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NOTES

BRIDGING THE (SIGNIFICANT) GAP: TO WHAT EXTENT DOES THE TELECOMMUNICATIONS ACT OF 1996 CONTEMPLATE SEAMLESS SERVICE?

*Stephanie E. Niehaus**

INTRODUCTION

Since the enactment of the Telecommunications Act of 1996 (the TCA or Act), an increasing number of personal wireless service (PWS)¹ providers have attempted to break into the attractive and highly profitable market for wireless service. The number of competing providers varies among locales; however, at least seventy-five percent of Americans currently can choose from at least five providers in their area.² This increase in choice has been matched by an increase in subscription rates. Between 1995 and 1999 alone, the number of wireless subscriptions reached seventy-six million, meaning that thirty percent of the population enjoys some level of wireless service.³

While these numbers may seem impressive, a recent study by the Organisation for Economic Co-operation and Development (OECD)

* Candidate for Juris Doctor, Notre Dame Law School, 2002; B.A., Georgetown University, 1999. I would like to thank my father, for suggesting this topic, and my mother, for patiently listening to our discussions. I would also like to thank Professor John C. Nagle of the Notre Dame Law School for taking time on a spring afternoon to read through my draft and for his insightful comments.

1 The TCA defines PWS as "commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services." 47 U.S.C. § 332(c)(7)(C)(i) (Supp. V 1999). This definition can be confusing as PWS encompasses several kinds of wireless technology. See *infra* Part I.B; *infra* notes 25–39 and accompanying text.

2 ORGANISATION FOR ECON. CO-OPERATION & DEV., OECD ECONOMIC SURVEYS—UNITED STATES (2000), available at 2000 WL 26058316, at *47.

3 *Id.*

indicates that the United States is falling far behind other developed countries in the provision of telecommunications services.⁴ According to the survey, "In 1995, the United States ranked fifth among OECD countries in cellular penetration, but its ranking fell to sixteenth in 1999."⁵ Among the reasons suggested for this statistical drop are the availability of pre-paid phone cards and free incoming calls in foreign markets.⁶ While the addition of these options certainly would make wireless service more attractive to American users, one of the more pressing concerns of PWS providers in the United States is an incomplete telecommunications infrastructure.

One side-effect to providers of an incomplete infrastructure is the inability to provide seamless coverage to consumers. Gaps in coverage result in dropped calls, or the inability to place or receive calls, in certain pockets of a PWS provider's coverage area that fall outside the range of a wireless facility.⁷ As one author aptly noted,

More antenna sites [are] required to provide reliable service to all areas of the country if we are to develop a smooth, seamless information highway. Gaps in service, like potholes on a highway, must be filled to allow voice, data, video and Internet traffic to travel smoothly and quickly through the nation's information infrastructure.⁸

These coverage gaps are not only inconvenient and annoying for consumers of wireless technology, but also raise personal security issues, for example, for long-distance travelers who rely on cellular service in case of a breakdown or an emergency.

PWS providers often find that for technological and geographical reasons they must construct new towers to provide service to the area affected by the gap. If the ideal site for the new tower is not zoned for telecommunications facilities or a local ordinance restricts the placement of telecommunications facilities, the providers must apply to local zoning authorities for variances, special exceptions, or other

4 *See id.*

5 *Id.*

6 *Id.* at *47-*48. Another notable difference between telecommunications in the United States and other countries is that in many foreign countries land line use is significantly more expensive than it is in the United States. Thus in many foreign countries, consumers may find it more economical to rely solely on a mobile phone rather than a land line. For Americans on the other hand, a mobile phone is an expensive alternative to a traditional land line, and few consumers rely solely on mobile phones for communication. *See id.* at *48.

7 *See infra* Part III.A.

8 Gregory D. Meese, *Filling Potholes in the Information Highway*, N.J. LAW., June 1999, at 19, 26.

permission to construct the proposed facilities. If the local zoning authority rejects the application, the parties may find themselves in court, embroiled in expensive and time-consuming litigation. Much of this litigation revolves around the proper construction of the terms of the TCA regulating municipal zoning authority over the placement of telecommunications facilities.⁹

Congress enacted the TCA in an attempt to facilitate deregulation of the telecommunications industry and to encourage competition.¹⁰ When President Clinton signed the bill into law, he remarked that the TCA “is truly revolutionary legislation that will bring the future to our doorstep. . . . [By enacting the TCA] our laws will catch up with our future. We will help to create an open marketplace where competition and innovation can move as quickly as light.”¹¹ To further this goal of an open marketplace, § 332 of the Act limits the traditional authority of municipal zoning boards to review applications from PWS providers for the construction of PWS facilities within municipal boundaries.¹²

Specifically, the Act imposes five express limitations on local authorities, three of which are substantive and two of which are procedural.¹³ Two of the substantive limitations—the “unreasonable discrimination clause” and the “prohibition clause”¹⁴—have inspired massive amounts of litigation. The Act states, in relevant part:

(7) Preservation of local zoning authority.

(A) General authority. Except as provided in this paragraph, nothing in this Chapter [47 U.S.C. §§151–6156] shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.

(B) Limitations.

(i) The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof—

9 See *infra* Part III.

10 See *infra* note 81 and accompanying text.

11 Remarks on Signing the Telecommunications Act of 1996, 1 PUB. PAPERS 185, 186 (Feb. 8, 1996) [hereinafter *Remarks*].

12 See 47 U.S.C. § 332(c)(7)(B) (Supp. V 1999).

13 See *id.* § 332(c)(7)(B)(i)–(v). See generally Matthew N. McClure, Comment, *Working Through the Static: Is There Anything Left to Local Control in the Siting of Cellular and PCS Towers After the Telecommunications Act of 1996?*, 44 VILL. L. REV. 781, 788–89 (1999) (discussing the TCA’s substantive and procedural requirements).

14 47 U.S.C. § 332(c)(7)(B)(i)(I)–(II).

- (I) shall not unreasonably discriminate among providers of functionally equivalent services; and
 - (II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services.
- (ii) A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request.
 - (iii) Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.
 - (iv) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions.
 - (v) Any person adversely affected by any final action or failure to act by a State or local government or any instrumentality thereof that is inconsistent with this subparagraph may, within 30 days after such action or failure to act, commence an action in any court of competent jurisdiction. The court shall hear and decide such action on an expedited basis. Any person adversely affected by an act or failure to act by a State or local government or any instrumentality thereof that is inconsistent with clause (iv) may petition the Commission for relief.¹⁵

In particular, § 332(c)(7)(B)(i)(II)—the prohibition clause—is almost always implicated in litigation springing from attempts to fill significant gaps in coverage. This litigation, and the underlying issues, provide the focus for this Note.

Practitioners, municipal zoning boards, PWS providers, and, eventually, state and federal courts have attempted to interpret the arguably ambiguous provisions of the TCA since its enactment in 1996. The debate involves the standard question of federalism: where does (or should) federal control end and local control begin? As

15 *Id.* § 332(c)(7)(A)–(B).

often is the case when this question emerges, the courts are split on the answer, with some circuits construing the TCA provisions broadly (thus favoring municipal zoning boards),¹⁶ and other circuits reading the provisions narrowly (thus favoring providers).¹⁷ This Note will deal with this conflict by concentrating on recent cases involving PWS providers' attempts to remedy significant gaps in their coverage areas, and the corresponding decisions of municipal zoning boards to deny the providers' applications to fill such gaps. The resulting position is that these denials potentially violate the prohibition clause, based on the plain meaning of § 332, the legislative purpose of the TCA, and the relevant case law.

Part I of this Note attempts to explain the relevant technological aspects of wireless telecommunications, including a brief historical sketch of the development of telecommunications services over the past century. Part I also includes a discussion of the complicated technological considerations that affect wireless tower placement, which is necessary as a background for understanding the debate between providers and municipalities. Part II explores the meaning and purpose of § 332 of the TCA, focusing particularly on the section's substantive limitations. Part III provides an extensive discussion of recent caselaw centering on the prohibition clause of § 332. Part III begins with an explanation of the significant gap problem, including the courts' attempts to define the problem and the problem itself within the context of § 332. Part III then addresses the circuit split, beginning with a discussion of the "foundational cases" and concluding with an in-depth analysis of the various tests the courts have created for dealing with significant gaps under § 332. Finally, Part III considers the development of the issue in the Third Circuit, which best illustrates the confusion and dissension created by § 332. In Part IV, this Note argues that the Second Circuit's standard, initially adopted by the Third Circuit, is the most accurate reading of the prohibition clause, but that recent developments in the Third Circuit have skewed the standard and changed its practical effect. Because of the confu-

16 For example see *AT&T Wireless PCS, Inc. v. Virginia Beach*, 155 F.3d 423 (4th Cir. 1998), discussed *infra* Part III.B.

17 For example see *Sprint Spectrum, L.P. v. Willoth*, 176 F.3d 630 (2d Cir. 1999), discussed *infra* Part III.B. Interestingly, the United States Supreme Court recently denied certiorari in a case out of the Third Circuit: *Omnipoint Communications Enterprises v. Newtown Township*, 531 U.S. 985 (2000). In its petition, Omnipoint urged the Court to resolve the growing circuit split, arguing that none of the four circuits that have decided this issue have applied an acceptable test. *Omnipoint Commun. Enter. v. Newtown Township*, 219 F.3d 240 (3d Cir. 2000), *petition for cert. filed*, 69 U.S.L.W. 3175, at 7 (U.S. Sept. 6, 2000) (No. 00-353) [hereinafter *Omnipoint Petition*].

sion between and within the circuits, this Note takes the position that the significant gap issue is ripe for Supreme Court review.

I. TECHNOLOGY

Because the technological requirements for cellular service are complicated, a rudimentary understanding of the way wireless technology works is necessary in order to appreciate the many factors that a PWS provider must consider in determining where and how to site a new tower.

A. History

Wireless technology has been available since after the Second World War.¹⁸ However, practical delivery of this technology to the consumer market was not possible for nearly thirty years following WWII;¹⁹ in fact, wireless service as we know it was not introduced to the public until the 1970s, when two significant breakthroughs occurred. The first breakthrough came in 1973, when Motorola began marketing a personal radiotelephone set called the DynaTAC mobile phone.²⁰ Then, in 1977 the Federal Communications Commission (FCC) stepped in to encourage further development by opening up the 800 to 900 MHz portion of the radio spectrum to cellular providers.²¹

The FCC's move was experimental and was not intended to fully deregulate the market. Rather, the FCC capped the number of possible licenses in each service area at two: the first was automatically awarded to the local telephone company, and the second was awarded to a competing provider through a lottery system.²² However, the

18 World of Wireless Communications, *The History of Wireless*, at <http://www.wow.com/consumer/FAQ/articles.cfm> (last visited Sept. 28, 2001) (on file with author). "The strategic value of wireless communication on the battlefield spurred companies like AT&T, Motorola and General Electric to focus on refining mobile and portable communications. Motorola's FM Handie-Talkie and Walkie-Talkie figured prominently among the products developed during the war years and carried over into peacetime use." *Id.*

19 *See id.*

20 *Id.*

21 *See* Kenneth C. Baldwin, *The Telecommunications Act of 1996: Developing Caselaw of Towering Propositions*, 31 URB. LAW. 555, 557 (1999); *see also* Lynn Hanley, Note, *Wireless Communications and the Telecommunications Act of 1996: An Experiment in Federalism*, 12 LOY. CONSUMER L. REV. 48, 51 (1999) ("The [FCC] has the exclusive responsibility and authority to assign and distribute sections of the radio frequency spectrum and otherwise regulate the use of the spectrum.").

22 Baldwin, *supra* note 21, at 557. The local telephone company was known as the "A" side carrier, and the competing provider was known as the "B" side carrier. World

inefficiency of this system was readily apparent as potential competitive providers flooded the FCC with applications. As a result, in 1994 the FCC announced that it would begin sectioning off the relevant portion of the radio spectrum to as many as nine cellular providers per market area through an open-bidding process.²³ The FCC's announcement fanned the competitive flames as providers dumped billions of dollars into the federal treasury to acquire licenses and set up shop in market areas across the country, bringing new technology to American consumers.²⁴

B. *Types of PWS*

Although used broadly to refer to mobile telephones, the term "cellular" does not accurately describe all forms of wireless service. Rather, cellular technology accounts for only one type of PWS. A second and more sophisticated technology—personal communications systems (PCS)—is also available to consumers of wireless products.²⁵ To further complicate matters, cellular can be broken down again into analog and digital technologies. The distinction is important because these three technologies often operate together and compete in the same markets.

1. Cellular Technology

When a customer initiates a call using cellular technology, his or her voice signal is transmitted by radio waves to a receiving antenna, usually mounted on a tower, pole, or other high structure.²⁶ Unlike commercial radio station transmissions, which are high-power and one-directional, cellular transmissions require smaller (and therefore

of Wireless Communications, *supra* note 18. In 1983, AT&T received the first competing license in Chicago. *Id.*

²³ Baldwin, *supra* note 21, at 557; *see also* World of Wireless Communications, *supra* note 18 (discussing FCC licensing divisions). The FCC also began auctioning off PCS licenses in 1994, further expanding the market. Currently, the FCC has auctioned off the entire 120 MHz of the spectrum available for Broadband PCS. FCC, *Broadband PCS Fact Sheet*, <http://www.fcc.gov/wtb/pcs/bbfctsh.html> (last modified Aug. 30, 2001) (on file with author); *see also infra* Part I.B.2 for further discussion of PCS technology.

²⁴ FCC, *supra* note 23. According to the FCC, Broadband PCS licensing auctions in 1994 and 1995 for A and B Block licenses (covering 51 Major Trading Areas) alone generated \$7.7 billion for the United States Treasury. *Id.*

²⁵ *See* Hanley, *supra* note 21, at 49.

²⁶ *See* SAN DIEGO ASS'N OF GOV'TS, WIRELESS COMMUNICATIONS FACILITIES ISSUES PAPER, pt. I (1995), <http://www.sandag.cog.ca.us/ftp/html/publications/wireless.html> (on file with author) [hereinafter ISSUES PAPER].

more) antennas to provide point-to-point, low-power, two-way communications.²⁷ The antenna receives the signal and then routes the call by microwave or landline to the telephone network.²⁸ As the caller moves through the area, the signal is “handed off” to surrounding antennas until the caller ends the transmission.²⁹

Analog technology was the first and most basic form of cellular technology available to the consumer public.³⁰ It also provides the lowest quality transmission.³¹ With analog service, the voice signal is electronically reproduced and amplified as it bounces from tower to tower.³² As a result of the amplification, however, the transmission is often interrupted by outside noises and static.³³

Digital service is the more advanced cellular technology and provides a much higher quality transmission. Unlike analog, with digital service the caller’s voice is broken up into binary digits that correspond with various sounds at different points in time.³⁴ By avoiding

27 See Gregory Tan, Note, *Wading Through the Rhetoric of the Telecommunications Act of 1996: Uncertainty of Local Zoning Authority over Wireless Telecommunications Tower Siting*, 22 VT. L. REV. 461, 465–66 (1997). To achieve two-way communication, transmissions between the antenna and the mobile unit are conducted on a two-frequency channel; transmissions to the antenna operate on one frequency, while transmissions from the antenna operate on the other. See Int’l Eng’g Consortium, Web ProForums, *Cellular Communications Tutorial*, Topic 1, at http://www.iec.org/online/tutorials/cell_comm/index.html (last visited Sept. 28, 2001) (on file with author).

28 See Hanley, *supra* note 21, at 49–50.

29 See *id.* at 50. Cellular towers cover an area of approximately ten miles, depending on the surrounding landscape. *Id.*

30 See Int’l Eng’g Consortium, *supra* note 27, at Topic 4.

31 See *id.* (“Limitations associated with AMPS [analog cellular technology] include: 1. low calling capacity; 2. limited spectrum; 3. no room for spectrum growth; 4. poor data communications; 5. minimal privacy; 6. inadequate fraud protection.”).

32 See Tim Race, *What Do They Mean by Digital, Anyhow?*, N.Y. TIMES, Mar. 19, 1998, at G11 (“A basic example of analog technology is the conventional telephone, in which sound waves are converted into a fluctuating electrical pattern analogous to the original sound waves. This principle—analogue electronic patterns—holds true whether sound is traveling over wires or via radio frequencies.”); see also ISSUES PAPER, *supra* note 26, at pt. II.

33 See ISSUES PAPER, *supra* note 26, at pt. II.

34 See *id.*; see also Race, *supra* note 32.

In the case of digital technology, information detectable by human ears or eyes is converted into an electronic pattern expressible as the digits of a computer code. This code typically uses a simple binary system of zeroes and ones, which can also be expressed as “on” and “off” in an electrical current Information can be captured and reproduced digitally with much more precision than with analog technology, and it can be compressed and stored in a much smaller physical format.

Id.

the amplification process, digital telecommunications also avoid problems with background noise, resulting in a much clearer signal.³⁵ More importantly, digital technology reduces the strain on the cellular infrastructure by compressing the voice signals, thus eliminating natural pauses and increasing calling capacity on the portion of the radio spectrum that the signal is using.³⁶

2. Personal Communications Systems Technology

Personal Communications Systems make up the other side of PWS. Like cellular technology, PCS can be broken down into two sub-categories, narrowband and broadband; however, only broadband PCS competes with cellular technology in the wireless communications market.³⁷ Unlike traditional cellular technology, PCS offers a huge range of potential services. According to the FCC, broadband PCS

could . . . be used in the development of more advanced wireless phone services that would be able to pinpoint the subscriber in any given locale. Broadband PCS will most likely be used to provide a variety of mobile services including an entire family of new communications devices utilizing very small, lightweight, multi-function portable phones, portable facsimile and other imaging devices, new types of multi-function cordless phones, and advanced devices with two-way data capabilities. Broadband PCS systems will be able to communicate with other telephone networks as well as with personal digital assistants, allowing subscribers to send and receive data and/or video messages without connection to a wire.³⁸

Although PCS relies on the same technology as digital cellular telecommunications, it operates at a higher frequency than cellular service; thus, while PCS improves technology, it requires more and often taller antennas to operate properly.³⁹ The number of towers needed to effectively provide service thus depends on the technology the service is using and has significant bearing on siting decisions regarding cell placement.

35 See ISSUES PAPER, *supra* note 26, at pt. II.

36 See Tan, *supra* note 27, at 470-71.

37 See Hanley, *supra* note 21, at 50-51. Messaging services and paging operate on narrowband PCS. *Id.*

38 FCC, *supra* note 23.

39 See Sara A. Evans, Note, *Wireless Service Providers v. Zoning Commissions: Preservation of State and Local Zoning Authority Under the Telecommunications Act of 1996*, 32 GA. L. REV. 965, 980-81 (1998). Broadband PCS uses the 1850 to 1990 MHz band of the radio spectrum. See FCC, *supra* note 23.

C. Cell Configuration and Frequency Reuse

The cell is the basic geographic component of the wireless communications infrastructure, regardless of the technology used.⁴⁰ Each cell is organized around a base station, which includes the supporting structure for an antenna,⁴¹ the actual antenna, and the peripheral equipment.⁴² For obvious reasons, cells are crucial components of a provider's service; as a result, providers must give careful consideration to cell placement.⁴³ Many factors influence cell placement decisions, including topography, subscriber density, and the type of technology available in the service area in question.⁴⁴

Cell size is partially determined by the subscriber density in the surrounding area; for example, in rural areas, where the subscriber density is low, cells tend to be larger, as opposed to urban areas, where cells tend to be quite small.⁴⁵ However, subscriber density is not the only determining factor for cell size; rather, the type of wireless service offered—analogue, digital, or PCS—also impacts cell sizing.⁴⁶ An analogue cell has a comparatively large radius, averaging two to five miles in urban areas and five to eight miles in rural areas; as a result, analogue service requires a small number of large cells to operate properly.⁴⁷ On the other hand, PCS technology utilizes microcells and macrocells, both with under a two mile radius.⁴⁸ "Consequently, some

40 Int'l Eng'g Consortium, *supra* note 27, at Topic 3 ("The term *cellular* comes from the honeycomb shape of the areas [i.e., the cells] into which a coverage region is divided.") (emphasis in original).

41 Tan, *supra* note 27, at 476.

There are three commonly used types of antenna support structures: lattice towers, monopoles, and building-attached facilities. Lattice towers are structures consisting of three or four legs connected by a lattice pattern of supporting beams Monopoles are structures consisting of a single pole, approximately three feet in diameter at its base and tapering to about 1.5 feet in diameter at the top Building-attached antennas . . . occur in two general forms: roof-mounted and building-mounted. Antennas have also been known to be mounted on silos, water tanks, windmills, or smokestacks.

Id. (footnotes omitted).

42 *Id.* at 475.

43 *See id.* at 474. "The actual positioning of base stations within the model cell structure is essential to the success of the network." *Id.*

44 *See* Tan, *supra* note 27, at 474; Int'l Eng'g Consortium, *supra* note 27, at Topic 3.

45 Int'l Eng'g Consortium, *supra* note 27, at fig.6.

46 Tan, *supra* note 27, at 474.

47 *Id.*

48 *See id.*; *see also* ISSUES PAPER, *supra* note 26, at pt. II (describing how PCS technology uses "microcells (antennas located on top of light poles or telephone poles), and macrocells (antennas mounted on the sides or tops of buildings)").

PCS providers estimate that PCS networks will require two to three times as many transmission sites as cellular networks.⁴⁹

Another consideration influencing cell configuration is the position of the base station within the cell. The optimal location for a base station is at the center of the cell; however, due to geographic constraints, optimal placement is not always possible.⁵⁰ Nonetheless, the base station must be placed within one-fourth of the total cell radius away from the optimal center for the system of cells to operate.⁵¹

Theoretically, if cells are arranged properly, wireless telephone users will be able to travel throughout a service area without disruption to a phone call. This uninterrupted service is possible because of a process known as "handoff."⁵² "Handoff occurs when the mobile telephone network automatically transfers a call from radio channel to radio channel as a mobile crosses adjacent cells."⁵³ The caller does not even notice the transition; however, the transfer is necessary because no two adjacent cells have the same channel assignment.⁵⁴ The difference in channels between cells is a product of the very necessary concept of "frequency reuse."

Frequency reuse developed because the radio spectrum available for commercial licensing is limited.⁵⁵ As a result, wireless providers had to develop a way to maximize the number of communications that could be carried on a single channel at a given time.⁵⁶ The concept that developed is called "frequency reuse" or "frequency planning."⁵⁷ Essentially, frequency reuse refers to the process of assigning and reassigning available radio channels across a series of hexagonal shaped cells.⁵⁸ These cells are arranged in adjacent, honeycomb-shaped "clusters," which are laid out across the service area to provide seamless coverage.⁵⁹ To minimize interference and maximize channel use, cells are organized so that other cells with the same channel

49 Tan, *supra* note 27, at 474.

50 *See id.*

51 *Id.*

52 *See* Int'l Eng'g Consortium, *supra* note 27, at fig.7.

53 *Id.* at Topic 3.

54 *Id.*

55 ISSUES PAPER, *supra* note 26, at pt. II ("The cellular telephone industry is limited to 45 MHz of spectrum bandwidth, which without frequency-reuse, would limit each cellular carrier to 396 frequencies or voice channels.").

56 *See* Tan, *supra* note 27, at 468.

57 *See* Int'l Eng'g Consortium, *supra* note 27, at Topic 3.

58 Tan, *supra* note 27, at 468. *See generally* Int'l Eng'g Consortium, *supra* note 27, at fig.5 (depicting hexagonal cell arrangement).

59 Int'l Eng'g Consortium, *supra* note 27, at Topic 3.

assignment, or "footprint," are far enough away that the signals do not interfere.⁶⁰

Ideally, a PWS provider would be able to locate the optimal locations for base stations and install the necessary facilities to create a pattern of adjacent cells and clusters throughout an entire service area. In this way, wireless carriers could offer uninterrupted service to customers. However, technology considerations do not always coincide with zoning restrictions, and what may be an optimal location for the provider may not be an optimal location for the municipality. Providers often encounter resistance from local zoning authorities and citizens who oppose the construction of telecommunications towers for, inter alia, aesthetic, health, and safety reasons. Indeed, zoning boards often cite community concerns to support a decision to reject a siting application.⁶¹ And community concerns are not surprising considering the sometimes unsightly appearance of wireless towers⁶² and the numerous studies linking wireless telephone use to health problems.⁶³

60 *Id.* The concept of frequency reuse is difficult and may be better explained by the following, simplified example:

In Cleveland, radio station WMMS broadcasts at frequency 100.7 of the FM spectrum. If you travel to other cities around the country, you will also find other radio stations that broadcast at frequency 100.7. All of the stations are broadcasting at the same frequency, but because they are geographically dispersed, they do not interfere with each other's broadcast. Each cellular tower is like a radio station. It broadcasts at certain frequencies, but unlike a radio station, a cellular tower will broadcast at many frequencies. Each tower is tuned to broadcast at frequencies that will not interfere with surrounding towers. This enables the network of towers to reuse the same frequency that one tower is using without interfering with the towers that are also using that frequency.

E-mail from James B. Niehaus, Esq., Frantz Ward L.L.P., to Stephanie E. Niehaus (Oct. 23, 2000) (on file with author).

61 See, e.g., *Cellular Tel. Co. v. Town of Oyster Bay*, 166 F.3d 490, 492 (2d Cir. 1999); *PrimeCo Pers. Commun., L.P. v. Vill. of Fox Lake*, 26 F. Supp. 2d 1052, 1064-66 (N.D. Ill. 1998); *Omnipoint Commun., Inc. v. Bd. of Adjustment*, 767 A.2d 488, 494-95 (N.J. Super. Ct. App. Div. 2001).

62 See Laurie Dichiera, *Wireless Communications Facilities: Siting for Sore Eyes*, 6 BUFF. ENVTL. L.J. 1, 13 (1998) (noting that "wireless facilities are typically designed with function, not appearance, as the primary goal").

63 See Nick Tinari, *Cell Phone Towers in Residential Areas: Did Congress Let the Pig in the Parlor with the Telecommunications Act of 1996?*, 73 TEMP. L. REV. 269, 276 n.43 (2000) (referencing studies that show "that low level radiation at cell phone frequencies can cause damage to DNA molecules associated with Alzheimer's disease, Parkinson's disease, and cancer"); Jeneba Jalloh, Comment, *Local Tower Siting Preemption: FCC Radio Frequency Guidelines Are Solution for Removing Barriers to PCS Expansion*, 5 COMMLAW CONSPICUOUS 113, 119 (1997) ("A national opinion poll . . . found that an over-

Section 332(c)(7)(B)(iv) of the Act specifically preempts a local zoning board's ability to deny a siting application based solely on health and environmental concerns.⁶⁴ Rather than leave the determination to local authorities, the TCA relies on the FCC to establish acceptable levels of radio frequency emissions for wireless towers. If a provider complies with these standards, the TCA prohibits a municipality from denying the provider's application without an alternate (and acceptable) reason.⁶⁵ On the other hand, the TCA does not address aesthetics, and several courts have allowed denials based partly on aesthetic concerns.⁶⁶ These concerns generally relate to the visibility of the structure above the tree line and the effect the structure will have on property values and the "character" of the surrounding neighborhood.⁶⁷

When community concerns arise, alternative arrangements are sometimes possible; for example, a provider may choose to mount an antenna on an existing structure or camouflage the structure by design or with vegetation. Still, these proposals often meet with equal

whelming majority of those polled cited health fears as the cause of their opposition to cellular tower [sic] in their neighborhoods.").

64 47 U.S.C. § 332(c)(7)(B)(iv) (Supp. V 1999). Specifically, the provision states: "No state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions." *Id.* Although the TCA preempts local authority over health and environmental matters, public debate on the potential harmful effects of wireless towers and telephone use continues. Because "three wireless communications sources . . . generate and use electromagnetic energy"—namely "cell site antennas, hand-held portable communications devices, and electrical equipment in equipment buildings at cell sites and switching stations"—some members of the public have voiced concern as to "whether the type of energy emitted by these systems affect [sic] human cells and cause [sic] illnesses." ISSUES PAPER, *supra* note 26, at pt. IV.

65 See Tinari, *supra* note 63, at 276.

66 See *Omnipoint*, 767 A.2d at 498 ("Although the tower would look like a light pole, its design did not change the fact that it would be much higher than the surrounding treetops and nearby structures."); *cf.* Va. Metronet, Inc. v. Bd. of Supervisors, 984 F. Supp. 966, 974–76 (E.D. Va. 1998) (overruling zoning board's decision to deny a siting application where four of the five stated reasons for the denial were based on aesthetic concerns).

67 See Mariah E. Murphy, Note, *A Proposal for Achieving Consistency in the Implementation of the Telecommunications Act of 1996, and Maintaining Local Land Use Laws*, 19 TEMP. ENVTL. L. & TECH. J. 205, 206 (2001) ("The towers are stand alone structures that range in height from fifty to two hundred feet [T]hey pose an eyesore, lower property values, and are popping up where they are unwanted, in residential and rural districts.").

resistance or are not feasible because of siting considerations.⁶⁸ The TCA anticipates this potential for conflict between local authorities and wireless providers in § 332 by expressly preserving local authority,⁶⁹ while simultaneously constraining that authority through the substantive and procedural limitations contained in § 332(c)(7)(B).

II. THE TELECOMMUNICATIONS ACT OF 1996: THE PLAIN MEANING AND THE LEGISLATIVE PURPOSE

Section 332(c)(7) of the TCA both preserves and limits local zoning authority over the placement of cellular structures within municipal boundaries. As one court noted,

Section 332 seeks to strike a balance between encouraging the growth of telecommunications systems and the right of local governments to make land use decisions. This balance is sought to be achieved by giving weight to the recognized importance of seamless wireless coverage as well as the right of local governments to make land use decisions.⁷⁰

This Note is concerned primarily with the second part of the first substantive limitation of § 332, which prevents municipal zoning boards from taking any action that prohibits or has “the effect of prohibiting the provision of personal wireless services” (the “prohibition clause”).⁷¹ This provision can be read in two ways: (1) based on the plain meaning of the statute, and (2) against the backdrop of the legislative purpose.

A. *The Plain Language Reading of the Prohibition Clause*

Although the provision consists of a relatively few number of words, the prohibition clause alone has inspired volumes of academic speculation and case law.⁷² The debate boils down to a semantical exercise centered on the proper construction of the phrase “prohibit or have the effect of prohibiting.”⁷³ Essentially, the prohibition clause

68 See *Sprint Spectrum, L.P. v. Willoth*, 176 F.3d 630, 635 (2d Cir. 1999) (“The antennae may be placed on preexisting structures such as a building or billboard. But absent suitable preexisting structures within 25% of the cell radius, it is necessary to erect a tower for the antennae.”).

69 47 U.S.C. § 332(c)(7)(A) (Supp. V 1999).

70 *N.Y. SMSA, L.P. v. Town of Riverhead*, 118 F. Supp. 2d 333, 340 (E.D.N.Y. 2000).

71 47 U.S.C. § 332(c)(7)(B)(i)(II).

72 See *Tan*, *supra* note 27, at 464 (arguing that the prohibition clause is “[p]erhaps the most ambiguous limitation” of 47 U.S.C. § 332(c)(7)(B)).

73 *Id.* at 479.

evokes two plain meanings. It could be read as an extension of “prohibit,” or it could be read independently. If read as an extension of “prohibit,” the phrase “effect of prohibiting” builds upon “prohibit” and, thus, encompasses any actions that have the effect of a total ban on cellular towers Alternatively, if read independently, the plain meaning of the phrase “effect of prohibiting” . . . is no longer limited to the figurative or geographical scope of “prohibit.” Instead, it includes *any* regulatory action that prevents a particular company from providing its personal wireless services in any geographical area.⁷⁴

Whether or not one accepts that both interpretations are possible, the independent reading is the more sensible. While acknowledging that legislation is not always clearly written, construing the prohibition clause to proscribe only absolute bans on wireless service would render the “effect of prohibiting” language redundant. As the Second Circuit has noted, “[i]t is a well-settled rule of statutory construction that . . . ‘interpretations of statutes that render language superfluous’ [are disfavored].”⁷⁵ Because the only way to give the latter half of the prohibition clause any effect is to read the provision independently, the restriction on municipal authority contained in the prohibition clause must extend beyond general policies banning wireless service.

B. 47 U.S.C. § 332—*Legislative Purpose*

While the plain language of the statute is arguably ambiguous, the legislative history gives an unambiguous account of Congress’s intention in passing the TCA. Former FCC Chairman William E. Kennard’s reflections on the purpose of the TCA are particularly insightful:

When figuring out what sort of telecommunications framework to establish for our country as it entered the 21st century, Congress wisely reached back to a value as old as America itself: choice. The idea that once given an array of options, individuals can best decide what is best for them. Thus, Congress gave the FCC the tools to break open the monopoly markets to competition.⁷⁶

⁷⁴ *Id.* (footnotes omitted).

⁷⁵ *Sprint Spectrum, L.P. v. Willoth*, 176 F.3d 630, 640 (2d Cir. 1999) (quoting *Conn. Nat’l Bank v. Germain*, 503 U.S. 249, 253 (1992)); see also *infra* note 127 and accompanying text.

⁷⁶ William E. Kennard, *The Telecom Act at Three: Seeing the Face of the Future*, Address at the Comptel 1999 Annual Meeting and Trade Exposition (Feb. 8, 1999), in 1999 FCC LEXIS 506, at *5.

This preference for "choice" is reflected in the legislative documents leading up to the signing of the bill,⁷⁷ statements made contemporaneously with the actual signing of the TCA,⁷⁸ the preamble to the Act itself,⁷⁹ and numerous court cases interpreting the Act.⁸⁰ Generally, these statements reflect the idea that "[t]he goal [of the TCA] . . . is to encourage competition that will produce innovative technologies for every American household and provide benefits to the American consumer in the form of lower prices and enhanced services."⁸¹

At the same time it sought to encourage competition in the telecommunications industry, Congress recognized the legitimate interest of local communities in maintaining some control over zoning decisions regarding antenna placement.⁸² In fact, Congress refused to bend to pressure from PWS providers, who lobbied for complete preemption of local authority.⁸³ Despite Congress's refusal to fully preempt local zoning authority, the legislative history, as well as the plain reading of the substantive and procedural limitations contained in the Act, indicate that Congress anticipated that zoning boards would allow wireless providers to access and effectively compete in the market and would not unreasonably discriminate against providers.⁸⁴

77 See, e.g., 142 CONG. REC. H1145-46 (daily ed. Feb. 1, 1996) (statement of Rep. Linder).

This legislation will be remembered as the most deregulatory telecommunications legislation in history. The philosophy of this Congress—and our Nation in general—is to encourage competition in order to provide more efficient service and superior products to the American consumer. This bill will strip away antiquated laws, create more choices, and lower prices for consumers and enable companies to compete in the new telecommunications marketplace.

Id.

78 See *Remarks*, *supra* note 11, at 186.

79 See Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, 56 (The purpose of the Act is "[t]o promote competition and reduce regulation in order to secure lower prices and higher quality service for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.").

80 See, e.g., *PrimeCo Pers. Commun., L.P. v. Vill. of Fox Lake*, 26 F. Supp. 2d 1052, 1058 (N.D. Ill. 1998); *Sprint Spectrum, L.P. v. Town of Easton*, 982 F. Supp. 47, 50 (D. Mass. 1997) ("The legislative history evidences clear Congressional intent to take 'down the barriers' to telecommunications."); *Paging, Inc. v. Bd. of Zoning Appeals*, 957 F. Supp. 805, 807 (W.D. Va. 1997); *BellSouth Mobility, Inc. v. Gwinnett County*, 944 F. Supp. 923, 927 (N.D. Ga. 1996) ("TCA is expansive legislation designed primarily to increase competition in the telecommunications industry.").

81 142 CONG. REC. H1146.

82 See 47 U.S.C. § 332(c)(7)(A) (Supp. V 1999).

83 See *Evans*, *supra* note 39, at 981.

84 See 47 U.S.C. § 332(c)(7); H.R. CONF. REP. NO. 104-458, at 208 (1996).

III. THE PROBLEM OF SIGNIFICANT GAPS IN RECENT CASE LAW

The boardroom, and later courtroom, battles between municipal zoning boards and providers multiplied rapidly after the passage of the TCA. Initially, the cases interpreting § 332 focused on the level of federal preemption contemplated by the Act, as well as the general implications of the substantive and procedural limitations contained in § 332(c)(7)(B).⁸⁵ Specifically with regard to the prohibition clause, the courts were faced time and again with the task of determining whether municipal moratoria or general bans on wireless applications were lawful under the TCA.⁸⁶ As the minutia of these cases was sorted out, a general consensus emerged that such policies were impermissible.⁸⁷ However, the issue did not stay out of the courts for long. With the decisions in their favor, providers sought to improve service by expanding the wireless infrastructure to fill coverage gaps.⁸⁸ Again, problems arose as zoning boards hesitated to approve further construction of wireless facilities in their neighborhoods. So the parties found themselves back in court, this time with "a subtler, and more troubling issue . . . whether a single decision by a municipality rejecting a tower siting could be construed as either prohibiting, or

The intent of the conferees is to ensure that a State or local government does not in making a decision regarding the placement, construction and modification of facilities of personal wireless services . . . unreasonably favor one competitor over another . . . Actions taken by State or local governments shall not prohibit or have the effect of prohibiting the placement, construction or modification of personal wireless services. It is the intent of this section that bans or policies that have the effect of banning personal wireless services or facilities not be allowed and that decisions be made on a case-by-case basis.

Id.

⁸⁵ See generally *Sprint Spectrum, L.P. v. Jefferson County*, 968 F. Supp. 1457 (N.D. Ala. 1997) (examining federal preemption and the prohibition and discrimination clauses); *Sprint Spectrum, L.P. v. City of Medina*, 924 F. Supp. 1036 (W.D. Wash. 1996) (same); see also generally Shannon L. Lopata, Note, *Monumental Changes: Stalling Tactics and Moratoria on Cellular Tower Siting*, 77 WASH. U. L.Q. 193 (1999) (providing general background on the problem of moratoria and court responses to such measures); McClure, *supra* note 13 (examining the breadth of § 332(c)(7)(B) limitations); Tan, *supra* note 27 (examining the meaning of the prohibition clause).

⁸⁶ See, e.g., *Jefferson County*, 968 F. Supp. at 1466–67 (holding that the institution of a moratorium violates the TCA); *Sprint Spectrum, L.P. v. Town of Farmington*, 3:97 CV 863 (GLG), 1997 U.S. Dist. LEXIS 15832, at *17–*20 (D. Conn. Oct. 6, 1997) (same); cf. *City of Medina*, 924 F. Supp. at 1036 (upholding a moratorium of limited scope).

⁸⁷ See *supra* note 86.

⁸⁸ See generally James Lawlor, *Act Two for Telecommunications*, PLANNING, Sept. 1999, at 16.

effectively prohibiting, personal wireless services within the meaning of the Act.”⁸⁹

The question breaks down into two main issues. First, the courts must determine what qualifies as a significant gap in coverage. Second, the courts must determine if and how decisions by zoning boards to deny providers’ applications to remedy these gaps implicate the substantive limitations of § 332. Perhaps not surprisingly, the federal courts are split on the answer to this question.

A. *The Problem*

As discussed in Part I.C., cells must be configured such that effective “handoff” can occur as users move in and out of the coverage area of a given antenna. One court explained:

If the distance between [the antennae] is too great, then “coverage gaps” occur. Coverage gaps significantly impair wireless service not only for people in the immediate area of the gap, but also for other customers because existing towers must then handle the “overflow” by relaying signals that should be—according to the honeycomb grid—transmitted via a non-existent tower. Additionally, in the coverage-gap [sic] area customers can neither initiate nor receive cellular telephone calls, and when customers travel through a gap area their calls are disconnected.⁹⁰

Obviously, coverage gaps are a source of frustration for consumers, who expect that communications initiated from a mobile telephone will be completed and, once completed, will be sustained for the duration of the communication. The problem is equally frustrating for providers, who stand to lose business if they cannot provide sufficient coverage to customers.

According to the Fourth Circuit, the TCA “obviously cannot require that wireless services provide 100% coverage. In recognition of this reality, federal regulations contemplate the existence of dead spots, defined as ‘small areas within a service area where the field

89 Paul J. Yesawich III & Anne Dyring Riley, *Second Circuit Rejects “Attractively Simple” Interpretation of Siting Provisions in Telecommunications Act of 1996*, METRO. CORP. COUNS., Dec. 1999, at 21, 21.

90 PrimeCo Pers. Commun., L.P. v. Vill. of Fox Lake, 26 F. Supp. 2d 1052, 1054 (N.D. Ill. 1998); see also Cellular Tel. Co. v. Town of Oyster Bay, 166 F.3d 490, 492 (2d Cir. 1999) (“If a network contains too few cell sites or sites too far apart from one another, customers living or working in or traveling through these ‘coverage gaps’ experience inadequate service, including static, inability to place calls and mid-call disconnection.”); *Jefferson County*, 968 F. Supp. at 1460 (likening cell structure to an “interconnected quilt” in which “cells must be stitched together to provide seamless coverage”).

strength is lower than the minimum level for reliable service.’”⁹¹ While it may be true that the TCA does not *require* 100% coverage, its express goal of facilitating competition surely contemplates more than scanty service from one or two providers, interrupted by significant gaps that are characterized not by *unreliable* service, but rather by *nonexistent* service.

The courts have attempted to differentiate a significant gap from a mere dead spot. Generally, the analysis seems to turn on a factual evaluation of the existing service. The Third Circuit, for example, has declined to provide a hard and fast definition of the phenomenon, but has stated:

[I]t matters a great deal . . . whether the “gap” in service merely covers a small residential cul-de-sac or whether it straddles a significant commuter highway or commuter railway. Unlike a utility such as electrical power, cellular service is used in transit, so a gap that covers a well-traveled road could affect large numbers of travelers—and the people who are trying to communicate with them. Over the course of a year, the total disruption caused could be quite significant.⁹²

The Second Circuit has also employed a factual inquiry when addressing this issue, noting that where the interruption to service is “*de minimis*” a wireless provider does not have a valid claim against the municipality.⁹³

Although still undefined, the phenomenon of significant gaps has appeared at the center of numerous legal battles between providers and municipal zoning boards.⁹⁴ Consistently, the providers have argued that municipal zoning authorities have acted to effectively prohibit the provision of wireless service by denying applications for facilities to remedy these significant gaps, thus violating the substantive limitations set forth in the TCA.⁹⁵ Municipalities have, not surprisingly, argued against this construction of the applicable provisions.⁹⁶

B. *The Split*

Of the circuits that have addressed the problem of significant gaps in light of the TCA mandates, each has applied a different stan-

91 360° Commun. Co. v. Bd. of Supervisors, 211 F.3d 79, 87 (4th Cir. 2000).

92 Cellular Tel. Co. v. Borough of Ho-Ho-Kus, 197 F.3d 64, 70 n.2 (3d Cir. 1999).

93 Sprint Spectrum, L.P. v. Willoth, 176 F.3d 630, 643–44 (2d Cir. 1999).

94 See *infra* Part III.B.

95 See *infra* Part III.B.

96 See *infra* Part III.B.

dard.⁹⁷ As a result, seemingly similar fact patterns have inspired significantly different conclusions of law. The cases have also generated a great deal of rhetoric in the district courts; still, no consensus seems likely at any level unless the United States Supreme Court agrees to hear the issue and unify the standards.

1. Foundational Cases

While literally dozens of decisions focusing on the “effect of prohibiting” language in the prohibition clause have been handed down across the country, a few clearly stand out as influential in shaping the circuit split. This Note will concentrate on the Second, Third, and Fourth Circuit standards, as representing the extreme sides of debate.⁹⁸ While this Note takes the position that none of these standards is an ideal interpretation of the TCA with regard to significant gaps in coverage, the Second Circuit standard is the most logical and well-reasoned reading of the statute. However, the leading Second Circuit case contains troubling dicta that, when taken to its logical conclusion and incorporated into a standard (as recently done by the Third Circuit), offends the letter and spirit of the TCA.⁹⁹

97 These include the First, Second, Third, and Fourth Circuits. See *Omnipoint Commun. Enter. v. Newtown Township*, 219 F.3d 240, 244 (3d Cir. 2000); *Willoth*, 176 F.3d at 643; *Town of Amherst v. Omnipoint Commun. Enter.*, 173 F.3d 9, 14 (1st Cir. 1999); *AT&T Wireless PCS, Inc. v. Va. Beach*, 155 F.3d 423, 428 (4th Cir. 1998).

98 In fact, only one other circuit (the First) has considered the issue. In *Town of Amherst v. Omnipoint Communications Enterprises, Inc.*, 173 F.3d 9 (1st Cir. 1999), the provider was not trying to fill gaps but rather to introduce service to a new area. After its applications were denied, the provider filed several claims against the zoning board, including a claim under the prohibition clause. The court acknowledged that a conflict existed in the circuits, specifically citing the Fourth Circuit’s approach. *Id.* at 14. However, rather than accepting an existing standard, the First Circuit applied a “fixed hostility” analysis to determine if the Town’s actions had the effect of prohibiting wireless service. *Id.* Under this analysis, “the burden for the carrier invoking [the] provision is a heavy one: to show from language or circumstances not just that *this* application has been rejected but that further reasonable efforts are so likely to be fruitless that it is a waste of time even to try.” *Id.* While this standard has since been used in significant gap cases, I have chosen to narrow the discussion to the other three circuits because the standards emerging from those circuits represent the polar opposites of the debate on the prohibition clause and were developed specifically with regard to the significant gap problem.

99 See *infra* notes 154–64 and accompanying text.

a. The Early Decisions: *Western PCS II Corp. v. Extraterritorial Zoning Authority*

Although disposed of at the district court level, the *Western PCS*¹⁰⁰ decision is one of the earliest and most commonly referred to cases addressing the problem of significant gaps in coverage.¹⁰¹ The underlying dispute in *Western PCS* reflects the standard fact pattern for these cases. In an attempt to close a gap in its service through a certain corridor of Interstate 25, Western sought to place an antenna on an existing water tank near the highway.¹⁰² Western applied for a special exception to the Extraterritorial Zoning Commission (EZC), which recommended conditional approval.¹⁰³ Despite this approval, and Western's statements that it had explored all of its alternatives, the Extraterritorial Zoning Authority (EZA) denied Western's application because it lacked a sufficient property interest and because local residents had not expressed a desire for the added service.¹⁰⁴

The district court overruled the EZA, holding that the Authority's denial of Western's application violated both the discrimination clause and the prohibition clause of the TCA.¹⁰⁵ Noting that Western's two competitors provided uninterrupted analog service along the I-25 corridor in question, the court remarked that "[i]t does not take a telecommunications engineer or a marketing expert to recognize that an inability to provide uninterrupted service along the I-25 corridor would seriously impede Western's ability to compete with its competitors in the Santa Fe area."¹⁰⁶ In light of the EZA's failure to provide a justifiable basis for its decision, the court determined that the resulting discrimination was not reasonable within the meaning of the provision.¹⁰⁷

In addition, the court concluded that the EZA's decision had the effect of prohibiting the provision of wireless service in the area.¹⁰⁸

100 957 F. Supp. 1230 (D.N.M. 1997).

101 See, e.g., *APT Pittsburgh Ltd. v. Penn Township*, 196 F.3d 469, 474 (3d Cir. 1999); *AT&T Wireless PCS, Inc. v. Va. Beach*, 155 F.3d 423, 428 (4th Cir. 1998); *APT Minneapolis, Inc. v. Eau Claire County*, 80 F. Supp. 2d 1014, 1024 (W.D. Wis. 1999); *Omnipoint Commun. Enter. v. Town of Amherst*, 74 F. Supp. 2d 109, 118 (D.N.H. 1998); *Sprint Spectrum, L.P. v. Town of N. Stonington*, 12 F. Supp. 2d 247, 251 (D. Conn. 1998).

102 *W. PCS*, 957 F. Supp. at 1234.

103 *Id.* The EZC's conditions included height restrictions and removal of existing graffiti on the water tank. Western agreed to these conditions. *Id.* at 1235.

104 See *id.*

105 *Id.* at 1237.

106 *Id.*

107 See *id.* at 1238.

108 See *id.*

The court based this conclusion on the fact that Western was a digital provider, while its competitors offered only analog service.¹⁰⁹ Thus, the EZA, in denying Western's application, was effectively prohibiting the provision of new technology to the I-25 corridor and the surrounding area.¹¹⁰

The language and the reasoning in *Western PCS* have been influential in other courts throughout the country, representing what appears to be the outcome most consistent with the meaning and purpose of the TCA.¹¹¹ However, not all courts have followed the logic of the *Western PCS* decision, choosing instead to interpret the TCA narrowly in favor of municipal zoning authorities.¹¹²

b. The Fourth Circuit "General Ban" Standard: *AT&T Wireless PCS, Inc. v. Virginia Beach*

One year after *Western PCS* was decided in New Mexico, on the other side of the country the Fourth Circuit handed down another influential decision.¹¹³ Employing a completely conflicting interpretation of the TCA provisions, the *Virginia Beach* decision ushered in a new wave of decisions upholding municipal zoning board decisions preventing carriers from filling gaps in their coverage.

The *Virginia Beach* case arose out of a dispute involving PWS providers AT&T and PrimeCo's proposal to construct two 135-foot towers at a church in a residential area of the town.¹¹⁴ Both providers offered digital service in the Virginia Beach area and intended the two towers to help fill a gap in the coverage area for the surrounding neighborhood.¹¹⁵ After arranging for a lease with the Church, the parties applied to the City for a conditional use permit.¹¹⁶ The area in which the plaintiffs sought to construct their facilities was characterized by little commercial development, and citizens were concerned with the aesthetic impact of the proposed construction.¹¹⁷ After a brief hearing on the proposal at which citizens expressed these con-

109 *See id.* at 1237-38.

110 *See id.* at 1238.

111 *See infra* Part IV.

112 *See infra* notes 113-29 and accompanying text.

113 *AT&T Wireless PCS, Inc. v. Va. Beach*, 155 F.3d 423 (4th Cir. 1998).

114 *Id.* at 424.

115 *Id.* at 425. In addition, the application included a co-location proposal for fellow carriers GTE Mobilnet and 360° Communications to supply analog service from the two towers. *Id.*

116 *Id.*

117 *Id.* This "Not In My Back Yard" or "NIMBY" phenomenon is common to much of the litigation surrounding § 332. *See, e.g.*, Malcolm J. Tuesley, Note, *Not in My*

cerns, the City Council of Virginia Beach voted unanimously to deny the providers' application.¹¹⁸

The Fourth Circuit found in favor of the City Council based on a narrow interpretation of § 332. First, the court found that the City Council's decision did not violate the discrimination clause of the TCA because the decision, even if discriminatory, was not unreasonable.¹¹⁹ Because four providers were involved in the application, the court reasoned that the City Council could not have discriminated against "functionally equivalent" providers by refusing to grant the application to all the providers involved.¹²⁰ In addition, the court noted that "the Act explicitly contemplates that some discrimination 'among providers of functionally equivalent services' is allowed."¹²¹ Because the contemplated discrimination need only be reasonable, the court held that the City Council was justified in refusing the permit on aesthetic grounds.¹²²

The court then turned to a discussion of the prohibition clause, which the court construed as applying only to general bans and not individual decisions.¹²³ The court reasoned that a broader reading would require zoning boards to approve all applications, thus negating the Act's express preservation of local authority.¹²⁴ Because the City Council had not imposed a general ban on wireless service, the court found that the denial did not violate the prohibition clause.¹²⁵

Backyard: The Siting of Wireless Communications Facilities, 51 FED. COMM. L.J. 887, 897 (1999).

118 *Va. Beach*, 155 F.3d at 425.

119 *See id.* at 427.

120 *See id.*

121 *Id.*

122 *See id.*

123 *See id.* at 428.

124 *See id.* The court also stated that, contrary to the providers' arguments, a narrow reading would not strip the Act of its effect because a city would still be prevented from imposing moratoria on siting applications. In addition, in an unexplained twist of logic, the court argued that the narrow reading would actually serve to further the competitive goals of the Act "by strengthening the hand of new market entrants who cannot show that they have been unreasonably discriminated against." *Id.*

125 *Accord* *Cellco P'ship v. Town Plan & Zoning Comm'n*, 3 F. Supp. 2d 178, 185 (D. Conn. 1998); *Smart SMR of N.Y., Inc. v. Zoning Comm'n*, 995 F. Supp. 52, 57-58 (D. Conn. 1998). *But cf.* *Va. Metronet, Inc. v. Bd. of Supervisors*, 984 F. Supp. 966, 971 & n.6 (E.D. Va. 1998) (endorsing the Fourth Circuit reading but applying a rigorous review standard to overturn the zoning board's decision, finding that the prohibition clause also encompasses "facially neutral" policies that "may also have the effect of prohibiting service if those policies serve merely as a pretense to mask arbitrary decision making").

Not only does the *Virginia Beach* decision ignore the logic of *Western PCS*, the court seems to have ignored the mandates of the TCA.¹²⁶ If anything, the prohibition clause does not contemplate the “general ban” standard. Not only does this narrow reading render the second half of the clause redundant,¹²⁷ but application of the general ban standard promises to stifle competition in local markets.¹²⁸ As such,

[e]vidence that a particular geographic area cannot be served by existing, surrounding sites and must be served by a new site within that same geographic area, coupled with evidence that the location of the proposed facility is the best or only location available to provide such service, should be enough to sustain the prohibition argument.¹²⁹

Evidently, the Fourth Circuit was unwilling to accept this reasoning in *Virginia Beach*.

c. The Second Circuit “Least Intrusive Means” Standard:
Sprint Spectrum, L.P. v. Willoth

What the Fourth Circuit missed in *Virginia Beach*, the Second Circuit recognized in *Willoth*.¹³⁰ Most courts dealing with § 332(c)(7)(B)(i)(II) already recognized that a blanket ban or moratorium was directly contrary to the spirit and the language of the TCA;¹³¹ however, the issues at stake in significant gap cases require a more in-depth analysis of the meaning of the provision. Rather than simply extending the logic applying to moratoria, as the *Virginia Beach* court did, the Second Circuit undertook this analysis and “adopted a common sense interpretation of the legislation.”¹³²

The dispute concerned Sprint’s proposed construction of three 150-foot towers in the Ontario, New York area.¹³³ Sprint presented its proposal for the three cell sites to the Town Planning Board (Town)

126 Interestingly, the *Virginia Beach* court distinguished the facts in *Western PCS*, noting that the area in question in that case had been zoned for commercial use. See *Va. Beach*, 155 F.3d at 428. However, the *Western PCS* decision did not turn at all on this fact. Rather, the *Western PCS* court concentrated on the important issue, namely that the EZA’s decision was anti-competitive and thus counter to the stated goals of the TCA. See *Western PCS II Corp. v. Extraterritorial Zoning Auth.*, 957 F. Supp. 1230, 1237–38 (D.N.M. 1997).

127 See *supra* Part II.A.

128 See *infra* note 143 and accompanying text.

129 Baldwin, *supra* note 21, at 560.

130 *Sprint Spectrum, L.P. v. Willoth*, 176 F.3d 630 (2d Cir. 1999).

131 See *supra* notes 86–87 and accompanying text.

132 *Yesawich & Riley, supra* note 89, at 21.

133 *Willoth*, 176 F.3d at 635.

and submitted applications for site plan approval.¹³⁴ Over the course of several public hearings and meetings, the Town reviewed the applications, assessed the environmental impact of the proposed towers, and considered other possible arrangements including reducing the number and lowering the height of the proposed towers.¹³⁵ In the end, the Town denied the application due to the environmental impact assessment.¹³⁶

Although the Second Circuit ruled in favor of the Town, the *Willloth* decision is interesting because the court applied an entirely new test for determining whether a zoning decision violated the TCA. Following the standard analysis, the court first considered Sprint's unreasonable discrimination claim, holding that the Town did not act unreasonably in requiring Sprint to undergo more probing inquiries than other carriers in the area.¹³⁷ The *Willloth* court noted the legislative history, stating that "local governments may reasonably take the location of the telecommunications tower into consideration" when reviewing an application, "even though this may result in discrimination between providers of functionally equivalent services."¹³⁸

However, the more revolutionary aspect of the court's analysis is its treatment of Sprint's claim under the prohibition clause. While the court dismissed Sprint's argument that a planning board does not have the authority to deny a provider's proposal for towers that the provider has deemed necessary,¹³⁹ the court also balked at approving the Town's argument that the prohibition clause referred only to general policies banning wireless service.¹⁴⁰ The court stated that this interpretation, based on the *Virginia Beach* decision, "would . . . render the language 'or have the effect of prohibiting' . . . duplicative."¹⁴¹ Reading the separate provisions of § 332 together, the court reasoned that accepting the Fourth Circuit's interpretation would not only render the second part of § 332(c)(7)(B)(i)(II) superfluous, but also

134 *Id.*

135 *Id.* at 635-36.

136 *Id.* at 636.

137 *Id.* at 639.

138 *Id.* (citing H.R. CONF. REP. NO. 104-458, at 208 (1996), reprinted in 1996 U.S.C.C.A.N. 124, 222).

139 *See id.* at 639-40. The court correctly noted that the TCA does not contemplate *mandatory* approval of all applications for tower construction. *Id.* Additionally, the court reasoned that "mandating approval of all wireless facilities would act as a disincentive for wireless service providers to develop and deploy new technology that will provide better transmission and reception with less intrusive towers, effectively undermining the TCA's goal of increased innovation." *Id.* at 640.

140 *See id.* at 640.

141 *Id.*

much of the following text of the provision.¹⁴² According to the Second Circuit, the “untenable” result of the “general ban” interpretation would be “that once personal wireless services are available somewhere within the jurisdiction of a state or local government, whether by virtue of a facility located outside or inside its borders, the state or local government could deny any further applications with impunity.”¹⁴³ Such a scenario would undermine the intended goals of the TCA.¹⁴⁴

After an exhaustive discussion of the meaning of “personal wireless service,” the *Willoth* court concluded that the best interpretation of the prohibition clause falls somewhere in between the two parties’ proposed interpretations.¹⁴⁵ Based on its own construction, the court held that “local governments must allow service providers to fill gaps in the ability of wireless telephones to have access to land lines.”¹⁴⁶ However, the court tempered this mandate by preserving a municipality’s power to deny applications if the proposed construction is not the least intrusive means of filling the gap.¹⁴⁷ In this way, the court acknowledged the balance between competing interests attempted by the TCA.

While the Second Circuit’s holding seems to correctly reflect all aspects of the TCA, the decision includes some questionable dicta. In explaining how the “least intrusive means” standard preserves local authority, the court wrote that

once an area is sufficiently serviced by a wireless service provider, the right to deny applications becomes broader: State and local governments may deny subsequent applications without thereby violating subsection B(i)(II). The right to deny applications will still be tempered by subsection B(i)(I), which prohibits unreasonable discrimination. However, it is not unreasonably discriminatory to deny a subsequent application for a cell site that is substantially more intrusive than existing cell sites by virtue of its structure, placement or cumulative impact.¹⁴⁸

142 *See id.*

143 *Id.* at 641. As time has shown, the *Willoth* court was dead-on in predicting the result of applying the “general ban” test. *See infra* Part III.B.2.

144 *See Willoth*, 176 F.3d at 641.

145 *Id.*

146 *Id.* at 643.

147 *Id.* The court reiterated this preservation of municipal power in its stated holding: “We hold only that the Act’s ban on prohibiting personal wireless services precludes denying an application for a facility that is the least intrusive means for closing a significant gap in a remote user’s ability to reach a cell site that provides access to land lines.” *Id.*

148 *Id.*

Unfortunately, the court's standard disintegrates a bit with this language. If this statement is relied upon as forming part of the standard, the standard becomes as anti-competitive as if the court had accepted the ruling in *Virginia Beach*. This result is evident in the way the Third Circuit has approached the problem of significant gaps.

2. The Third Circuit Approach: *Ho-Ho-Kus* to *Newtown Township*

While the Second and Fourth Circuits have maintained relatively consistent positions on the correct standard applicable to the significant gap problem,¹⁴⁹ the Third Circuit has subtly changed its initial position through subsequent decisions. While the changes were ostensibly subtle, the practical effect of these later cases has been to alter the effect on providers dramatically.

a. *Cellular Telephone Co. v. Borough of Ho-Ho-Kus*

Shortly after the *Virginia Beach* and *Willoth* decisions were issued, the Third Circuit was given an opportunity to throw in its two cents on the significant gaps/prohibition clause debate. In *Cellular Telephone Co. v. Borough of Ho-Ho-Kus*,¹⁵⁰ the court expressly accepted the *Willoth* reasoning when it held that "local officials must always insure that *neither* their general policies nor their individual decisions prohibit or have the effect of prohibiting personal wireless services."¹⁵¹ The court went on to

interpret this mandate to mean more than simply ensuring that personal wireless services are available somewhere within the relevant jurisdiction, even if they are not available throughout. Thus [it] conclude[d], as did the [*Willoth* court], that local zoning policies and decisions have the effect of prohibiting wireless communication services if they result in "significant gaps" in the availability of wireless services.¹⁵²

Ultimately, the Third Circuit reversed the district court's decision in favor of the Borough and remanded the case for reconsideration of the proposed facility. In doing so, the court noted that the inquiry involved the two-prong test set out in *Willoth*; namely whether signifi-

149 See, e.g., 360° Commun. Co. v. Bd. of Supervisors, 211 F.3d 79, 86–87 (4th Cir. 2000) (acknowledging the hypothetical feasibility of First Circuit hostility standard, but outright rejecting the Second and Third Circuit standards in favor of continuing the general ban standard).

150 197 F.3d 64 (3d Cir. 1999).

151 *Id.* at 70 (emphasis added).

152 *Id.*

cant gaps exist and, if so, whether the providers' proposal "is the least intrusive means of filling those gaps."¹⁵³

b. *APT Pittsburgh, Ltd. v. Penn Township*

Just five months after the Third Circuit reached its decision in *Ho-Ho-Kus*, the court handed down another decision in which "[i]t purported to agree with *Willoth* generally, but actually gutted the [S]econd [C]ircuit's standard"¹⁵⁴ by extracting and adopting the *Willoth* court's dicta that a broader right to deny applications exists once an area is served by a wireless provider.¹⁵⁵

In *APT Pittsburgh*, APT submitted a proposal for the construction of a tower to help fill a gap in coverage along Route 8.¹⁵⁶ Because of the topography in the area, APT needed to construct a sufficiently tall tower to supply effective service.¹⁵⁷ After a three-month investigation of potential sites, APT entered into a lease with a private resident and submitted an application for a variance to the local zoning board.¹⁵⁸ The board denied the application, and APT filed suit alleging, inter alia, violation of the prohibition clause.¹⁵⁹

In addressing this claim, the Third Circuit returned to a discussion of the *Willoth* standard. After noting that the TCA neither gave a provider a "wildcard that would trump any adverse zoning decision,"¹⁶⁰ nor stripped a provider of that ability to challenge an individual zoning decision, the court quoted extensively from the *Willoth* decision by way of introducing the two-pronged, least intrusive means standard.¹⁶¹ As in *Ho-Ho-Kus*, the Court ostensibly endorsed the *Willoth* standard; however, the Third Circuit went further than it had in *Ho-Ho-Kus* and held that a zoning board's decision may not have the effect of prohibiting service if another provider already serves the area in question.¹⁶² In its decision, the court wrote that

the provider must show that its facility will fill an existing significant gap in the ability of remote users to access the national telephone network. In this context, the relevant gap, if any, is a gap in the service available to remote users. . . . The provider's showing on

153 *Id.* at 76.

154 196 F.3d 469 (3d Cir. 1999).

155 *See supra* note 148 and accompanying text.

156 *APT Pittsburgh*, 196 F.3d at 472.

157 *Id.*

158 *Id.*

159 *Id.* at 473, 478.

160 *Id.* at 479.

161 *See id.* at 479-80.

162 *See id.* at 480.

this issue will thus have to include evidence that the area the new facility will serve is not already served by another provider.¹⁶³

As APT had not submitted evidence that other providers were not already servicing the Route 8 corridor, the court held that APT had not met its burden.¹⁶⁴

The practical effect of the Third Circuit standard as developed in the *APT Pittsburgh* decision is best illustrated by its application to the facts in another recent Third Circuit decision, *Omnipoint Communications Enterprises, L.P. v. Newtown Township*.¹⁶⁵

c. *Omnipoint Communications Enterprises, L.P. v. Newtown Township*

The facts underlying the dispute in *Newtown Township* follow the now-familiar format. Because of a gap in its service in the Newtown area, Omnipoint entered into a lease with the owner of Newtown Towers, an apartment complex, to install an antenna on the building's rooftop.¹⁶⁶ Omnipoint applied for a building permit, which was denied.¹⁶⁷ Omnipoint appealed the decision to the local zoning hearing board, which again denied the application. Thus, Omnipoint sued the Township.¹⁶⁸

When the case reached the Third Circuit, the court took an interesting approach in construing the question at the heart of the dispute. The court wrote that "[t]he question in this case is whether a decision which creates a gap in one cellular provider's service violates section 332(c)(7)(B)(i)(II) when other providers serve the area."¹⁶⁹ The court focused on the effect of a gap on consumers, noting that "the doctrine prohibiting gaps is designed to protect the users, not the carriers."¹⁷⁰ With this in mind, the court reasoned that if one carrier is able to provide seamless coverage, then a zoning board decision preventing another carrier from filling its gap does not have the effect of prohibiting the provision of wireless service.¹⁷¹ In other words, under the Third Circuit "single provider" standard, "a finding of pro-

163 *Id.*

164 *Id.* at 481.

165 219 F.3d 240 (3d Cir.), *cert. denied*, 531 U.S. 985 (2000).

166 *Id.* at 242.

167 *Id.*

168 *Id.*

169 *Id.* at 244.

170 *Id.*

171 *See id.*

hibition under the Act requires proof that *all* carriers are without service in a given area, not just the carrier asserting the claim.”¹⁷²

IV. ANALYSIS

By transforming the “least intrusive means” standard into a “single provider” standard, the court in *Newtown Township* did an injustice to the *Willoth* standard, which it purported to apply, and to the language and meaning of the TCA itself. First, the holding and reasoning of the *Willoth* decision directly contravenes such a “single provider” application of the standard. Like the “general ban” standard, which the *Willoth* court flatly rejected, the *Newtown Township* “single provider” standard would allow state or local governments to deny applications “with impunity” once a single provider has made services “available somewhere within the jurisdiction.”¹⁷³ This is exactly the result that the *Willoth* court dismissed as “untenable.”¹⁷⁴ In addition, preventing more than one carrier from achieving seamless service in a given area frustrates the competitive goals of the TCA. As stated by Omnipoint counsel:

If only one carrier is allowed in each municipality, the country will be divided up like a multicolored mosaic with a random pattern, where some users will have service only on the blue tiles, some only on the red, some only on the green, some only on the yellow, and so on. An uninterrupted conversation would be nearly impossible as a user travels throughout a given region and moves into and out of the areas serviced by different carriers.¹⁷⁵

Thus, not only would the “single provider” standard prevent one provider from achieving seamless coverage, the standard potentially prevents *any* provider from achieving seamless coverage, leaving *no* provider with a competitive edge over the others. On a much smaller level, the “single provider” standard grants the first provider to achieve seamless coverage in a municipality a de facto monopoly on wireless service in that area. Reiterating what the district court found so obvious in *Western PCS*, “[i]t does not take a telecommunications engineer or a marketing expert to recognize that an inability to provide uninterrupted service” in a given area “would seriously impede [a provider’s] ability to compete with its competitors.”¹⁷⁶

172 Omnipoint Petition, *supra* note 17, at 8.

173 Sprint Spectrum, L.P. v. Willoth, 176 F.3d 630, 641 (2d Cir. 1999).

174 *Id.*

175 Omnipoint Petition, *supra* note 17, at 13.

176 W. PCS II Corp. v. Extraterritorial Zoning Auth., 957 F. Supp. 1230, 1237 (D.N.M. 1997).

Furthermore, the “single provider” standard does not serve its stated purpose of protecting consumers.¹⁷⁷ On an economic level, a lack of competition in a given municipality will affect both prices and service. As the *Willoth* court rightly noted, “mandating approval of all wireless facilities would act as a disincentive for wireless service providers to develop and deploy new technology that will provide better transmission and reception with less intrusive towers, effectively undermining the TCA’s goal of increased innovation.”¹⁷⁸ The same logic presumably holds true where a lack of competition is created, not by mandated entry, but by an effective monopoly.

In addition, the “single provider” standard fails to recognize the technological requirements of wireless service. As such, a situation in which consumers are forced to choose between seamless analog service, or advanced service marred by significant gaps in coverage, is not entirely unthinkable. If, for example, the first provider to achieve what in a court’s opinion amounts to sufficient coverage happens to utilize only analog technology, consumers may find themselves weighing two entirely unattractive options.

Finally, the “single provider” standard fails to take into account the very realistic fact that even if one provider is capable of providing 100% seamless coverage, remote subscribers to different services traveling through the area, or even local subscribers to different services, will be unable to sustain communications when in the coverage gap. In short, the “single provider” standard does nothing to solve the problem of significant gaps except for those consumers who happen to subscribe to the first provider to achieve seamless service. As one of Omnipoint’s lawyers in the *Newtown Township* case remarked, “[i]f your car breaks down somewhere where there is a gap in your wireless service, it won’t matter that there is another service provider in that area. That person will be unable to call for help, and that is unfortunate.”¹⁷⁹ In the end, the “single provider” standard serves neither consumers nor providers.

Still, recognizing that the TCA does preserve a municipality’s right to control zoning decisions, subject to the limitations in § 332(c)(7)(B), the correct reading of the prohibition clause cannot be that municipalities must always allow all providers to remedy significant gaps in coverage, irregardless of zoning concerns.¹⁸⁰ How is the

177 See *supra* notes 175–76.

178 *Willoth*, 176 F.3d at 640.

179 Chani Katzen, *Supreme Court Won’t Hear Case of Disputed Phone Tower in Newtown Township, Pa.*, PHILA. INQUIRER, Nov. 7, 2000, 2000 WL 28949688.

180 See 47 U.S.C. § 332(c)(7) (Supp. V 1999).

balance preserved? The simple answer can be found by reading the prohibition clause and the unreasonable discrimination clause in conjunction with each other.¹⁸¹ For all of the reasons contained herein, the language and history of the TCA anticipate more than *one* provider being able to offer coverage in any given area. However, a municipality may not be acting “unreasonably” in turning down the third, fourth, or fifth provider that submits an application to fill significant gaps if the market is saturated, and all other carriers provide seamless or near-seamless coverage. Thus, the unreasonable discrimination clause serves to temper the application of the prohibition clause.¹⁸² In this way, the interests of providers, consumers, *and* municipalities are served.

CONCLUSION

The TCA represents a breakthrough attempt by Congress to streamline the delivery of PWS and other technologies to the American public by encouraging competition within the market. However, Congress’s efforts continue to be impaired as disputes between providers and municipalities prevent the development of seamless service and the introduction of new technology in many areas of the United States. These problems could be alleviated by a simple interpretation and application of the TCA, based on the legislative history and the plain meaning of the Act. The Second Circuit’s standard introduced by the *Willloth* decision is the most accurate interpretation currently available and should be accepted by the other circuits as the best compromise between municipalities and providers. By accepting such a balanced interpretation, the courts will be able to give effect to the TCA so that the American telecommunications industry will be able to provide quality service to consumers.

181 *See id.* § 332(c)(7)(B)(i).

182 *Id.*