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STUDENT ARTICLES

Wireless Communications and the Telecommunications Act of 1996: An Experiment in Federalism

Lynn Hanley

I. INTRODUCTION

Traditionally, zoning and land use issues have been entrusted to local governments to authorize and regulate, as they deemed appropriate. However, when Congress passed the Telecommunications Act of 1996 ("TCA")¹ it had a direct impact on local zoning control. Designed to implement a national public policy to encourage deregulation and innovation in the telecommunications industry, the act prohibits local communities from banning antennas or towers for wireless, cellular telecommunications. However, the TCA is not a complete preemption of local zoning authority; the act does allow local governments to regulate the siting of such towers within specific limitations outlined by Congress.

This "experiment in federalism"² has had a significant impact on consumers. Wireless customers have reached nearly 70 million, resulting in the proliferation of antennas in communities across the country. The TCA has successfully increased competition producing economic growth for the country, lower prices, increased innovation and better technology, all benefits to the consumer. But at what cost? Because of this competition, the number of services has increased, the number of customers has increased and, because companies are reluctant to share space on these towers, the number of towers has increased.

This Note will discuss the purpose of the TCA and its ultimate effect on consumers. To begin, Part II provides an overview of the TCA and an introduction to the technology behind wireless communication, including a brief description of the difference between analog and digital cellular technology. Also relevant to the discussion is the composition of the industry and the competition, now a critical component

of the industry. Additionally, this Note will explain the limitations outlined in the TCA on local governments and their efforts to restrict the siting of cellular towers.

Part III then discusses relevant case law and the impact of these federal court decisions on cellular consumers. The language of the TCA is vague, and the courts have disagreed on how broadly the act's limitations should impact local zoning authority. This disagreement ultimately affects consumers. Part IV analyzes the TCA and the courts' decisions. Also discussed is what is to be expected for the future, specifically balancing the purpose of the act with community concerns, and advocating cooperation between the service providers and local governments in an effort to maximize the benefit to consumers.

II. BACKGROUND

A. *Wireless Communications Industry*

1. *The Technology*

In order to analyze the competition within the industry and ultimately the increasing need for antennas and towers, it is necessary to understand the technology that encompasses the wireless telecommunications industry. Fundamentally, there are two major, competing branches of wireless communication - cellular and personal communication services ("PCS").³ Additionally, within cellular there are two types of technology - analog and digital.⁴ Although PCS technology offers some advantages to consumers, the infrastructure for cellular technology is well established and, with the addition of digital service, it still adequately services the needs of its consumers.

Cellular technology is based on the transmission of communications via radio waves. On the transmitting end, the information (or voice signal) is imposed on a locally generated radio frequency. On the other end, the receiving end, an antenna receives the signal and feeds it into a receiver. Whereas radio stations broadcast high-power, one-way radio transmissions, cellular communications are point-to-point, low power, two-way radio transmissions.⁵ This technology existed as early as 1947, but cellular systems were not available to the public until 1982.⁶

Wireless customers communicate with other wireless customers through a network of antennas and base stations spread around the area that receive and transmit these low power radio frequencies.⁷ Using an 800-megahertz range, a cellular tower picks up a call and

transfers it via microwave or landline to the cellular network.⁸ As the cellular customer moves out of range, the signal is transferred from one tower to the next.

In the cellular industry, each tower has a range of less than ten miles, depending on topography and density.⁹ Likewise, as the number of cellular subscribers increase and the areas of travel expand, more towers are needed to transmit the increasing volume of signals.¹⁰ Consequently, because the radio frequency spectrum has only limited availability, cellular service requires a technique called frequency reuse, which is the foundation of the cellular concept.¹¹ Frequency reuse utilizes radio frequencies over and over again within the cellular network, thereby maximizing the use of the available frequency range.¹²

The configuration of cell sites within the network determines the degree of frequency reuse and, ultimately, the area's service capacity. A formation similar to a honeycomb of adjacent hexagonal cells is a model network configuration.¹³ This structure provides maximum frequency reuse capacity and seamless service because the cells are arranged side-by-side.

This concept is applied for both analog cellular communication as well as digital cellular communications. The analog system operates with a different type of signal than the digital systems. Specifically, in an analog system, the signals, or voice messages are "electronically replicate[d] and amplif[ied] as they are carried from the transmitting antenna to the receiving antenna."¹⁴ However, because of this amplification process, outside noise is also picked up and this reduces the quality of the transmission. Digital cellular communication has since improved upon the analog systems. In a digital transmission, "a voice message is converted into binary digits that represent sound intensities at specific points in time."¹⁵ Consequently, because digital systems are more immune to noise, they produce clearer transmissions. Additionally, digital signals can be easily manipulated or processed in useful ways using modern computer processes.

The next evolution in wireless communications is PCS. PCS operates on two different frequency bands, narrowband PCS and broadband PCS. Whereas narrowband PCS is used for messaging and two-way paging services, broadband PCS offers services similar to cellular communications services.¹⁶ Yet, there are crucial differences between the two technologies. For example, PCS uses a higher frequency radio wave, around 1800-megahertz.¹⁷ PCS also relies entirely on digital technology. With the higher frequency and digital technology, PCS services "yield greater calling capacities than analog net-

works.”¹⁸ However, because PCS uses a higher frequency than cellular service, PCS cells are smaller in size and, as a result, greater in number than cellular cells.¹⁹ This ultimately requires more antennas.

2. The Competition

The Federal Communications Commission (“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. Specifically, the FCC is responsible for dividing the radio frequency spectrum into sections with diverse uses, including wireless communications. Likewise, the FCC is responsible for auctioning licenses that entitle the wireless service providers to employ these sections of the spectrum.²⁰ Beginning in 1974, the FCC auctioned off licenses on the 800-megahertz band for cellular communications.²¹ Since then, the FCC has also allocated 120-megahertz of spectrum to broadband PCS and currently, all available licenses for broadband PCS have been auctioned off.²² Also significant is that the FCC has placed a spectrum cap in this band; this means that the FCC has limited the amount of spectrum that one entity can control.²³

So far, this arrangement has been successful in creating a flurry of competition. Under the analog cellular system, each service area had two wireless service providers.²⁴ But with the introduction of PCS service, many metropolitan areas have several different wireless providers.²⁵ The initial PCS auction “attracted real heavyweights: AT&T Wireless Services; PCS Primeco, a consortium formed by Bell Atlantic, Nynex, US West, and AirTouch, a wireless provider; and the biggest bidder of all, an alliance between Sprint and cable TV companies, Cox, Comcast, and TCI, dubbed the Sprint Telecommunications Venture.”²⁶ Altogether these companies paid almost \$8 billion for their licenses in the initial offering by the FCC.²⁷ Yet, that figure does not include the expense of building the network of cell towers and antennas to provide the technology for each of these services.

B. Overview of the Telecommunications Act of 1996

The placement of antennas is controlled through zoning regulations. Zoning is the primary means of land use control used by local governments. The early developments of zoning arose largely from conflicts between industries and rapidly growing cities. Residents and business owners looked to their local governments to protect their health, safety and aesthetics. With the increase in the use of cellular

technology, the controversy surrounding the siting of wireless communication towers in their neighborhoods has plagued homeowners. Consequently, again, homeowners have turned to their local government for protection. However, the TCA limits the authority of local government regulation over the siting of cellular towers.

The TCA states, “[t]he regulation of the placement, construction, and modification of personal wireless service facilities by any state or local government or instrumentality thereof shall not prohibit or have the effect of prohibiting the provision of personal wireless services.”²⁸ This prohibition clause essentially forces local governments into taking proactive measures in siting these cell towers.

1. Local Zoning Authority Prior to 1996

To understand the TCA’s current impact on local zoning authority, some background on the development of this authority is necessary. Fundamentally, the purpose of a zoning ordinance is to protect and further the public health, safety and welfare, and its lawful exercise may not exceed this. The power to enact a zoning ordinance is granted by each state to its municipalities and is often referred to as “police power.”

As early as 1926, the United States Supreme Court ruled in *Village of Euclid v. Ambler Realty Co.*²⁹ that it would presume the legislative enactment of a zoning ordinance for the Village of Euclid valid and held that zoning was a constitutional exercise of police power. This presumption is rebuttable and the court can find the ordinance invalid if “the provisions are clearly arbitrary and unreasonable, having no substantial relation to the public health, safety, morals or general welfare.”³⁰ Just a few years later, the Court made clear in *Nectow v. City of Cambridge*³¹ that, although a zoning ordinance may be valid on its face, a particular regulation applied to a specific parcel of land may, nevertheless, be invalid. Subsequently, common law has left the state courts to decide the constitutional extent to which zoning ordinances may restrict land uses. Additionally, the federal communications law at the time, the Communications Act of 1934,³² did not give state or local governments any direction; many states developed their own telecommunications statutes to address the growing concern of antenna and tower siting.³³

Yet, with each state creating its own standards for zoning laws and land use regulations, problems arose as wireless companies expanded from state to state. For example, in *Cellular Tel. Co. v. Rosenberg*,³⁴ the New York Court of Appeals determined that cellular

telephone companies met the definition of a public utility and, as a result, should receive preferential treatment.³⁵ That is, when cellular service providers applied for a variance in a zoning ordinance, they should have received the same lower standard of review that public utilities receive.³⁶ However, in Illinois, cellular service providers are not deemed a public utility. In *Illinois RCA No. 3, Inc. v. County of Peoria*,³⁷ the district court relied on Illinois statutes and ruled that, "the Public Utilities Act seems to exclude the telecommunications business."³⁸

Another divergence among states are the environmental regulations regarding the output of electromagnetic fields ("EMFs") or the effects of radio frequency ("RF") emissions from transmitters. Fearing that EMFs or RFs caused cancer, some jurisdictions enacted legislation to establish EMF and RF emission standards.³⁹ Still another concern among homeowners is the aesthetics of cell towers in their neighborhood. Consequently, local zoning authorities created zoning restrictions on cell towers so that they would not interfere with the area's comprehensive master plan.⁴⁰ Residents also feared that the towers would create nuisances such as dust, noise, or increased traffic that would affect their enjoyment of the property.⁴¹ Again, as a result of such public outcry, local governments passed zoning restrictions, even moratoriums, on the siting of cell towers.

2. Congress Passed the Telecommunications Act

In an effort to confront the rapidly evolving telecommunications industry, including changes in radio, television, cable, telephone, the Internet and wireless technology, Congress decided to update the Communications Act of 1934 and enacted the Telecommunications Act of 1996.⁴² The TCA was an "attempt to 'eliminat[e] barriers that inhibit or preclude the entry of new competitors into various industry sectors,' while at the same time deregulate the radio, television, cable, telephone industries."⁴³

Within the TCA, Congress specifically addressed the issue of uniformity on cell tower siting and the rapid growth of the wireless communications industry.⁴⁴ The TCA mandated the FCC to address the RF concerns within 180 days after the TCA's enactment; Congress also instituted uniform regulations of the development of cellular communication facilities.⁴⁵ It is this attempt at uniformity that has preempted local governments' zoning authority and limits local zoning regulations on cell tower siting.

The theory is that the wireless service providers need the towers and antennas to maintain their network, and the providers need a

comprehensive network to compete with other service providers. Thus, Congress passed the TCA to allow the wireless service providers to erect their towers and build their networks in order to facilitate competition.⁴⁶ Ideally, in turn, this competition would ultimately benefit the consumers. As William E. Kennard, Chairman of the FCC explained, “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.”⁴⁷

Yet, the TCA does not give wireless service providers the right to erect towers wherever they choose. Local governments do retain some zoning authority. Specifically, the TCA states, “[n]othing in this Act 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.”⁴⁸

The TCA does not explicitly prohibit local governments from creating regulations on the placement cell tower facilities. It does, however, establish certain limitations that local governments must observe. For example, the TCA does prohibit a local government from denying a wireless service provider from erecting a cell tower based on RF emissions if the provider has complied with the FCC’s RF regulations.⁴⁹

Additionally, the TCA states that local and state regulations “shall not unreasonably discriminate among providers of functionally equivalent services;”⁵⁰ nor shall the local or state regulations “prohibit or have the effect of prohibiting the provisions of personal wireless services.”⁵¹ The TCA also mandates that, “[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. . .”⁵² Moreover, any decision by a state or local government to deny a wireless service provider’s request to “place, construct, or modify a personal wireless facility” must be made in writing and, “supported by substantial evidence contained in a written record.”⁵³

Finally, the TCA permits any person or entity who may be “adversely affected by any final action or failure to act by a state or local government . . . that is inconsistent with this [act],” to bring suit against that government within thirty days of the government’s action or inaction.⁵⁴ Consequently, the local government’s zoning authority is now subject of judicial oversight and thus, the basis for conflict be-

tween local governments and their constituents on the one hand, and the wireless service providers and consumers on the other.

III. Judicial Interpretation of the TCA: Rigorous v. Deferential

The TCA has created a great deal of litigation between local governments and wireless communications providers. Federal district courts have decided scores of cases across the country. Likewise, appellate courts in several circuits have had to address the issue as well. What has evolved is a clash on how to interpret the TCA. On one hand, several courts have approached these cases with a "rigorous review of local zoning decisions;" whereas, other courts have granted "substantial deference to such decisions."⁵⁵

In each case, the court must examine the municipality's zoning code and the actions of the zoning board or any other decision-making entity, to determine what effect they have on a wireless communication provider's service. Thus, in light of the TCA, the courts must determine whether the zoning code has a discriminatory effect and whether this discrimination is reasonable. A court must also determine whether the decision by the zoning board was supported with substantial evidence. And, finally, a court must decide what relief should be granted, if any. However, each of these decisions requires careful reading and interpretation of the TCA and as a result, some courts have disagreed.

A. Discrimination

Section 332(c)(7)(b)(i)(II) forbids local governments from creating any regulation that would "unreasonably discriminate" among service providers.⁵⁶ The Fourth Circuit, in *AT&T Wireless PCS, Inc. v. Virginia Beach*,⁵⁷ has read this provision to mean that local governments cannot enact regulations that have the effect of creating a "general" or "blanket" ban on siting cell towers.⁵⁸ Likewise, the Fourth Circuit ruled that the TCA's discrimination ban did not apply to decisions made on individual, case-by-case requests for cell towers.⁵⁹ The court ruled that case-by-case determinations of cell towers siting did not violate the TCA, and moreover, such an interpretation of the TCA would abolish local zoning authority.⁶⁰ Thus, the Fourth Circuit has approached the TCA with deferential-review by deferring to the local zoning board's authority.⁶¹

The First Circuit in *Amherst v. Omnipoint Communications*,⁶² also applied deferential review but with a different rationale. The court

reasoned that individual denials could, because of either language or circumstances, sanction an effective prohibition on personal wireless service.⁶³ Furthermore, the court proposed a scenario where a zoning board denies an individual permit request, and in the denial proclaims that the town will never permit such cell towers or establishes criteria for the cell towers that providers could never meet.⁶⁴ The First Circuit explained that “[t]he fact that the ban is embodied in an individual decision does not immunize it.”⁶⁵

The First Circuit further reasoned that “[i]f the criteria or their administration effectively preclude towers no matter what the carrier does, they may amount to a ban ‘in effect,’” and consequently, the regulation would be a violation of the TCA’s effect provision.⁶⁶ Based on the facts in this case, however, the court deferred to the local government. The court found that Omnipoint’s proposal was not the only option to provide wireless service to the area. On the contrary, Omnipoint conceded that lower towers could possibly be used; thus, because Omnipoint’s proposal was not the only possible proposal, the town’s denial was not a ban on wireless service.⁶⁷ Thus, the First Circuit applied a deferential review of the town’s zoning requirements by deferring to the zoning board’s determination. However, the First Circuit’s approach was not as extreme as that applied by the Fourth Circuit.

On the other hand, a district court in Virginia applied the more rigorous review in *Virginia Metronet, Inc. v. Board of Supervisors*.⁶⁸ The district court ruled that the “scope of § 332(c)(7)(B)(i)(II) is not limited to general prohibitions, moratoriums, bans, or other similarly expressed hostile limitations on the siting of personal wireless facilities.”⁶⁹ The court explained that even seemingly neutral policies restricting the siting of cell towers might be prohibitive if those policies have the effect of rejecting all possible sites.⁷⁰

Similarly, in *Sprint Spectrum, L.P. v. Willoth*,⁷¹ the Second Circuit ruled that TCA should be applied to individual, case-by-case zoning decisions and did not apply only to explicit, general bans on personal wireless service.⁷² The Second Circuit reasoned that, “[s]ubsection B(ii) requires local governments to act on an application, and subsection B(iii) requires a denial to be in writing and supported by substantial evidence in the record. Together these sections constitute a clear mandate to consider applications on a case-by-case basis.”⁷³ The court went on to explain that reading subsection B(i)(II) strictly as a prohibition on general bans would make the phrase “or have the effect of prohibiting” in subsection B(i)(II) redundant.⁷⁴ The court also explained that such an interpretation of B(i)(II) “would lead to the untenable result that once

personal wireless services are available somewhere within the jurisdiction of state or a 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."⁷⁵

B. Substantial Evidence Standard

The Fourth Circuit has also taken the deferential approach in considering section 332(c)(7)(B)(iii).⁷⁶ In overturning the district court, the Fourth Circuit explained that the "in writing" requirement and the "substantial evidence" requirement are distinct and should be treated separately.⁷⁷ Comparing the TCA to the Administrative Procedure Act, the Fourth Circuit ruled that, "the simple requirement of a 'decision . . . in writing' cannot reasonably be inflated into a requirement of a 'statement of . . . findings and conclusions, and the reasons or basis therefor.'"⁷⁸ Thus, the Fourth Circuit held that the city council's stamp "DENIED" and the date of the decision was sufficient to meet the "in writing" requirement. Likewise, the Fourth Circuit held that the substantial evidence requirement assumes the federal administrative law standard as well.

The district court for the northern district of Illinois agreed with the Fourth Circuit's evaluation of the "in writing" requirement.⁷⁹ The Illinois district court ruled that "had Congress intended to impose the additional burden of producing an opinion-like writing on state and local entities, it would have said so - if not in the statute, then certainly in the conference report."⁸⁰ Thus, the court required only a statement from the deciding body informing the applicant that the application had been denied.⁸¹

The *Fox Lake* court, however, did not concur with the Fourth Circuit's substantial evidence standard. On the contrary, the Illinois district court ruled that the TCA has changed the rules for zoning where cell towers are involved.⁸² Congress has forbidden a zoning board or city government from denying a permit for a cell tower unless the denial was supported with substantial evidence. The district court explained that "Congress explicitly defined substantial evidence as 'the traditional standard used for judicial review of agency actions.'"⁸³ Thus, under this standard, a neighbor or constituent who offers unsupported testimony in opposition to the cell tower is not sufficient.⁸⁴ Congress did not intend the siting of cell towers to be overthrown merely by neighborhood opposition.⁸⁵

The Second Circuit reached the same conclusion in *Cellular Telephone Co. v. Oyster Bay*.⁸⁶ The appellate court explained that sub-

stantial evidence is “less than a preponderance, but more than a scintilla of evidence.”⁸⁷ Moreover, in determining whether the decision was based on substantial evidence, the court must determine whether a reasonable person would find that the evidence presented was competent to uphold the conclusion.⁸⁸ In examining the facts of the case, the court noted that aesthetics could be considered in New York zoning cases. However, the court also explained that “a few generalized concerns about a potential decrease in property values, especially in light of AT&T’s contradictory expert testimony, does not seem adequate to support a conclusion.”⁸⁹

The Third Circuit applied the same reasoning in *Omnipoint Corp. v. Pine Grove*.⁹⁰ Concluding that the zoning board’s actions had been quasi-judicial, the Third Circuit applied the same substantial evidence standard as applied in the review of an administrative agency.⁹¹ Again, finding that the testimony of area residents was a generalized concern for aesthetics and property values, the court ruled that such evidence did not meet the substantial evidence requirement of the TCA in order to support the zoning board’s denial.⁹² Thus, the Third Circuit held that courts should not rely on generalities or speculation.⁹³ This is a more rigorous standard, contrary to the Fourth Circuit’s approach, and ultimately diminishes the local zoning authority.

C. Appropriate Relief

After finding that the zoning board did not have substantial evidence to support its denial, the Second Circuit in *Oyster Bay* ruled that the injunction imposed by the district court was proper.⁹⁴ The lower court had granted the wireless provider an injunction and ordered the town to issue the special use permit required to locate the cell tower where the provider had proposed.⁹⁵ The Second Circuit recognized that the TCA does not provide specific remedies for violations of the act; however, it reasoned that an injunction best met the goals of the TCA and Congress’s intent to expedite resolution of these controversies.⁹⁶ The court also noted that the majority of district courts have found that injunctive relief is appropriate relief for TCA violations.⁹⁷

As the Second Circuit points out, however, not all courts have found that injunctive relief is permissible under the TCA. The district court in *Fox Lake*, for example, held that the TCA does not specify that a writ of mandamus is the appropriate relief.⁹⁸ Additionally, the district court ruled that because the issues of substantial evidence and the “in writing” requirement are still unsettled, mandamus relief is not

proper.⁹⁹ Thus, the court remanded the case back to the village officials to conduct additional hearings.¹⁰⁰

IV. Impact

It is clear, the courts have disagreed on what standard to apply to zoning regulations. On the one hand, some courts have read the TCA narrowly, giving more deference to the local zoning authorities. Yet, on the other hand, a number of courts have applied a rigorous standard in reviewing TCA violations and have placed broad limitations on local zoning boards thereby diminishing their control. The TCA has not created complete uniformity as Congress has contemplated, but the TCA is a step in the right direction.

As the First Circuit stated in *Amherst*, "we are in the realm of trade-offs: on one side are the opportunity for the carrier to save costs, pay more to the town, and reduce the number of towers; on the other are more costs, more towers, but possibly less offensive sites and somewhat shorter towers."¹⁰¹ The First Circuit ruled that Congress had decided when it enacted the TCA that these decisions were best left for the local governments to decide.¹⁰² This middle-of-the-road approach provides the local governments the deference they are accustomed to in zoning cases, yet applies a rational review of the regulation in light of Congress's intent to facilitate the growth of wireless communications.

The First Circuit in *Amherst* made a critical observation. In overruling the district court, the First Circuit explained that although the town had denied Omnipoint's request to locate four cell towers within town limits, the denial did not constitute a ban of wireless service.¹⁰³ The First Circuit noted that Omnipoint's requested sites were not the only locations to put the towers.¹⁰⁴ Furthermore, it was not certain that the towers needed to be 190 feet.¹⁰⁵ And, finally, the court recognized that providers need to consider alternatives, including co-locating or sharing tower space.¹⁰⁶

In fact, co-location has already been explored as one possible solution to the proliferation of antennas. Building a cell tower and maintaining it costs money. But a service provider can lower its expenses by leasing out space on its towers to other wireless companies.¹⁰⁷ However, the competition, inherent in the industry, interferes with sharing tower space.¹⁰⁸ Critics of cell towers argue that wireless service providers don't have enough incentive to share space on cell towers.¹⁰⁹ In Louisville, Kentucky, for example, one provider proposed to erect a tower across the street from another service provider's

tower.¹¹⁰ The first tower was the subject of a hot debate four years earlier, but was settled when the service provider agreed to share space on the tower with other service providers.¹¹¹

Thus, because wireless technology requires antennas for its services, consumers cannot have a wireless communications system without them. And, consumers certainly want a wireless system. The FCC reports that as of early this year, 68 million Americans owned a wireless phone.¹¹² The FCC also anticipates that wireless service providers will offer wireless computer networking as well as wireless Internet access.¹¹³ Moreover, PCS service providers intend to offer their services to “compete directly with residential local exchange and exchange access services.”¹¹⁴ This technological innovation benefits consumers as a whole whether they use wireless phones or not. That is, businesses who communicate using wireless technology work more efficiently and ultimately pass on lower costs and higher quality to consumers.¹¹⁵

The TCA is encouraging wireless service providers to improve technology and develop new and more efficient services. By reserving some discretion to the towns on locating cell towers, within specific limitations outlined by the TCA, wireless service providers are forced to invent alternative means of providing their services. For example, engineers have experimented with new techniques to “hide” cell towers and antennas. These concepts include using environmentally pleasing paints and incorporating the towers into smokestacks, water towers, church steeples and chimneys.¹¹⁶ Eventually, wireless innovations may even reach so far as to make the cell tower obsolete, but without the regulations and control of local governments, wireless providers would not have the incentive.

V. Conclusion

Cases such as *Amherst* suggest that courts are willing to allow towers despite the objections of property owners and town officials, but the TCA is written to allow the towns some regulation if they follow the limitations outlined in the act. Clearly, the TCA is vague and subject to varying interpretations. The courts, however, must recognize the traditional authority of local governments in zoning controversies and balance this authority with the overall purpose of the TCA. The FCC, the agency responsible for implementing and regulating the TCA, and the courts, who oversee the enforcement of the TCA, must remember that consumers were the intended beneficiaries of the TCA. Consequently, in order to fulfill Congress’s vision of a pro-competitive,

pro-consumer communications market, wireless service providers and local and state governments must work together to achieve this common goal.

Endnotes

1. Telecommunications Act of 1996, 47 U.S.C. § 151 (Supp. II 1996).
2. *See Amherst v. Omnipoint Communications*, 173 F.3d 9, (1st Cir. 1999).
3. *See Malcom J. Tuesley, Not in My Backyard: The Siting of Wireless Communications Facilities*, 51 FED. COM. L.J. 887, 888 (1999) [hereinafter Tuesley].
4. *See id.*
5. *See Michelle Gregory, Local Planning Issues in Siting Cellular Towers*, ZONING NEWS, June 1995, at 2.
6. *See Nancy M. Palermo, Progress Before Pleasure: Balancing the Competing Interest of Telecommunications Companies and Landowners in Cell Cite Construction*, 16 TEMP. ENVTL. L. & TECH. J 245, 246 (1998) [hereinafter, Palermo].
7. *See Gregory Tan, 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, 467, [hereinafter Tan], citing R.C.V Macario, Cellular Radio Principles, CELLULAR RADIO SYSTEMS 3, 5-6 (D.M. Balston & R.C.V. Macario eds., 1993).
8. *See Palermo, supra* note 5, at 246.
9. *See id.*
10. *See id.*
11. *See Tan, supra*, note 6.
12. *See id.*
13. *See id.* at 468.
14. *Id.* at 470.
15. *Id.* at 470-71.
16. WIRELESS TELECOMMUNICATIONS BUREAU, FCC, FACT SHEET NO. 2, NATIONAL WIRELESS FACILITIES SITING POLICIES (Sept. 17, 1996) <<http://www.fcc.gov/wtb/siting>> [hereinafter, WIRELESS TELECOM. BUREAU, FACT SHEET NO. 2].
17. *See id.*

18. Tan, *supra* at note 6, at 472.
19. *See id.*
20. *See* Tan, *supra* note 6 at 466.
21. *See id.*
22. WIRELESS TELECOMMUNICATIONS BUREAU, FCC, PERSONAL COMMUNICATIONS SERVICE (PCS), (Aug. 2, 1999) <<http://www.fcc.gov/wtb/pcs>> [hereinafter, WIRELESS TELECOM. BUREAU, PCS].
23. *See id.*
24. *See* Stewart Alsop, *Welcome to Cell Phone Hell*, FORTUNE, Jan. 12, 1998, at 147 [hereinafter Alsop].
25. *See id.* Such competition has resulted in a price drop for cellular service. "In market where PCS have been introduced, there has been a 25 percent drop in prices since 1994, compared to a 10 percent reduction in markets with only cellular providers." Tuesley, *supra* note 2, at 890. Additionally, because of the increase in wireless technology, the wireless industry is competing with traditional land-line telephone services. *See id.*
26. Andrew Kupfer and Ruth M. Coxeter, *This Is Not a Tree!; The Trouble with Cellular the Same Phones, the Same Services, and Fake Trees the Hide Transmitters: The Brave, New World of Wireless Communications is Neither Brave Nor New - Just Weird*, FORTUNE, Nov. 13, 1995, at 180 [hereinafter Kupfer and Coxeter].
27. *See id.*
28. 47 U.S.C. § 332(a)(7)(B)(i)(II) (1998).
29. 272 U.S. 365 (1926).
30. *Id.* at 395.
31. 277 U.S. 183 (1928).
32. Communications Act of 1934, 47 U.S.C. §§ 151-613.
33. *See* Sara Evans, *Wireless Service Providers v. Zoning Commissions: Preservation of State and Local Zoning Authority Under the Telecommunications Act of 1996*, 32 GA. L. REV. 965, 975 (1998) [hereinafter Evans].
34. 624 N.E.2d 990 (N.Y. 1993).
35. *See id.* at 993.
36. *See id.* The Ohio Supreme Court also recently ruled that wireless service is a public utility because it provides a service to the public, the FCC federally regulates

it, and it must provide its services to customers in a reasonable in undiscriminating manner. See *Campenelli v. AT&T Wireless Serv., Inc.*, 706 N.E. 2d 1267 (Ohio 1999); see also, Catherine Candisky, *Court Rules Companies Exempt from Local Zoning Wireless Communications*, COLUMBUS DISPATCH (Columbus, Oh.), March 25, 1999, 1C.

37. 963 F.Supp. 732 (C.D. Ill. 1997); see also, 220 ILL. COMP. STAT. ANN. 5/3-105 (West 1998), definition excludes communications.

38. *Id.* at 741.

39. See Palermo, *supra* note 5, at 255-56.

40. See *id.*

41. See *id.*

42. 47 U.S.C. § 151 (1999).

43. See Evans, *supra* note 32, at 977, citing Richard E. Wiley, *The Telecommunications Act of 1996*, ADMIN. & REG. L. NEWS, Spring 1996, at 1.

44. See 47 U.S.C. §332.

45. See 47 U.S.C. § 332(c).

46. See 47 U.S.C. § 332 (a)(3).

47. William E. Kennard, *The Telecom Act at Three: Seeing the Face of the Future, Address at the Comptel 1999 Annual Meeting and Trade Exposition, Atlanta, Ga.*, (Feb. 8, 1999).

48. 47 U.S.C. § 332(c)(7)(A).

49. See 47 U.S.C. § 332(c)(7)(B)(iv); see also WIRELESS TELECOMMUNICATIONS BUREAU, FCC, FACT SHEET, NEW NATIONAL WIRELESS TOWER SITING POLICIES (April 23, 1996) [hereinafter WIRELESS TELECOM. BUREAU, FACT SHEET].

50. 47 U.S.C. § 332.

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.*

55. *PrimeCo. Personal Communications Inc. v. Fox Lake*, 26 F.Supp.2d 1052, 1059 (N.D. Ill. 1998).

56. *Id.*

57. 155 F.3d 423 (4th Cir. 1998).
58. *See id.* at 428.
59. *See id.*; *see also* Gearon & Co. v. Fulton County, 5 F.Supp. 2d 1351 (N.D. Ga. 1998) (zoning board's denial of personal wireless services provider's request for variance to build cellular tower on a particular site was not unreasonable discrimination against provider because denial affected all such providers equally in that no provider was permitted to erect tower on proposed site).
60. *See id.* at 429.
61. *See Fox Lake*, 26 F.Supp.2d at 1059 (court explained that there were two trends in the interpretation of the TCA: the rigorous review and deferential review).
62. 173 F.3d 9 (1st Cir. 1999).
63. *See id.* at 14.
64. *See id.*
65. *Id.*
66. *Id.*
67. *See id.*
68. 984 F.Supp. 966 (E.D. Va. 1998).
69. *Id.* at 971.
70. *Id.*
71. 176 F.3d 630 (2nd Cir. 1999).
72. *See id.* at 640.
73. *Id.*
74. *See id.*
75. *Id.* at 641.
76. *See Fox Lake*, 26 F.Supp.2d at 1060 (the court explained that "rigorous-review courts believe the Act limits zoning-board consideration to demonstrable facts, actual 'evidence' as that term is used in judicial and quasi-judicial agency proceedings"). *Id.*
77. *See Virginia Beach*, 155 F.3d at 429.
78. *Id.* at 430, (citations omitted). The Fourth Circuit has also held that the "in writing" requirement is satisfied by the entrance into the record of a transcript of the

meeting during which the permit was denied. *See* AT&T Wireless PCS, Inc. v. Winston-Salem Zoning Board, 172 F.3d 307 (4th Cir. 1999).

79. *See PrimeCo.*, 26 F.Supp.2d at 1061.

80. *Id.*

81. *See id.*

82. *See id.*

83. *Id.* at 1063, quoting 142 CONG.REC. H1078 at § 704 (H.R. CONF. REP. NO. 104-458) at 208 (1996); *see also*, Nextel Partners v. Canaan, 1999 WL 651561 (N.D.N.Y. 1999).

84. *See PrimeCo.*, 26 F.Supp.2d at 1063.

85. *See id.*

86. 166 F.3d 490 (2nd Cir. 1999).

87. *Id.* at 494.

88. *See id.*; *see also* Spectrum v. Jefferson County, 1999 WL 592009 (D. Colo. 1999) (the role of the court is to determine whether there is sufficient evidence from which a reasonable person would find adequate to support the zoning board's decision).

89. *Cellular Tel.* 166 F.3d at 496.

90. 181 F.3d 403 (3rd Cir. 1999).

91. *See id.*

92. *See id.*

93. *See id.*

94. *See Oyster Bay*, 166 F.3d at 497.

95. *See id.*; *see also* Cellular Telephone Co. v. Oyster Bay, No. 97-CV-641 at 16 (E.D.N.Y. 1998).

96. *See Oyster Bay*, 166 F.3d at 497.

97. *See id.*; referencing Iowa Wireless Serv. L.P. v. City of Moline, Illinois, 29 F.Supp.2d 915, 924 (C.D. Ill. 1998) (ordering defendant to grant plaintiff a special use permit with "all deliberate speed"); Omnipoint Corp. v. Zoning Hearing Bd., 20 F.Supp.2d 875, 881-82 (E.D. Pa. 1998) (ordering zoning board to issue requested special exemption permit) *aff'd* 181 F.3d 403 (3rd Cir. 1999); Illinois RCA No. 3, Inc. v. County of Peoria, 963 F.Supp. 732, 747 (C.D. Ill. 1997) (deciding that injunction directing defendant to issue permit is appropriate relief under the TCA); Bell South Mobility Inc. v. Gwinnett County, Georgia, 944 F.Supp. 923, 929 (N.D. Ga. 1996) (granting plaintiffs'

request for writ of mandamus and ordering defendant to grant plaintiffs' requested permit).

98. *See Fox Lake*, 26 F.Supp.2d at 1066.

99. *See id.*

100. *See id.* Remand of the case for further proceedings by the local zoning authority is also appropriate; see also *AT&T Wireless Serv. of Fla., Inc. v. Orange County*, 994 F.Supp. 1422 (M.D. Fla. 1997).

101. *Amherst*, 173 F.3d at 15.

102. *See id.* Senator Patrick Leahy of Vermont and Representative Charles Bass of New Hampshire have each proposed changes to the TCA that would encourage more local discretion. Under Rep. Bass's bill the wireless service provider would have the burden of proving that the tower is necessary to equip the community with wireless service. See Jill Zuckman, *On different wavelengths; Cellular phone companies, community activists battle over transmission towers*, BOSTON GLOBE, April 18, 1999, B1.

103. *Amherst*, 173 F.3d at 15.

104. *See id.*

105. *See id.*

106. *See id.* at 14-15.

107. *See Michael E. Kanell, Towers of Power; Scorned by Neighbors but Vital to Cell Phone Service, They Are a Business of Their Own*, ATLANTA JOURNAL AND CONST., April 7, 1999, 4D.

108. *See Laura Kellams, City council finds it has more bark than bite on cellular towers*, The Arkansas Democrat-Gazette, March 17, 1999, B1. "Company representatives said that ... they're reluctant to share information with competitors about their level of coverage in certain areas." *Id.*

109. *See Nina Walfoort, Plan is designed to control spread of cell towers; Jefferson officials envisions taller but fewer structures*, THE COURIER-JOURNAL (Louisville, Ky.), Nov. 5, 1998, 2B.

110. *See id.*

111. *See id.*

112. *See William E. Kennard, Crossing Into the Wireless Century, A Speech to the CTIA Convention (Feb. 9, 1999)*, <<http://www.fcc.gov>>.

113. *See WIRELESS TELECOM. BUREAU, FACT SHEET NO. 2, supra note 15.*

114. *Id.*

115. *See id.*

116. *See* Matthew Phair, *Working on the air waves*, ENGINEERING NEWS-RECORD, December 14, 1998, 26. Other towns have also tried to use municipally owned land to locate cell towers, and so far, the court has ruled that this is permissible, despite its claims that the zoning board was biased toward the wireless provider. *See* Roberts v. Southwestern Bell Mobile Sys., 709 N.E. 2d 798 (Mass. 1999). *See also*, *Suit to Block Tower Partially Reinstated by MA Sup. Jud. Ct.*, 7 ELECTROMAGNETIC FIELD LIT. R. 7.

