment in communications services and systems, or technology development; and (C) such use would not result in harmful interference among users.138

Although legislative action is preferable, through a proper rulemaking procedure it may be possible for the Commission to include waves utilized by laser communications satellites as part of the definition of the electromagnetic spectrum under Section 303(y). However, the obvious limitation in using this method is the fact that the language of the statute only permits the Commission to “allocate” spectrum. Stakeholders providing laser communications who wish to challenge the Commission’s authority could do so whether or not this serves as a limitation in regulating the actual ser-

135. See § 1302(b).
136. See id.
137. See id. § 1302(a).
138. See id. § 303(y) (emphasis added).
services provided, which remains unclear.

2. **Section 706 is technology neutral based on the legislative intent.**

   When drafting Section 706, Congress intended only to provide broadband services to the American public.\(^{139}\) It was mostly a response to the expansion of Internet-consumer use.\(^{140}\) Based on the Senate Report, a reasonable interpretation of the term “advanced communications” would be broadband-based technology.\(^{141}\) However, laser communication was not even in production for commercial use at the time Congress was developing this statute. The underlying Congressional intent was to provide more “broadband services” to the American public and to have more economic participants through “a strong, advanced communications infrastructure.”\(^{142}\) Additionally, Congress claimed these capabilities “not only allow individuals to communicate and exchange information but also serve as the platform on which much of entertainment, commerce, and communication will take place.”\(^{143}\) Congress understood the public interest in facilitating this industry’s growth.

   Additionally, Congress did not say broadband services must include services through fiber-optic wire networks, satellites, or copper-wire lines. It merely described what broadband services make available. Laser communication was not yet a factor in providing such services at the time Section 706 was drafted. Therefore, there was no possible way for Congress to consider it as an option for providing broadband services to consumers. It is conceivable that, if Congress had this option available, they would have considered laser communication as part of this broadband-deployment initiative.

   The term broadband does not necessarily imply a particular technology.

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\(^{139}\) S. Rep. 110-204, at 1 (2008) (“The purpose of S. 1492 is to improve the quality of data collected at State and Federal levels regarding the availability and robustness of broadband services and to promote the deployment of affordable broadband services to all parts of the Nation.”).

\(^{140}\) See id.

\(^{141}\) Id. at 2 (“Efforts by the Federal Communications Commission (FCC) to measure the speed and quality of broadband deployment across the United States originated after Congress enacted of the Telecommunications Act of 1996. Under section 706 of that Act, the FCC is required to conduct regular inquiries concerning the availability of advanced telecommunications capability and to determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion. If such determination is negative, the statute further requires the FCC to ‘take immediate action to accelerate deployment’ by ‘removing barriers to infrastructure investment’ and ‘promoting competition.’”).

\(^{142}\) See id. at 1.

\(^{143}\) See id.
Merriam Webster dictionary defines “broadband” as “of, relating to, or being a high-speed communications network and esp. one in which a frequency range is divided into multiple independent channels for simultaneous transmission of signals (as voice, data, or video).”\textsuperscript{144} Thus, nothing in the dictionary definition actually implicates a particular type of technology.\textsuperscript{145} Moreover, if one were to accept the definition previously cited, then it would not be farfetched to include laser communication transmissions in the Commission’s regulatory definition.

If the Commission were to adopt a more inclusive interpretation of the term “broadband,” it would further its goals outlined in Section 706 and, by extension, be consistent with Congress’s goals discussed in the Senate Report. Since there is no legislative guidance on whether Congress intended to exclude laser communication technologies, it logically follows that laser communications has a role in promoting Congress’s goal.

Still, is Section 706 only limited to broadband capabilities for laser communications or could it apply to all services seeing as the statute has both “advance telecommunications” and “information services?” One could interpret “advance telecommunications” to be distinct from “information services” because of the mention of the two terms in the statute and in the Senate Report. Meaning that if Congress intended information services to be equal to an advanced telecommunication, then why have the two terms separated in both their discussions and in the actual statute? This makes Congressional intent unclear and should be left up the expertise of the agency to determine Congress’s meaning so long as it passes \textit{Chevron} analysis. Because the Commission currently classifies broadband services as information services, it would not be unreasonable for the Commission to make this distinction between “information services” and “advance telecommunications.”


\textsuperscript{145} \textit{Eg. id.} (defining broadband as “of, pertaining to, or responsive to a continuous, wide range of frequencies”); \textit{TechTerms.com}, http://www.techterms.com/definition/broadband (last visited Nov. 23, 2014) (defining broadband as “refers to high-speed data transmission in which a single cable can carry a large amount of data at once”); Margaret Rouse, \textit{Broadband}, TechTarget, http://seaq5rctelecom.techtarget.com/definition/broadband (last visited Nov. 23, 2014) (defining broadband as “telecommunication in which a wide band of frequencies is available to transmit information. Because a wide band of frequencies is available, information can be multiplexed and sent on many different frequencies or channels within the band concurrently, allowing more information to be transmitted in a given amount of time (much as more lanes on a highway allow more cars to travel on it at the same time). Related terms are wideband (a synonym), baseband (a one-channel band), and narrowband (sometimes meaning just wide enough to carry voice, or simply ‘not broadband,’ and sometimes meaning specifically between 50 cps and 64 Kpbs”).
communications.” This interpretation would open the door for the Commission to define the term “advance communications” as communications provided by laser satellites and distinct from broadband services. To accomplish this, the Commission would need some statutory grounds in the Act, and Section 303(y) may suffice so long as it adds laser frequencies to the term “electromagnetic spectrum.” However, the APA requires the Commission to perform a proper rulemaking process to make this distinction. Until the Commission satisfies its APA obligations, laser communications remains virtually unregulated.

CONCLUSION

The Commission could have some authority to regulate laser communications satellite, but it would depend on the type of services provided by the carrier. There are also some regulatory limitations based on the explicit mention of “wire or radio” in the statutes of the Communications Act, but the Commission may overcome said limitations by using its ancillary jurisdiction to encourage “advanced telecommunications” services so long as it uses some statutory basis in the original Act (i.e., Section 303(y)).

Currently companies, such as Laser Light, can circumvent the Commission’s licensing requirements to provide services until the FCC conducts a proper rulemaking process satisfying its APA requirement. Until then, it will remain virtually unregulated. As outlined in this Article, as long as the Commission makes reasonable interpretations of its statute, the Commission should start considering how it intends to regulate such entities.

Moreover, assuming the definitions in the Communications Act of 1934 pose any limitations on the Commission in regulating laser communications satellites, this Article offers the Commission’s ancillary jurisdiction under Section 706 of the Telecommunications Act of 1996 with statutory grounding in Section 303(y) of the Act as the proper statutory justification and legal basis for such regulation.