Before the
Federal Communications Commission
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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In the Matter of	)	
Promotion of Competitive Networks in Local Telecommunications Markets	)	WT Docket No. 99-217
Wireless Communications Association International, Inc. Petition for Rulemaking to Amend Section 1.4000 of the Commission's Rules to Preempt Restrictions on Subscriber Premises Reception or Transmission Antennas Designed To Provide Fixed Wireless Services	)	
Cellular Telecommunications Industry Association Petition for Rule Making and Amendment of the Commission's Rules to Preempt State and Local Imposition of Discriminatory and/or Excessive Taxes and Assessments	)	
Implementation of the Local Competition in the Telecommunications Act of 1996	)	CC Docket No. 96-98

REPLY COMMENTS OF THE PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION

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SUMMARY

The Commission must be mindful of the important public policy interests at stake in this proceeding: The ability of the nearly one-third of U.S. businesses and residential consumers that currently occupy or reside in multi-tenant environment ("MTE") buildings to choose among competing telecommunications providers for both their basic and advanced telecommunications service needs.

Wireless broadband providers are ready and eager to offer MTE residents and businesses faster and cheaper alternatives to local telephone companies' DSL services and cable companies' modem services. However, Commission action is necessary to overcome the historical ILEC dominance that finds them with a stranglehold on access to MTE facilities.

The Commission has an extraordinary opportunity in this proceeding to break the ILECs' long-held competitive bottleneck in MTE buildings and deliver to MTE tenants the freedom of choice among providers. PCIA urges it to craft guidance that implements a set of seven principles that, taken together, will benefit MTE building owners, their tenants, and new telecommunications service providers. These principles should:

- Provide comparable access on and within MTE buildings so that wireless service providers can offer their services to MTE building tenants;
- Ensure that service providers pay reasonable, market-based compensation to MTE building owners for building access;
- Prohibit telecommunications carriers from entering into exclusive building access or service arrangements with MTE owners;

- Ensure that wireless service providers pay the costs of installing and maintaining facilities on or within MTE buildings;
- Ensure that tenants are not penalized for exercising their right to choose among service providers.
- Apply these principles to both commercial and residential MTE buildings so that residential and business customers have true freedom of choice among carriers;
- Recognize that access obligations must take into consideration the space limitations that may exist in a particular building.

In keeping with these principles, the Commission should reject any reading of Section 224 that would frustrate the pro-competitive purposes of the 1996 Act. Congress clearly meant Section 224 to apply to all rights-of-way owned or controlled by utilities, including those on or within MTE buildings owned by third parties. Common law and recent case law also state that utilities may apportion their rights-of-ways to others without running afoul of the building owners' property interest. Any other interpretation would eviscerate the statute and, more importantly, deny the benefits of local competition to the substantial portion of the nation's consumers and businesses that reside or occupy MTE buildings. Consistent with the pro-competitive purpose of Section 224, the Commission should find that all rooftops, risers, conduits, ducts, easements, and property used by a utility in the distribution of its telecommunications services constitute "rights-of-way" that are subject to access by competing carriers.

The Commission must now act to ensure that the benefits of facilities-based competition and advanced telecommunications services are realized in all local telecommunications markets. PCIA urges the Commission to take prompt action and adopt rules and policies that will promote MTE tenant choice and facilitate facilities-based local competition.

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REPLY COMMENTS OF THE
PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION

The Personal Communications Industry Association ("PCIA")[1] respectfully submits these reply comments in connection with the *Notice of Proposed Rulemaking ("NPRM")* issued by the Commission in the above-captioned proceeding.[2]

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[1] PCIA is an international trade association established to represent the interests of the commercial and private mobile radio service communications industries and the fixed broadband wireless industry. PCIA's Federation of Councils includes: the Paging and Messaging Alliance, the PCS Alliance, the Site Owners and Managers Association, the Private Systems Users Alliance, the Mobile Wireless Communications Alliance, and the Wireless Broadband Alliance. As an FCC appointed frequency coordinator for the

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This proceeding concerns the issue of whether or not the nearly one-third of U.S. businesses and residential consumers that work or reside in multi-tenant environment ("MTE") buildings will be given the opportunity to choose freely among the advanced telecommunications services offered by competitive telecommunications operators, including wireless broadband providers. This issue is pivotal to the achievement of Congress's vision of a truly competitive facilities-based local telecommunications market. Wireless broadband providers offer a viable alternative to local telephone companies' DSL services and to cable companies' modem services. If new wireless services are to achieve their full market potential, however, it is crucial for these new wireless entrants to compete with incumbent wireline providers by having comparable access to MTE buildings. Fixed wireless broadband technologies, including LMDS, clearly offer customers a faster and cheaper alternative to wireline technologies, but in order for customers to receive these benefits, wireless carriers must have access to customers' rooftops, conduits, risers and telephone closets.[3]

(...Continued)
Industrial/Business Pool frequencies below 512 MHz, the 800 MHz and 900 MHz Business Pools, the 800 MHz General Category frequencies for Business Eligibles and conventional SMR systems, and the 929 MHz paging frequencies, PCIA represents and serves the interests of tens of thousands of FCC licensees.

[2] *Promotion of Competitive Networks in Local Telecommunications Markets*, Notice of Proposed Rulemaking and Notice of Inquiry, WT Docket No. 99-217, CC Docket No. 96-98, FCC 99-141 (rel. July 7, 1999) *("NPRM")*.

[3] Exhibit A hereto is a primer on wireless broadband equipment and its installation. Fixed wireless technology is distinct from mobile communications services in that fixed carriers must have physical access to each building where they have a customer. In contrast, mobile carriers use a limited number of freestanding towers and rooftops to place an omnidirectional signal over large portions of a community. If a mobile operator
(Continued...)

I. THE HISTORICAL MONOPOLY POSITION OF INCUMBENT CARRIERS WILL NOT CHANGE WITHOUT COMMISSION ACTION

As the Commission is well aware, in many MTE buildings, tenants have access to a single provider of telecommunications—the incumbent local exchange carrier ("ILEC").[4] Competition is emerging as envisioned by Congress and the Commission pursuant to the Telecommunications Act of 1996. However, the Commission's recently released Local Competition report[5] indicates that, while the number of registered CLECs is growing, 96.5 percent of local telecommunications service revenues still go to ILECs.[6] This dominant marketplace position and favorable building access terms enjoyed by ILECs can be traced to the government-sanctioned local exchange monopolies once held by ILECs in all parts of this country. Until very recently, building owners/managers were faced with only one choice to provide local exchange telecommunications to their tenants.[7] Indeed, as the Real Access Alliance ("RAA")

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is denied access to a particular tower or building, it may not lose the ability to serve a willing customer in that building. Instead, it can find another tower (or build its own) or rooftop and still place a signal over a community. This important technical difference between fixed and mobile services requires that the Commission carefully define any carrier access rights. PCIA does not suggest that there is any public policy justification for mandating access to towers or rooftops by mobile carriers who will always have alternatives in placing their antennas or constructing their own.

4 *NPRM* at ¶¶ 3-14.

5 *Local Competition: August 1999*, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission.

6 *Id.* at 17.

7 *See* Comments of the Real Access Alliance, WT Docket No. 99-217, at 31 (filed Aug. 27, 1999). (RAA aptly note that "(i)n the traditional monopoly environment of the
(Continued...)

comments indicate, in many if not most cases, the ILECs have been able to install wires in conduit and risers and to use floor space, without making any payment to the building landlord.[8]

PCIA accepts and understands the willingness—indeed, desire—of many building owners/managers to accommodate competing telecommunications service providers. The evidence presented by the RAA and other real estate commenters suggests that the majority of MTE owners and operators are willing to entertain the idea of competitive telecommunications providers in their buildings. The RAA's own member survey, however, offers some disturbing information that suggests that, in some cases, MTE consumers will continue to have no choice in telecommunications services. For example, the RAA-commissioned survey indicates that in approximately one-third of instances, requests for building access by carriers do not result in such access and tenants may be left without a competitive telecommunications choice. At the same time, a recent BOMA/ULI survey concludes that 72 percent of tenants are willing to pay more for advanced communications services, but that less than 35 percent of all tenants are in buildings with these amenities.[9] There is also substantial evidence now

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past, neither property owners, nor their customers had any choice in who provided them with telecommunications services.")

[8] *Id.*

[9] *What Office Tenants Want,* 1999 BOMA/ULI Office Tenant Survey Report at Chapter 4.

before the Commission that competitive carriers are unable to access many buildings under reasonable tenant and conditions.[10]

PCIA urges the RAA and real estate interests to join in crafting means of overcoming the historical legacy of ILEC monopolies and ensuring that tenants have a real choice in telecommunications services. At the same time, however, the Commission needs to take steps to open up the local communications marketplace in MTE buildings. Otherwise, new wireless providers will continue to face uncertainty as they make their best attempts to deploy their services across the country.

MTE consumers suffer and ILECs prosper due to the vestiges of the ILECs' monopoly position and their automatic access to buildings. The RAA is entirely correct in rejecting blame for the monopoly position of ILECs in MTE facilities. Real estate owners simply had no choice for over 100 years but to allow the phone companies uncompensated access to MTE buildings. Congress has rejected this monopoly approach to the provision of telecommunications services and directed the Commission to lead the transition to local competition. The Commission can break the ILEC's competitive bottleneck in MTE buildings by implementing a set of principles that will spur the transition to real competition and benefit property owners, their tenants, and new telecommunications providers.

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[10] *See, e.g.*, ALTS Comments at 1-18; WinStar Comments at 13-16; Teligent Comments at 9-10; NextLink at 4-7.

II. THE COMMISSION SHOULD IMPLEMENT THE SEVEN PCIA PRINCIPLES AS A MEANS TO FACILITATE ITS LOCAL COMPETITION GOALS

PCIA outlined seven principles to bring telecommunications choices to customers in MTE buildings. Not only can these principles serve as the basis for creating real choices for consumers, but can do so while protecting the legitimate private property rights and concerns of MTE building owners. Based on its review of the opening comments, PCIA offers an expanded discussion of its suggested seven principles.

A. Essential Access to Buildings

The Commission must act to ensure that wireless service providers have the opportunity to compete on an equal footing with incumbent and other service providers. It is imperative that the terms, conditions, and compensation paid by competing service providers for the installation of telecommunications facilities in MTE buildings be "comparable"—that is, terms of access must not disadvantage one carrier over another. Differences in treatment between telecommunications providers should be based upon real differences between the carriers, not arbitrary attempts to penalize new operators.

PCIA agrees wholeheartedly with the Real Access Alliance that, due in large part to purely historical circumstances, the local telephone companies are well-entrenched in every MTE building.[11] Tenants in those buildings are sometimes prevented from availing themselves of alternative services because building owners have been "locked in" by exclusive deals with the incumbent provider. Building owners may also be

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[11] *Id.*

reluctant or not accustomed to dealing with competing service providers, or they may fail to appreciate the value of having alternative providers of telecommunications services.

Commission action consistent with the principle of comparable access rights among service providers is necessary to break down these barriers that deny potential consumers choice in MTE buildings. At the same time, the objective of this principle is not to secure "free" access to MTE buildings for fixed wireless service providers, nor is it to dictate the exact terms and conditions building owners negotiate with individual service providers. Nor does this principle suggest that the terms, conditions, and fees must be equal for all telecommunications providers. Access arrangements must reflect the obvious differences in facilities and needs of the parties.

This principle is also intended to ensure that building owners are able to "undo" existing arrangements with service providers that have the effect—intended or not—of stymieing competition by way of exclusive or exclusionary provisions. Under this suggested principle, building owners/managers should have the right to take a "fresh look" at existing contracts and arrangements so that they can amend provisions that deter competition and tenant choice as well as terms that give free access to incumbent providers. PCIA is unaware of any federal or state requirements mandating that incumbent providers have access to buildings (including the use of floor space) at no charge. Once a new telecommunications service provider gains the necessary access to provide service to any tenant (and assuming that provider is not being granted

access for free), the incumbent provider should be required to begin paying for its access as well.[12]

Comparable access as envisioned under this principle is not in any way a "subsidy."[13] Rather, it is a necessary transition mechanism to reverse the local monopolies that exist today and to carry out Congress's vision of providing consumers with choices in local telecommunications services. Wireless service providers' efforts to initiate their services first to MTE building tenants is a sound, often employed and proven market strategy. Such a strategy is necessary—especially in view of the concentrated market conditions that exist in the local telecommunications market today—to allow wireless service providers to get their foot in the door and achieve economies of scale, so that they can continue to expand the reach of their services to more consumers across the country.

B. Reasonable Compensation for Building Owners/Managers for Building Access

Building owners or managers deserve to be fairly compensated for the access they grant to service providers in their buildings. Such compensation should cover the service providers' use of all space on top of or within the building, including all rooftop areas, risers, conduits, phone closets, or other spaces. The rates charged for access

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[12] *See* Comments of Apex Site Management, Inc., WT Docket No. 99-217, at 8 (filed Aug. 27, 1999).

[13] *See* RAA Comments at 24. RAA contends that, if building owners are forced to supply CLECs access to their buildings on terms and conditions that they would not voluntarily make available to these carriers, they are, in effect, subsidizing the business activities of CLECs.

and space rental by a building owner to a broadband wireless provider should be comparable to the rates charged other service providers that are given access to the building.[14] Moreover, building access rates should bear some reasonable relationship to the market rate or fair market value of access and space rental, and must not be unduly inflated so as to create an anti-competitive situation where one or more service providers are placed at an unfair disadvantage vis-à-vis others.

Under this principle, PCIA does not envision, nor does it support, a scenario under which the Commission would become a federal rate board for building access. Building access rates should be established through the process of private negotiations between or among the parties involved, not pursuant to federally-mandated pricing formulas and may include revenue sharing arrangements. Disputes, if they arise, should be resolved as private contractual matters are resolved today.

Finally, PCIA is not adverse to allowing parties to negotiate building access arrangements as they see fit or that are necessary to reflect a particular situation. This principle is aimed at ensuring that rates for access to MTE buildings reasonably compensate building owners and managers, while being assessed on an even-handed basis.

C. No Exclusive Access Arrangements for Telecommunications Service Providers

Building owners/managers and telecommunications service providers should generally be able to negotiate freely the terms and conditions of their building access

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[14] *See* discussion in § II.A *supra*.

arrangements. The Commission should not, however, permit telecommunications carriers to demand or enter into exclusive contracts with building owners or managers. This limitation is necessary to promote open and fair competition that provides consumers with choice. Furthermore, to the extent telecommunications carriers currently have exclusive access or exclusive service arrangements in place, the Commission should require amendments to ensure that other providers have the opportunity to compete fairly for MTE building customers.

This principle is not intended, nor should it be construed, to impinge at all upon MTE building owners' ability to negotiate and enter into exclusive contracts with building managers. As with PCIA's other building access principles, the sole purpose here is to ensure that building owners do not become or do not remain contractually bound to restrict other telecommunications service providers from delivering their services to willing MTE building tenants.

D. Carrier Assumption of Installation and Damage Costs

Building owners and managers have legitimate concerns regarding the installation of service providers' equipment and facilities on or within MTE buildings and the damage that can occur as a result of such installation. Wireless service providers understand and accept the fact that they are expected to pay certain costs incurred in bringing these services to the customer. Service providers or their agents who install and maintain facilities on MTE buildings must assume the costs associated with the installation, as well as full responsibility for any repairs and payments for damages to buildings. Building owners and their tenants deserve reasonable assurance—whether by contract or other available means—that the cost of any repairs for damages caused

by facility installation or maintenance should be assumed by the installing service provider. Moreover, building owners should, if necessary, be able to enforce their rights in this area through courts of proper jurisdiction.

E. No Charges to Tenants for Exercising Choice

Consumers must have a choice among "first-" and "last-mile" broadband access providers if Congress's vision of a truly competitive telecommunications market is to be realized. Consistent with this objective, MTE building tenants should not be penalized for exercising their option to obtain service from a particular telecommunications service provider. As discussed above, the selected service provider should be the one to bear the responsibility for any reasonable costs associated with the delivery of its services to the customer.

F. Commercial and Residential Tenants in MTE Buildings Should Be Governed Equally by These Principles

These principles should be applied to both businesses (small, medium, or large) and residential consumers located in MTE buildings. There is no justification for drawing an arbitrary distinction between the need to offer telecommunications choice to consumers in their private lives and commercial operations. Moreover, any attempt to draw such an artificial line likely would be defeated by the fact that many MTE buildings encompass both residential living areas and commercial functions. The Commission should make clear that its principles promoting customer choice and facilities-based competition apply to all types of entities and individuals residing or located in MTEs without regard to the nature of usage of leased space. At the same time, this principle

recognizes that the details of securing access will necessarily vary due to the different concerns that apply to commercial and residential buildings.

G. Reasonable Accommodation of Space Limitations

There may be instances, particularly in older MTE buildings that have not been updated or rewired, where access to a building may be partially restricted or precluded because of a shortage of space. In such situations, building owners should not be forced to build additional space or capacity. Under this principle, however, building owners and incumbent service providers should examine possible alternatives and make good-faith efforts to facilitate and accommodate a competing provider's entry into the building. If changes to a building must be made to accommodate newcomers, the incumbent and competitive carriers would be responsible for space improvements, not the building owner.

III. SECTION 224 APPLIES TO ANY RIGHT-OF-WAY OWNED OR CONTROLLED BY A UTILITY, INCLUDING THOSE LOCATED ON OR INSIDE BUILDINGS

The Commission should ignore comments that seek to frustrate the pro-competitive purposes of the 1996 Act by reducing Section 224[15] to a nullity vis-à-vis MTEs. Arguments that Section 224 is inapplicable to easements inside buildings,[16] that such application would improperly expand the scope of existing easements,[17] as well as

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[15] 47 U.S.C. § 224.

[16] RAA Comments at 50.

[17] RAA Comments at 53-55; Comments of the Community Associations Institute, the National Association of Housing Cooperatives, and the Cooperative Housing Coalition in WT Docket No. 99-217, at 17 (filed Aug. 27, 1999) ("CAI Comments").

arguments that such expansion would violate the Fifth Amendment,[18] are simply wrong and have already been rejected by both the Courts and the Commission. Indeed, reading Section 224 so narrowly as to exclude rights-of-way in MTEs that are owned or controlled by a utility would eviscerate the statute and would deny the benefits of competition to a substantial portion of the nation's population. Neither the Communications Act, its legislative history, nor sound public policy countenance such a result. Nothing in the reading of Section 224 that is supported by PCIA would, however, suggest that building owners should not be compensated for use of utility right-of-ways on or within their buildings.

As PCIA and others demonstrated in their initial comments, the plain language of Section 224(f) requires that utilities provide nondiscriminatory access to any pole, duct, conduit, or right-of-way that they own or control. Section 224 contains no limiting language to suggest that Congress intended to exclude rights-of-way located inside buildings. The statute limits neither the type of equipment that may be attached to utility facilities[19] nor the rights-of-way that are subject to the nondiscriminatory access requirement. In fact, Section 224(f)(1) expressly requires that utilities provide nondiscriminatory access "to *any* . . . right-of-way owned or controlled"[20] by them, which

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[18] RAA Comments at 55-57; CAI Comments at 9-13.

[19] *See* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, *First Report and Order*, 11 FCC Rcd 15499, 16085 at para. 1186 (1996) (subsequent history omitted) ("*First Local Competition Order*").

[20] 47 U.S.C. § 224(f)(1) (emphasis added).

necessarily includes rooftops, risers, ducts, and conduits located in MTEs, as well as both publicly and privately granted rights-of-way. If Congress had intended Section 224 to be interpreted narrowly in terms of property law concepts, it certainly would have indicated as much. Instead, Congress framed the language of Section 224 broadly, and no statutory text or legislative history suggests otherwise or supports a narrow interpretation.[21]

The Commission is on record that Section 224 includes access to third-party property. Indeed, the Commission stated explicitly that "the access obligations of section 224(f) apply when . . . the utility owns *or controls* the right-of-way to the extent necessary to permit such access."[22] The Commission also concluded that a utility must "exercise its eminent domain authority to expand an existing right-of-way over private property in order to accommodate a request for access."[23] Finally, the Commission found in the *First Local Competition Order* that "[t]he intent of Congress in section 224(f) was to permit cable operators and telecommunications carriers to 'piggy-back' along distribution networks owned or controlled by utilities."[24]

Well-settled principles of the common law of real property and existing provisions of the Communications Act demonstrate that rights-of-way owned or controlled by

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[21] Again, as PCIA states herein at Section II.B., building owners are entitled to compensation at market rates for use of their property.

[22] *First Local Competition Order*, 11 FCC Rcd at 16082 para. 1179 (emphasis added).

[23] *Id.*, 11 FCC Rcd at 16083 para. 1181.

[24] *First Local Competition Order*, 11 FCC Rcd at 16085 para. 1185.

utilities are divisible for third-party use without infringing the rights of the owner of the underlying fee as long as a mechanism exists for the utility or property owner to recover just compensation for use of the right-of-way and the third-party use does not unduly burden the underlying property.[25] No legal or policy reason exists to carve out an exception to these principles for utility rights-of-way located within MTEs.

The common law provides a special rule for utility easements, which are "exclusive easements in gross;" *i.e.*, one giving the easement owner the sole privilege of making the uses authorized by it and which is independent of an adjacent parcel of land. Such easements are "apportionable," or divisible, for a third party's use by the easement holder even if such use extends to a new technology or was unanticipated by the owner of the underlying fee.[26]

Courts around the country have previously addressed the issue of whether utilities could apportion their easements in cases involving cable television operators and the Pole Attachment Act, where landowners raised arguments identical to those raised here to prevent cable operators from attaching wires over existing rights-of-way. These courts have repeatedly found that utilities were authorized to share, *i.e.*, apportion, their easement rights with third parties.[27] Moreover, additional attachments

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[25] *See C/R TV, Inc. v. Shannondale, Inc.*, 27 F.3d 104, 109 (4th Cir. 1994) ("telephone wire" utility easement allowed expansion to include transmission of cable television; even if additional wire were introduced, there would be no increased burden on the servient estate).

[26] RESTATEMENT (THIRD) OF PROPERTY; SERVITUDES § 5.9 – Division of Benefits in Gross (Draft Adopted May 1998).

[27] *See Jolliff v. Hardin Cable Television Co.*, 26 Ohio St.2d 103, 269 N.E.2d 588

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on existing rights-of-way were held not to constitute an additional servitude.[28] In *Hoffman v. Capitol Cablevision System, Inc.*,[29] for example, the Court observed that

> Plaintiffs claim, of course, that the additional use of the easements by defendants will be to the damage of their property. Even if we were to assume an additional burden, this would not be sufficient to defeat an apportionment of exclusive easements . . . .[30]

These cases lay rest to the claim that application of Section 224 to rights-of-way located within MTEs would impermissibly expand the scope of existing easements. Utility rights-of-way invariably are exclusive easements in gross that may be apportioned. Section 224 and the Commission's rules simply require a utility to apportion such easements where physically possible and where apportionment would not create safety concerns.

Moreover, the courts have already determined that Section 224 is consistent with the Fifth Amendment.[31] In fact, the United States Court of Appeals for the Eleventh Circuit recently held that the 1996 amendment to the Pole Attachment Act, *viz.*, Section

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(1971); *Hoffman v. Capitol Cablevision System, Inc.*, 383 N.Y.S.2d 674 (1976), *app. denied*, 40 N.Y.2d 806; *Faulkner v. Kingston Cablevision Inc.*, 386 N.Y.S.2d 358 (1976), *app. denied*, 40 N.Y.2d 805 (1976); *Henley v. Continental Cablevision of St. Louis County, Inc.*, 692 S.W.2d 825 (Mo. App. 1985).

28 *See, e.g.*, *Salvaty v. Falcon Cable Television*, 165 Cal.App.3d 798, 212 Cal.Rptr. 31 (1985).

29 383 N.Y.S.2d 674.

30 *Id.* at 676.

31 *FCC v. Florida Power Corp.*, 480 U.S. 245 (1987).

224(f), does not effect an unconstitutional taking under the Fifth Amendment.[32] Thus, the contention that "any attempt to broaden the scope of an existing access right to accommodate an additional user's facilities would violate the Fifth Amendment"[33] is simply wrong under both the statute and the common law. Under these circumstances, the Commission should not reconsider its conclusion that where a rooftop or other MTE location constitutes a right-of-way owned or controlled by a utility—*i.e.*, where the utility has the right to place its antennas or other facilities there and exercises this right of ownership or control—Section 224 requires the utility to permit competing telecommunications service providers access to such rights-of-way.[34]

The Commission has also recognized previously that "[t]he purpose of Section 224 of the Communications Act is to ensure that the deployment of communications networks and the development of competition are not impeded by private ownership and control of the scarce infrastructure and rights-of-way that many communications providers must use in order to reach customers."[35] Any attempt to narrow the scope of

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[32] *Gulf Power Company v. United States*, No. 98-2403, 1999 U.S. App. LEXIS 21574, __ F.3d __ (11th Cir. Sept. 9, 1999).

[33] RAA Comments at 55 (footnote omitted).

[34] *Notice* at para. 41.

[35] Implementation of Section 703(e) of the Telecommunications Act of 1996, Amendment of the Commission's Rules and Policies Governing Pole Attachments, *Report and* Order, 13 FCC Rcd 6777 at para. 2 (1998) (footnotes omitted) (citing Pub. L. No. 95-234 ("1978 Pole Attachment Act") and S. REP. No. 580, 95th Cong., 1st Sess. 19, 20 (1977) ("*1977 Senate Report*"), *reprinted in* 1978 U.S.C.C.A.N. 109, 121).

Section 224 to exclude utility rights-of-way located on or within MTEs would be inconsistent with the sound public policies underlying the statute.

Rooftops, conduits, and other locations constitute a "right-of-way" within the meaning of Section 224 so long as they are "owned" or "controlled by" the utility. To implement the pro-competitive purposes of the 1996 Act, the Commission should reject any overly restrictive interpretation of these terms that would undermine the policies of the Communications Act. The Commission should find that all rooftops, risers, conduits, ducts, easements, and property used by a utility in the distribution of its services constitute "rights-of-way" that are subject to access under Section 224.

IV. CONCLUSION

The Commission must act decisively to ensure that all Americans have the opportunity to avail themselves of the many benefits that flow from advanced communications services and technologies. Accordingly, PCIA urges the Commission to take immediate action to adopt building access requirements premised on the mutually beneficial principles outline above.

Respectfully submitted,

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September 27, 1999

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EXHIBIT A

Wireless Broadband Service for the MDU Customer:

An Equipment and Installation Primer

Wireless Broadband Service for the MDU Customer: An Equipment and Installation Primer[1]

Introduction

Integrating telephony, data, and video services into a unified network has been a topic of rapidly increasing interest in the 1990s. The Telecommunications Act of 1996 and the resulting push toward deregulation have only intensified the quest for full-service network solutions. In this light, operators are developing new network architectures that will forever change the world telecommunications landscape. Fundamental to that change will be an ever-increasing number of competitive offerings from a multitude of service providers. This constellation of choices will give the consumer more alternatives and more opportunities than ever before.

But, why do consumers need these new choices? As large as it has already become, the use of the Internet for consumer-oriented services is still in its infancy. High-speed networked communication is already a reality at most large corporate, government, and educational workplaces. As people become accustomed to rapidly accessing e-mail, online shopping, news, and other yet-to-be-introduced services, the demand for residential broadband is certain to mushroom. As time progresses, residential broadband will offer a full range of multimedia offerings that include digital audio and video. Telecommunication firms are now touting transfer rates of 1,000 kbps (or 1 Mpbs) and more as attainable by digital modems that use cable television networks or telephone exchanges equipped with digital subscriber line (DSL) capacity. However, these technologies are not readily available in most communities and the pace of deployment to new markets has been extremely slow. Head-on competition between high-speed connections by cable modem and by telephone company DSL seems even rarer; wireless access is rarer still. But, with the rapid emergence of wireless broadband in the marketplace, that is all about to change. With wireless broadband connections to multi-tenant environments (MTEs), wireless carriers can very rapidly provide extremely fast connections to MTE tenants and offer the first wave of these new integrated services. This in turn will pave the way for the true multimedia convergence of video, audio, and text for the residential consumer.

Fixed Wireless: Focus on LMDS

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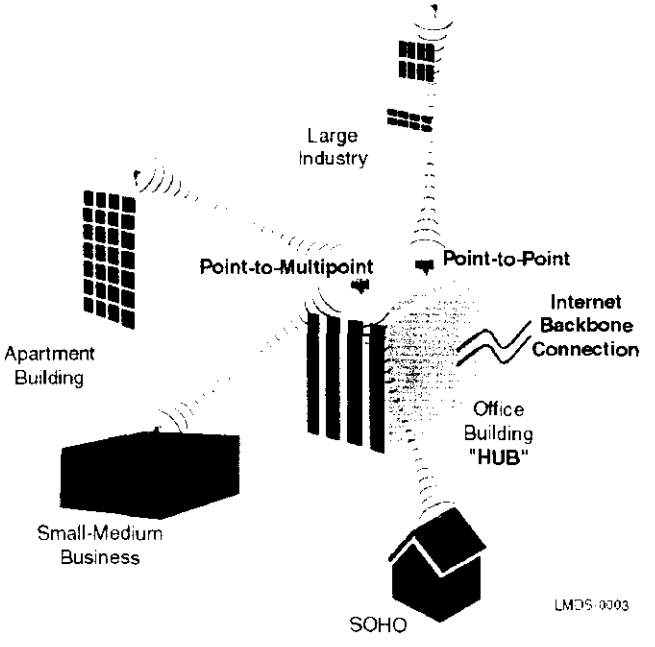
[1] This paper was prepared for PCIA by Andrew J. Hinsdale, Senior Strategy Manager, SpectraPoint Wireless LLC. SpectraPoint Wireless LLC is a leading manufacturer of fixed wireless equipment.

Fixed wireless broadband applications may be offered in many spectrum bands. Local Multipoint Distribution Services (LMDS), operating at 28 and 31 GHz, offers tremendous promise because operators will use up to 1100 GHz to bring communications to the home or office. This is the most bandwidth ever held by an individual operator in a community.

Although fixed wireless communications systems have been in use for decades for long-range telephone transmissions and video distribution, LMDS uses modern microelectronics technology to make fixed wireless broadband systems and advanced communications services affordable for a much greater number of businesses and individuals. Also, because LMDS is a wireless network, there is no need for a potential customer to wait months or years for their local telephone company to install a fiber optic cable to their building, or to compromise on access speed or services.

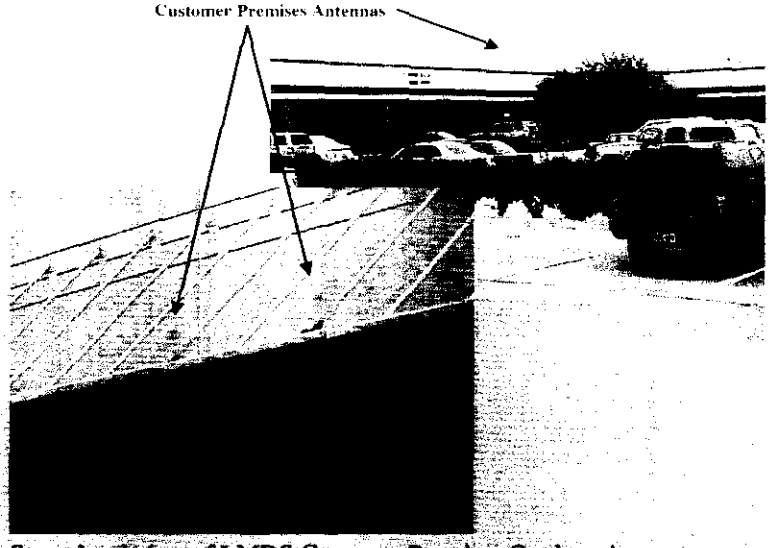
LMDS systems can be thought of as either Point-to-Point (PTP) or Point-to-Multipoint (PTM). PTP systems provide very large data capacities and are dedicated to a single consumer or company. A PTP link is very similar to deploying a fiber optic line to a building, except that it can be done much more quickly and cheaply. On the other hand, PTM systems share much of the expense of the central node or "base station" among several dozen, to up to a few thousand customers. Each customer has the ability to access the network "backbone" with high-speed connections, though at lower cost than a dedicated PTP link.

WHAT IS LMDS

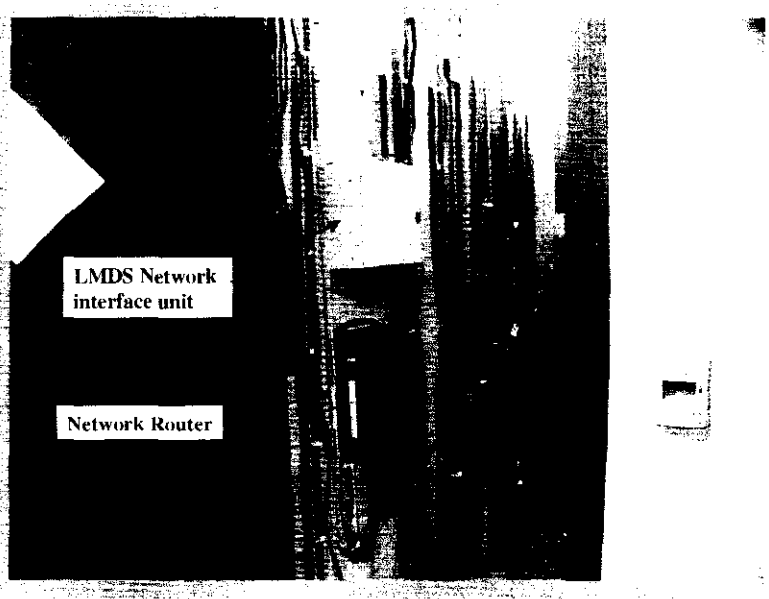


LMDS equipment, both at the hub site and the Customer Premises Equipment (CPE) are compact and lightweight. The typical customer installation puts a

single dish about the size of a medium pizza on the rooftop or outside wall of the building being served. This dish is aimed toward the hub site and connected by a one-quarter-inch diameter cable to a small electronics unit about the size of an attaché case in any convenient location inside the building.



Street level view of LMDS Customer Premises Outdoor Antennas show low visual impact



Customer indoor equipment uses little closet space

From that point, there are several ways to connect to individual customers inside the building, including tapping into an existing local area network, running dedicated wiring, or using existing phone lines. Many times, customers can be served using equipment that they already own. This powerful and flexible distribution technique allows a single LMDS dish on the rooftop to serve many consumers in the same building. In most cases, the LMDS cabling will fit easily within existing riser space[2] without disrupting services to any tenants. The existing telephone lines may continue to be connected to the PSTN as they are at the customer premise, or if the LMDS service provider offers telephony then the PSTN connection may be through the LMDS hub site.

Typical Installation Timeline

With LMDS, there is no need for customers to wait months for service initiation. Once a local hub site has been established, services to individual customer premises can be inaugurated within days. Because no two LMDS installations will be exactly the same, there is no exact timeline for installation. For a large building, some site preparation will be required, though once installation begins most LMDS equipment providers believe that a typical installation can be accomplished in half a day or less. When it is compared to the several weeks or months that it can take to provide high-speed services using conventional wireline technologies, LMDS installation times are insignificant. The exact time required depends on several factors:

- The type of roof mount to be used (penetrating or non-penetrating)
- The location of the nearest power outlet
- The type and condition of the building's existing inside wiring
- The location and ease of access to interior telco closets

Typically, installing an LMDS outdoor unit (ODU) should be no more complicated than installing a satellite TV mini-dish, a task that many customers are able to perform for themselves. The indoor unit (IDU) can be mounted in almost any convenient location on a wall or tabletop, connected by a cable run to the ODU, and plugged into the standard wall outlet. From there, it's a matter of running the appropriate cabling to individual customer's locations or hooking up to existing wiring.

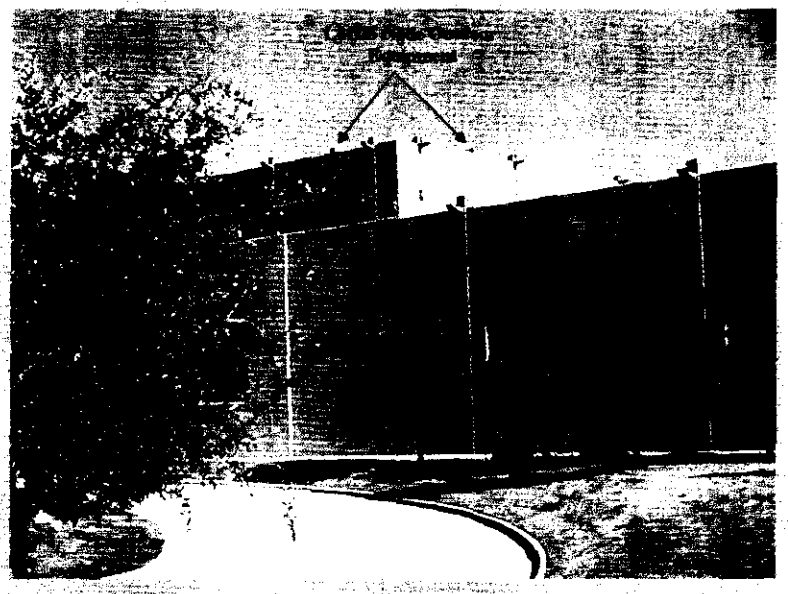
LMDS Equipment and Installation

Use of standard power, small footprint, and lack of special environmental requirements make LMDS equipment easy to install in almost any building.

[2] The term "riser" refers to conduits that are built into multistory buildings to allow convenient wire runs for telephone and data services.

Hub Sites

Hub sites can typically cover an area of about six to ten square miles while serving literally thousands of consumers. Most LMDS service areas require more than one hub site. The LMDS hub is like the hub of a wheel, with radio "spokes" going out to each individual subscriber. Some deployments will have only a few hubs, while very large cities could require 20 or more. While the size of the hub equipment is highly dependent on the specific network design, all hub sites will all have some things in common. Hub sites will have Indoor Units (IDUs) and Outdoor Units (ODUs). Generally, the outdoor units perform the actual transmission and reception of LMDS signals, convert these signals to easier-to-handle lower frequencies, and send them to the IDU to be processed back into information.



Street level view of LMDS node (or hub site) shows low visibility

Outdoor units come in various shapes and sizes depending on the manufacturer. Because they all use modern microelectronics technology, individual transmit/receive units are compact modular units, usually less than one-half cubic foot and weighing around 20 pounds. For typical LMDS system designs, each sector may have as many as eight to ten of these units, and each node can have up to four sectors (each sector is 90 degrees). Each sector will be mounted as close to the edge of the roof as possible on the side closest to it's designated service area. Including an allowance for the weight of the rooftop mounting racks, interface units, and other auxiliary equipment, a fully equipped node will require about 1000 pounds of equipment to be installed on the rooftop. Because

it is spread out in what amounts to four different locations on the roof, this amounts to having four or five people standing on the roof at the same time – in other words, not a significant load from a structural standpoint. To further simplify installation, non-penetrating mounting platforms are available.

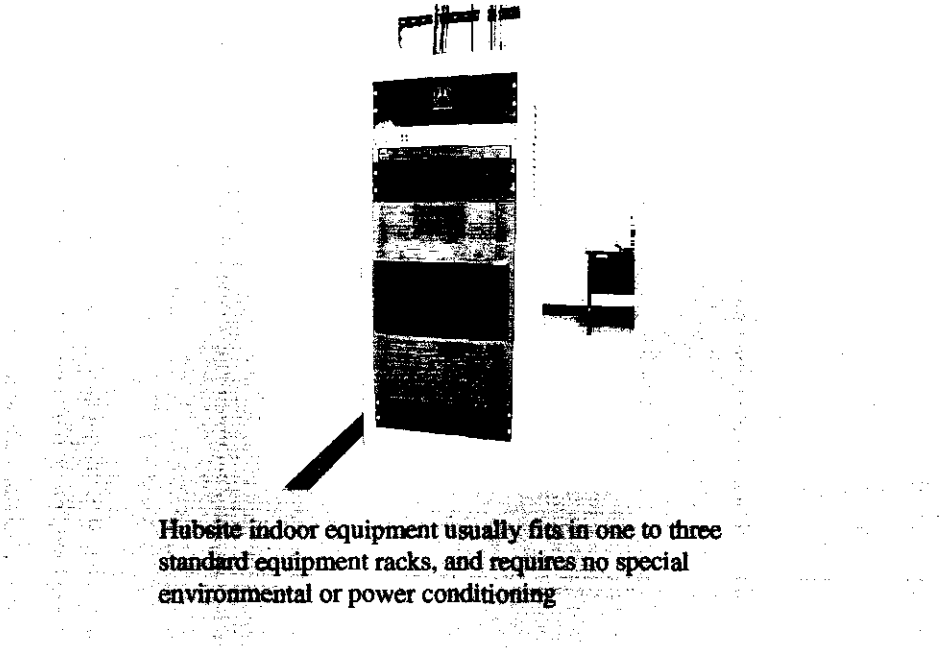
Close-up view of LMDS outdoor hub site equipment

The ODU is connected to the IDU via coaxial cables and control lead/power cables. These are typically one-quarter to one-half-inch cables, which can easily be entered into the building by a number of simple, reliable means, including entering existing drainage or service openings, elevator service sheds, or other existing rooftop structures.

As with the ODU, the IDU configuration varies depending on the quantity and types of services provided. The typical IDU uses standard power and operates in a normal office-type environment. The equipment normally consists of these elements:

- Transport Rack: one or more equipment racks that house the LMDS transmitters
- Power Conversion: one rack that converts standard wall power to the voltages used by the LMDS IDU and ODUs.
- Network Interface: equipment that interfaces the hub site to the public network, usually a switch or router.
- Battery Backup (Optional): a bank of batteries that provide backup power in the event of a prolonged power failure.

Each rack of equipment weighs about 200-250 pounds. Installations usually require free space of two feet around the equipment racks for proper cooling and maintenance access. Battery backup systems can get quite large, up to 30 cubic feet and approximately 4000-5000 pounds, making it very desirable to place them in basements or ground floor locations.

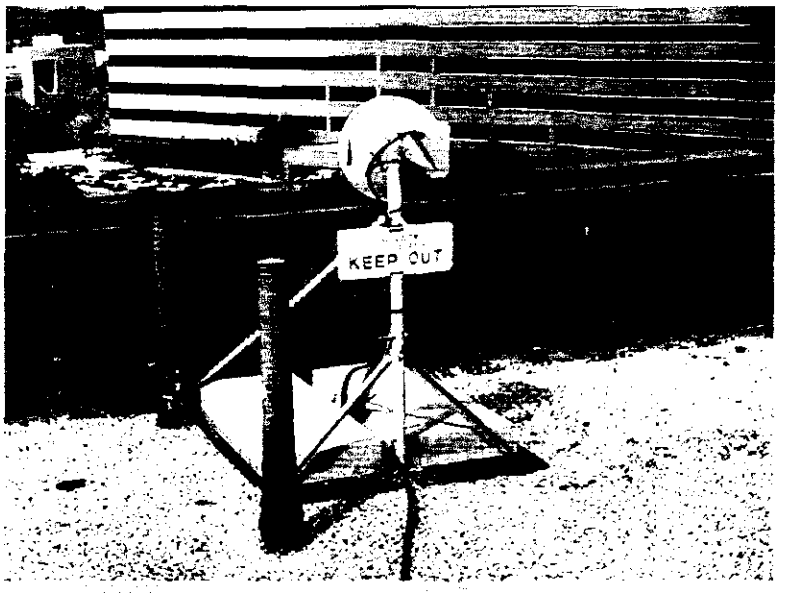


Hubsite indoor equipment usually fits in one to three standard equipment racks, and requires no special environmental or power conditioning

Customer Premises Equipment

The Figure shows a simplified view of a typical installation of customer equipment in an MDU. The LMDS ODU mounts in any convenient spot on the roof where it has clear line of sight (LOS) to the nearby LMDS hub. A run of coaxial cable, usually about one-quarter-inch in diameter, connects the ODU to the LMDS IDU. The IDU could be located near the ODU or in a basement area depending on the specific installation. The IDU can provide several different types of interfaces with customer equipment. The larger customers may wish for the IDU to interface directly with their existing networks via Ethernet or other popular data-movement protocols. Smaller users may be served using existing telephone wiring hooked up to a Digital Subscriber Line (DSL) modem, which allows individual customers even in older buildings to receive service at high-speed data rates.

The rooftop unit itself is usually a ten- to twelve-inch mini dish weighing around six to eight kilograms. While each supplier has a slightly different mounting scheme, non-penetrating roof mounts are available for situations where it is undesirable or impossible to go through the roof.



CPE antennas have various mounting options including non-roof penetrating mount (shown)

The indoor unit is usually about the size of a desktop PC, weighing around six to eight kilograms. Indoor units are usually mounted either on the wall or on a desktop. They are designed to use standard power and require only normal indoor environmental conditions.

Customer connecting equipment

The use of the term "customer premises equipment" in the fixed wireless broadband context can be misleading. Customers will continue to access their fixed wireless networks through current telephones and computers, not new office equipment. Future generations of fixed wireless may take advantage of new computers and phones that allow users to readily access full-motion video and graphics. Otherwise, end users will conveniently switch over to fixed wireless with no disruption to their office facilities.