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EX PARTE OR LATE FILED

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

VIA HAND DELIVERY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: **EX PARTE**
CC Docket No. 92-297

Dear Mr. Caton:

Late yesterday, Leonard J. Kennedy of Dow, Lohnes & Albertson, Joseph W. Waz, Jr., Vice President, External Affairs and Public Policy Counsel of Comcast Corporation, and Mark A. Coblitz, Vice President, Strategic Planning of Comcast Corporation, and I met, on behalf of Comcast Corporation, with James Coltharp, Special Counsel to Commissioner Quello, Suzanne Toller, Legal Advisor to Commissioner Chong, Gregory Rosston and Jackie Chorney, Legal Advisors to Chairman Hundt, and Susan Magnotti, Robert James, Jane Phillips, David Wye, Mark Bollinger, Elizabeth Lyle and Walter Strack of the Wireless Telecommunications Bureau to discuss cable operator eligibility to hold in-region LMDS licenses. The positions discussed were consistent with those taken in reply comments filed by Comcast Corporation on August 22, 1996 in this docket. The attached economic analysis regarding cable participation in LMDS also was distributed at the meeting.

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This letter is being filed in original with two duplicates pursuant to the Commission's rules. If you have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,

Laura H. Phillips CCB

Laura H. Phillips
Counsel for Comcast Corporation

LHP/car
cc: James Coltharp
Suzanne Toller
Jackie Chorney
Gregory Rosston
Walter Strack
Susan Magnotti
Robert James
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Cable Participation in LMDS

Steven S. Wildman
Northwestern University
and
Law & Economics Consulting Group

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I. Introduction

As a new communication technology with applications in voice telephony and broadband video and data services, LMDS has the potential for providing great economic benefits to American consumers and businesses. Because some firms will inevitably be better positioned to exploit this potential than others, the extent to which this potential is realized could be substantially affected by the Commission's decision on who can participate in the development of LMDS spectrum and under what conditions. The principal questions raised in this regard have concerned whether LECs and cable operators should be allowed to hold LMDS licenses in the Basic Trading Areas (BTAs) in which they currently offer service. Because the public interest at stake is potentially quite large, it is important that these questions be given a full airing. This paper addresses issues relevant to determining the terms and conditions under which cable operators should be allowed to participate in the development of the LMDS spectrum.

Three aspects of the new technology should be given careful consideration in designing the policies that will govern the commercial use of the spectrum that has been designated for LMDS.

- LMDS is a multipurpose technology that can be used for voice telephony, broadband data services, and multichannel video service.
- Sufficient spectrum (1000 MHz per BTA) has been set aside, and the technology is sufficiently flexible, that a single LMDS provider could offer all three types of services simultaneously.
- LMDS technology has not yet been fully tested or developed, so it is too early to make confident forecasts regarding just how it will be commercialized or who is best suited to develop it.

For the most part, the comments advocating that cable participation in LMDS be either banned or severely constrained have focused on traditional concerns with concentration and market power in the market for multichannel video programming served by cable operators and other multichannel video programming distributors (MVPDs). Unfortunately, important issues relating to the use of LMDS spectrum to provide two or more sets of services

simultaneously have been largely ignored. In addition, the implications of the fact that LMDS technology is new and untried have not been explored.

The potential for using LMDS spectrum to provide combinations of voice, video and data services simultaneously must be reflected in the Commission's determination of eligibility rules for cable because current trends in the marketing and packaging of communication services strongly suggest that the ability to offer consumers and businesses diverse packages of services is becoming an important component of competitive strategy.[1] Following an earlier period of optimism, many observers are now predicting that it will be some time before technological advances make feasible the cost effective adaptation of most cable plant to voice and data services. In this case, without access to other distribution technologies, such as LMDS, cable operators will be precluded from competing in the increasingly important market for multiservice communications packages. This means that the innovations and insights they might bring to the task will be lost. Furthermore, for the more sophisticated voice and data services in these packages, the ability to allow customers to connect with other customers using the same services anywhere within a geographic market is a critical component of the value added. Relying on their cable plant alone, cable MSOs will never be able to offer more than partial coverage of their BTAs and, for most, the uncovered portions of their BTAs are quite large due to cable's historically fractionalized franchising patterns. The ability of a provider to offer services ubiquitously throughout a BTA is an important source of competitive advantage that will be unavailable to cable operators unless they have access to alternative distribution technologies like LMDS to fill in the gaps in the coverage of their cable plant.

The fact that LMDS technology is new, with capabilities that the marketplace has only begun to explore, should also be reflected in the rules governing participation in LMDS. There is no reliable way to predict at this time which firms and which services will be able to make the most beneficial use of this spectrum. Furthermore, because each firm's valuation of the spectrum is based on its own private assessment of its capabilities, there is no practicable way other than competitive bidding to make these valuations known. Because it is impossible to determine in advance which uses of the LMDS spectrum might contribute the most to the public good, there is a strong possibility that the best uses of a technology will be lost if certain players are either denied the opportunity to develop it or are constrained in the way they develop it--

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[1] For example, MCI, a long distance provider, is partnering with News Corp. in a forthcoming DBS service, offers Internet access service, and has plans to offer local telephone service in major urban markets throughout the United States. Similarly, AT&T has purchased a minority ownership stake in DirecTv's DBS service, which it is promoting in conjunction with other AT&T services, including an aggressive effort to offer local telephone service. Through its purchase of McCaw, AT&T has become the largest provider of cellular telephone services in the United States. AT&T is also a major Internet access provider. Similarly, the Regional Bell Operating Companies and other local exchange carriers are heavily involved in mobile services, many are offering Internet Access Services; and almost all have invested heavily in multichannel video services, including MMDS, cable overbuilds, and video dialtone/open video system networks.

especially if they include firms that have proven themselves to be adept at commercializing new communication technologies.

The analyses of market power and concentration in the market for MVPD services that have been presented to the Commission by other government agencies and by some private parties are severely flawed and surprisingly thin on analytical and evidentiary support. Most significant are analytical errors due to failures to carefully examine the empirical and analytical bases for measuring concentration and assessing market power in the provision of MVPD services; and the use of generic economic approaches to analyzing competition that were not appropriately modified to reflect the nature of competition among MVPDs.

Those parties who recommend that cable operators not be allowed to bid for LMDS licenses in BTAs where they currently offer service advance a basic two-step argument. First, it is asserted that cable operators are dominant firms with market power in their franchise areas; so it is important that LMDS spectrum be kept out of incumbent cable operators' hands so it may serve as a vehicle for competitive entry. Second, taking the asserted market power of incumbent cable operators as a given, they claim that economic theory demonstrates that the opportunity to preserve supracompetitive profits gives cable operators an incentive to outbid potential video competitors interested in LMDS.[2] This argument is developed most fully in the reply comments of the Department of Justice[3] (hereafter DOJ) and the Staff of the Bureau of Economics at the Federal Trade Commission[4] (hereafter FTC), and in the reply comments of WebCel[5] and the attached paper by economist Kenneth Baseman[6] (hereafter Baseman). More abbreviated versions of this argument are also presented in a submission by the National Telecommunications and Information Administration[7] (hereafter NTIA) and in the joint reply comments of the State Attorneys General (hereafter Attorneys General).[8] DOJ, FTC, and WebCel/Baseman go a step further and offer a third argument: that the social cost of preventing cable operators from using the LMDS spectrum in BTAs where they offer cable service is effectively zero because no one has provided convincing evidence that cable companies' current operations give them

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[2] Similar arguments have been offered in opposition to in-market LECs participating in LMDS. This paper does not address and takes no position on LEC participation.

[3] Reply comments of the United States Department of Justice, August 22, 1996..

[4] Reply Comment of the Staff of the Bureau of Economics of the Federal Trade Commission, August 22, 1996.

[5] Comments of WebCel Communications, Inc., August 12, 1996.

[6] Kenneth C. Baseman, "The Economics of Bidding for Scarce Resources: The Lessons of Monopoly Preemptions as Applied to FCC Auctions of LMDS Licenses," August 12, 1996. Report attached to the Comments of WebCel Communications, Inc., August 12, 1996.

[7] August 23, 1996 letter from Larry Irving, Assistant Secretary of Communications and Information, United States Department of Commerce, writing as head of the National Telecommunications and Information Administration to Reed E. Hundt, Chairman, Federal Communications Commission.

[8] Reply comments of the Attorneys General of Connecticut, Delaware, Florida, Idaho, Illinois, Iowa, Massachusetts, Minnesota, Missouri, New York, Oklahoma, Pennsylvania, Rhode Island, Virginia, Washington, West Virginia and Wisconsin, August 22, 1996.

special advantages relative to other communications companies for exploiting the commercial potential of the LMDS spectrum.

This paper addresses in order each of these three arguments against allowing cable operators to bid for LMDS licenses in BTAs where they currently offer cable service. The policy implications of the newness of LMDS technology, its distinctive attributes, and the fact that it can be used to provide multiple services simultaneously are addressed as part of this analysis.

II. Assessing the Market Power of Cable Operators

A. The claims that cable operators have market power are not supported by current evidence.

This section examines the market for MVPD services and assesses the likelihood that cable systems currently benefit from market power in the relevant market and whether they are likely to have market power when LMDS operators begin to offer video services. Before presenting this analysis, however, it is important to note that the proponents of a ban on in-market cable operators' participation in LMDS are uniformly distinguished by a failure to consider recent competitive developments in the market for MVPD services. Current data reflecting substantial recent and ongoing entry and rapid growth by multichannel alternatives to cable has been ignored by those opposing cable participation. In fact, the FTC, the Attorneys General, and NTIA cite no evidentiary support for their claims. The market power of cable operators is simply asserted and taken as self-evident. The Department of Justice does a little better, citing a 1993 article by Robert Rubinovitz.[9] However, this article was published before most of the relevant entry into multichannel television service had occurred, and the data supporting Rubinovitz' empirical analysis is older still.

The most relevant recent evidence regarding cable's market power cited in any of the comments is the conclusion of the FCC's 1995 Cable Competition Report (hereafter Competition Report) that in most markets cable operators still possessed market power.[10] But this finding, although recent, still does not adequately reflect competitive developments during the past year, including the entry and announced entry of new DBS services over the past few months, the record setting rate of growth of subscriptions to these services, and the rapid expansion of other competitive alternatives, such as MMDS. Furthermore the analysis reported in the Competition Report in support of this conclusion is flawed in a number of ways. It relies too heavily on HHIs calculated with shares of revenue when HHIs based on shares of capacity are more appropriate for assessing market power in video services; the implications for competition analysis of the fact that DBS and MMDS competitors have the capacity to provide service to all viewers reached by their signals are not fully appreciated;

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[9] Robert N. Rubinovitz, "Market Power and Price Increases for Basic Cable Service Since Deregulation," RAND Journal of Economics, Spring 1993.

[10] Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 95-61, December 7, 1995, ¶ 194.

and various factors other than concentration that affect the ability of firms to collude on price and that traditionally are taken into account in a Merger Guidelines-type assessment of market power are completely overlooked.

B. Reassessing the market power of cable operators

To evaluate the degree of market power cable operators are likely to possess when LMDS services first become available, we begin by calculating the HHI for the local market served by a representative cable operator. As the Commission noted in the Competition Report, HHIs may be calculated in a number of ways. The 1992 revision of the Horizontal Merger Guidelines by the Department of Justice and Federal Trade Commission[11] (hereafter Guidelines) discusses HHIs calculated using firms' shares of market revenues, shares of units sold, and shares of production capacity. As the Guidelines make clear, different measures of share are appropriate in different situations. It matters what unit of measure is employed to determine market shares and calculate HHIs. The Competition Report considers HHIs calculated with shares of capacity and HHIs calculated with shares of subscribers without expressing a preference for one over the other, even though HHIs based on shares of subscribers are greater than those based on capacity shares by more than a factor of four. In calculating shares based on capacity, the Competition Report assumed multichannel video service in a market had roughly equal capacity, because each in effect has enough capacity to serve the entire market. I will refer to HHIs calculated using the equal capacity assumption as "comparable capacity HHIs" or "capacity-share HHIs."

According to the Guidelines, market shares should be calculated "using the best indicator of firms' future competitive significance."[12] The measure chosen should be the one that best reflects the ability of a firm to respond to a "small, but significant and nontransitory" increase in price by providing service to the current customers of the firm raising price. In addition, assets and capacity currently outside the industry or that might be created for entry in the near future are to be counted as if they already are in the industry for purposes of calculating HHIs if they are likely to be deployed within one year.[13]

Applying these principles to the market for MVPD services, it is clear that capacity is the appropriate unit for measuring shares and that the firms supplying many of the alternatives to cable should be credited with the capacity to serve the entire market of any incumbent cable operator. Most of the MVPD alternatives to cable are broadcast services employing either satellite (DBS) or terrestrial (MMDS) facilities. The broadcast nature of these services means that, once set up, they have the capability to immediately extend service to all households reached by their signals, which generally includes the geographic areas served by incumbent cable operators. (Because they are nation-wide, entire BTAs are covered by DBS signals.) Thus, capacity-based share

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[11] Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, April 2, 1992.
[12] Guidelines, Section 1.41.
[13] Guidelines, Section 1.32.

measures should be used to calculate MVPD market shares and HHIs. Furthermore, MVPD services that can reasonably be expected to start up in the near future should also be included in the HHI calculations. To assess the competitiveness of the market into which LMDS video services will be introduced, all new MVPDs likely to enter before the start of LMDS services--at the earliest probably four years from now[14]--should be included in the HHI calculation.

Cable's recent history as an industry in which single, locally franchised operators provided the only multichannel video distribution service available to most consumers virtually guarantees that the competitive impact of newer MVPDs will be dramatically understated by HHIs calculated from shares of revenue or shares of subscribers. In a market with numerous close and competitively priced substitutes, consumers have little reason to switch suppliers because their current service is as good an option as the next. Having started with close to one hundred percent of MVPD subscribers, cable systems can be expected to retain the bulk of the subscribers they had prior to competition for a considerable period of time, even if competition is intense, as long they respond to entry with attractive services and competitive prices. In this situation HHIs calculated from either shares of subscribers or shares of revenue will inevitably, and inappropriately, give the appearance of substantial market power for cable operators, regardless of how competitive the market actually is. In fact, with subscriber or revenue share-based HHIs, a market in which the incumbent rapidly loses share because it does not offer an attractive alternative to entrants' services will appear to be more competitive than a market in which the incumbent retains most of its customers by improving its service and lowering its price. Thus, use of revenue or subscriber-based HHIs to assess the need for restrictions on the activities of cable operators could have the perverse effect of encouraging cable companies to deliberately allow entrants to capture more of their subscribers than would happen if they responded competitively, just so that they can more rapidly shed burdensome regulatory restraints.

To assess the likelihood that cable operators will be able to exercise market power in the market for MVPD services by the time LMDS services become operational, we begin by calculating the appropriate, capacity-based HHIs for this market as if DBS services were the only alternatives to cable television. The fact that there are a number of other substitutes for cable of varying degrees of closeness means that we can take the HHI based on DBS options only as an upper bound on the true value of the HHI.

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[14] It is doubtful that the process of auctioning off LMDS licenses will be completed earlier than a year from now. With the need for continued development and experimentation with LMDS technology and in-process learning that will have to occur as the systems are built, it is doubtful that LMDS operators will begin selling video services to the public earlier than three years from the date the licenses are granted. The Commission formally recognized the need for further development of the technology when it proposed in the Third Notice of Proposed Rulemaking on LMDS that LMDS licensees be given five years from the granting of their licenses before they are required to provide service to a minimum of one-third of the population in their service areas. Third Notice of Proposed Rulemaking and Supplemental Tentative Decision, CC Docket No. 92-297, released July 28, 1995, ¶¶ 113-117.

Currently, in addition to incumbent cable operators, most U.S. households have access to the high-power DBS services offered by EchoStar, which began service in late Spring of this year, and the services jointly offered by the DirecTv/USSB partnership that pioneered high-power DBS service. A third high-powered DBS service, ASkyB, which is a partnership of MCI and Rupert Murdoch's News Corp., is scheduled to launch in the Fall of 1997 and has already begun marketing itself.[15] Consumers also have two mid-power DBS options, AlphaStar, which launched in July, and Primestar, an established service with over 1.3 million subscribers. Primestar is owned by a partnership of major cable MSOs, and therefore cannot be counted as a totally independent service in the local markets in which these MSOs have franchises.[16] Nevertheless for cable franchise areas not served by one of these MSOs, consumers will have at least five independently-owned alternatives to the local cable operator well before any LMDS operator begins offering service. With six separate comparable capacity competitors, the HHI would be 1673, which is below the Guidelines threshold of 1800 for identifying highly concentrated markets. If Primestar is excluded from the calculations, the five remaining comparable capacity options would produce a HHI of 2000. Primestar must still be considered a competitive influence, however, even in markets served by one of its MSO owners--especially those whose ownership shares barely exceed the Commission's 10% threshold for ownership attribution. When one firm in a market is a partial owner of another, the first firm still benefits to some degree from the competitive gains of the second as long as the second firm's gains come at least in part from other firms in the market. In addition, the independent owners of the second firm have a direct interest in whatever competitive gains the second firm realizes. Furthermore, as competition intensifies, incentives to compete should increasingly dominate incentives to cooperate because the proliferation of other competitive options means that eventually the partial owner will not be able to lessen the competitive pressures on itself by restraining the provider in which it has an ownership interest.

Primestar's response to increasing competition from independently owned DBS services is consistent with this prediction. Primestar was initially developed as a complement to cable service to be sold to households in rural areas too sparsely populated for cable to be profitable. However, since the emergence of other DBS services as highly competitive alternatives to cable, Primestar has been retargeted as a general purpose service competing vigorously with the other DBS services and cable operators for urban as well as rural subscribers. It has also experienced rapid growth with this strategy. In terms of marketing strategy and pricing, Primestar now appears to be similar to the other DBS services, and it is aggressively pursuing options for high-power satellite capacity that will keep it competitively well-positioned for the foreseeable future. Therefore, while there is no simple formula that would allow

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[15] A. Breznick, Lambert, P., and Mitchell, K., "Let the DBS Pricing, Marketing Wars Begin: As Christmas nears, DirecTv, EchoStar, Others Scramble for Customers," Cable World, August 12, 1996, pp. 25,26.

[16] Primestar's six owners share ownership in the following proportions: Time-Warner owns 31.2%; TCI owns 20.86%, Cox Cable, Comcast Cable and Continental Cablevision each own approximately 10.4%, and G.E. American Communications owns about 16%.

us to adjust for Primestar's MSO ownership; an appropriately adjusted HHI would be somewhere between 1673 and 2000. The fact that Primestar's pricing and marketing strategies now mirror those of other DBS services suggest that 1673 is probably the better approximation.

It has been argued that DBS services should be viewed as somewhat differentiated options rather than direct substitutes for cable service,[17] but this reflects a misunderstanding of the nature of the differences between DBS and cable services. The most important differences are: (1) DBS services are already digital, while most cable subscribers won't have access to digital services until the bulk of cable plant has been converted and new set-top equipment has been installed--a process that will take several years; and (2) Local broadcast signals, which are retransmitted by cable systems, are not carried by DBS. As is noted in the Competition Report,[18] because they are digital, the DBS services can, and do, offer a number of service options not available through cable. Not noted in the Competition Report, however, is the fact that virtually any set of video services offered by cable is also available through DBS. Thus the extras provided by the DBS services are best thought of as quality improvements on the set of services offered by cable companies, rather than sources of differentiation that make DBS less attractive as a direct substitute for cable. In addition, the common perception is that digital DBS pictures are sharper and clearer than their analogue cable counterparts--another quality improvement. The digital advantages of DBS may be offset to some degree by the ability of cable subscribers to use cable as an antenna service for local over-the-air broadcast channels. Most DBS subscribers currently receive over-the-air channels through standard rooftop or rabbit ear antennas and use an A/B switch to switch back and forth from local television signals to the satellite channels. While this does not appear to constitute a significant drawback, DBS services are working to develop technology for using satellite spot beams to deliver local broadcast stations to their subscribers. There is also nothing to bar DBS services from partnering with MMDS services, which retransmit local signals just as cable systems do, as an alternative means of delivering local TV stations' signals to DBS subscribers.[19] Finally, some DBS subscribers take the lowest level of basic cable service to pick up local broadcast channels and get everything else from a DBS service.

The fact that most viewers subscribing to a MVPD for the first time now choose one of the non-cable alternatives is persuasive evidence that, to viewers, other MVPD services look like good alternatives to cable. Unlike subscribers who are already signed up with a particular MVPD, consumers purchasing MVPD services for the first time have no reason other than their perceptions of the relative merits of the alternatives for choosing one MVPD over another. Thus, choices of new customers should present a fairly accurate gauge of the extent to which they view other MVPDs as viable options to cable.

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[17] Competition Report, ¶ 137.

[18] id.

[19] Peter Lambert, "DBS Players Pursing MMDS Distribution: Advantages on Both Sides Center on Encoding Cost Savings, Local Programs," Cable World, August 12, 1996, pp. 26, 37.

Here the evidence is unambiguous. The non-cable alternatives have accounted for most of the growth in subscriptions to MPVDs in the United States over the past year. This is reflected in the figures reported in Table 1, which is based on Paul Kagan Associates, Inc.'s estimates of basic subscriber counts for cable and alternative multichannel services for 1995 and their projections for each subsequent year through 2005. 60% of the gain in U.S. MVPD subscriptions from 1995 to 1996 is projected to come from alternative services, most notably the high- and medium-power DBS services. By 2005 fully 95% of the net gain in subscriptions is predicted to come from the alternative services and cable subscriber counts are actually expected to fall slightly from their level in 1996. Although not shown here, Kagan predicts a similar, though more dramatic, pattern of alternative services dominating the growth in subscriptions to premium services over this period.

Table 1

Basic Subscriber Growth for Cable and Alternative Video Services

year and change	1995	1996	change 95-96	2005	change 95-2005
cable basic subs (mil)	62.1	64.0	3%	63.3	2%
alt. services basic subs (mil)	6.4	9.3	45%	31.1	486%
total subs (mil)	68.5	73.3	7%	94.4	38%
alt. service share of total growth	--	--	60%	--	95%

Source: Marketing New Media, August 19, 1996, Paul Kagan Associates, Inc.

Kagan's predictions are in the same ballpark as other industry analysts. For example, Berge Ayvazian of the Yankee Group predicts that DBS will reach 12 million homes by the year 2000, in significant part by winning subscribers from cable.[20]

The HHI calculations described above assumed that the only competitive alternatives to cable were the high-power and medium power DBS services known as direct-to-home (DTH) services that consumers receive with small aperture satellite dishes attached to their dwellings. In actuality, consumers

[20] A. Bresnick, "Telephony, Data Game Plans: Despite skeptics, MSOs outline expansion plans; Speedvision goes online," Cable World, September 23, 1996, p. 22.

have a number of other options that further limit the possibility that cable companies might have market power. Among these options are the low power (C-band) satellite services, known as HSD (home satellite dish) services, that are received with large backyard satellite dishes. Subscribership to these services is still growing, although the rate of growth has slowed considerably since the emergence of the DTH options. In a substantial and growing number of markets, consumers also have MMDS as a terrestrial, multichannel broadcast service available on a subscription basis. MMDS subscriber counts have been growing rapidly, approximately doubling in the year and a half from the end of 1993 to June 1995.[21] As MMDS systems begin converting to digital in the near future and increase their capacity to over 100 channels of programming, they will begin offering the same diverse packages of channels currently available from the DBS services, plus local broadcast channels. LECs have begun putting substantial resources into MMDS systems as a vehicle for rapid entry into video entertainment services. An example is Bell Atlantic's agreement with MMDS operator CAI to operate Bell Atlantic MMDS systems that will reach 12 million line-of-sight homes in 13 markets. In similar moves into MMDS, BellSouth has plans to begin operating a digital MMDS service in New Orleans in 1997 and Pacific Telesis is acquiring MMDS companies that will give it line-of-sight access to nine million homes.[22]

LECs are also investing heavily in wire-based video facilities (hybrid fiber-coax cable overbuilds, video dialtone networks, and open video systems) that compete directly with incumbent cable operators. Ameritech has acquired cable franchises to compete directly with incumbent cable operators in 20 markets in the Ameritech region with a combined population of 1.2 million households.[23] SBC is offering cable service in Richardson, Texas[24] and BellSouth is operating a cable system in Chamblee, Georgia.[25] Both LEC systems compete with incumbent cable operators. BellSouth is also seeking cable franchises in ten additional markets, including Atlanta, Miami, Orlando, Memphis, Raleigh, and Charlotte.[26] Bell Atlantic launched a video dialtone system in January 1996 and currently is constructing an all-digital network it will operate as an open video system in Dover Township, New Jersey.[27] In

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[21] Competition Report, ¶ 69.

[22] Dana Cervenka, "MMDS Standing Tall on Digital Technology, RBOC $$," Communications Engineering and Design, July 1996, p. 58.

[23] In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 96-133, Comments of Ameritech, July 19, 1996, p. 3.

[24] In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 96-133, Comments of SBC Communications, July 19, 1996, pp. 3,4.

[25] In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 96-133, Comments of BellSouth, July 19, 1996, p. 2.

[26] A. Breznick, "BellSouth Widens Video Strategy," Cable World, July 29, 1996, p. 4.

[27] In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 96-133, Comments of Bell Atlantic, July 19, 1996, pp. 5,6.

addition, Pacific Telesis was recently awarded a cable tv franchise to serve the city of San Jose, California.[28]

Data limitations and differences among these other alternatives to cable preclude simply plugging them into the HHI formula. However, their cumulative effect would undoubtedly be to produce HHIs substantially below the values calculated above--especially if we project forward to what their effect will be in four years when the first LMDS video services will probably just be hitting the market.

Two other features of the market for MVPD services impose significant constraints on cable systems' market power . First, as noted in the Guidelines,[29] "coordination may be limited or impeded by firm heterogeneity," because heterogeneous firms are likely to have heterogeneous objectives, which makes it more difficult to agree on a common course of action that benefits all. MVPDs are extremely heterogeneous. Different MVPDs employ very different technologies (DBS, cable, and MMDS) to deliver their services. They employ different organizational strategies for coordinating marketing and service activities, with cable relying primarily on in-house personnel while DBS operators tend to work out deals with third parties (e.g., Radio Shack selling and installing DirecTv/USSB receivers) and equity partners (e.g., AT&T retail operations selling DirecTv subscriptions). Cable and the other MVPDs that employ terrestrial distribution technologies sell advertising time to local advertisers, an activity in which the satellite services can nott participate. In addition, while DBS must devise nationwide programming strategies, for terrestrial services like cable and MMDS, the local market is the competitive arena.

Second, production capacity for MVPDs is effectively infinitely expandable, and this creates a much greater incentive to lower price to take business from competitors than would be the case in markets for manufactured goods with similar comparable capacity-based HHIs. Consider, for example, a market for a manufactured product in which each of five firms has twenty percent of the market's production capacity and all firms are producing at 100% of capacity. Contrast this situation, in which a firm wishing to expand its sales would have to incur additional capacity costs, with the situation in a MVPD services market in which each firm in the market always has the capacity to serve all of every other firm's customers. Furthermore this capacity can be deployed instantly at no extra cost at the request of a customer. The incentive to lower price and expand output is obviously much greater in the MVPD situation than in the manufacturing example. Yet the capacity-based HHIs would be the same.

To summarize, this review of factors affecting competition in the market for MVPD services strongly suggests that cable companies do not have market power at present and that they almost certainly will not by the time LMDS

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[28] "San Jose City Council Awards Cable TV Franchise to PBVS," Telephone IP News, August 1, 1996, Information Access Company.
[29] Guidelines, ¶ 2.11.

systems have been authorized, constructed and deployed. By that time there will be at least four independently-owned DBS services that are highly competitive, close substitutes for cable, and a fifth DBS service owned by MSOs that, due to the competitive pressures it faces, is acting like a full-fledged competitor. The fact that each of these services has the capacity to provide service to all viewers in local markets creates a strong incentive to compete on price. In addition, there is already vigorous competition from LEC wire-based video services and MMDS operators in many markets, and these options are rapidly being extended throughout the country. The service choices made by new MVPD subscribers are persuasive evidence that consumers view DBS services as at least as attractive as cable television, if not more so, and these services are being vigorously promoted as competitive alternatives to cable and to each other. Over-the-air TV and video rentals also constrain cable prices and other MVPDs are proliferating and rapidly attracting subscribers. Finally, the extreme heterogeneity among MVPDs would make coordination difficult in any event.

III. Preemptive bidding claims are overly general and inconsistent with the facts of the market for MVPD services.

WebCel/Baseman, DOJ and the FTC all argue that the problem of cable market power is compounded by the incentive of dominant firms to perpetuate their dominance by preemptively outbidding potential competitors for resources required for entry. This argument is developed most fully in the reply comments of DOJ and the FTC, and especially in Baseman's attachment to WebCel's reply comments. In developing this argument, both Baseman and DOJ rely primarily on the analysis and conclusions presented in a 1983 article by Tracy Lewis,[30] although a number of precursors to the Lewis article are cited as well, most notably an influential article by Richard Gilbert and David Newberry.[31] The FTC also cites these authors in addition to more recent academic work on the topic, but the basic claims and argument are the same. Regardless of the theoretical soundness of this argument, its application to cable operators depends entirely on the claim that cable operators will have market power when LMDS services are deployed. This claim was shown to be tenuous at best in the previous section; but a review of the theoretical literature on preemption also shows that the claims of theoretical generality for the incentive of dominant firms to preempt entrants are considerably overstated.

WebCel/Baseman, DOJ, and the FTC all appeal to the compelling intuition that incumbents with supracompetitive profits to protect have more to gain by buying up the resources required for entry than do entrants who can only expect a competitive return on their investment following entry. Baseman claims the incentive for dominant firms to preempt potential competitors is established conclusively in the economics literature.[32] However, a careful

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[30] Tracy R. Lewis, "Preemption, Divestiture, and Forward Contracting in a Market Dominated by a Single Firm," American Economic Review, December 1983, pp. 1091-1101.

[31] Richard Gilbert and David Newberry, "Preemptive Patenting and the Persistence of Monopoly," American Economic Review, June 1982, pp. 512-26.

[32] Baseman, p. 3.

review of the preemption literature shows this claim to be unwarranted for two reasons. First, the economic models producing this result typically employ highly restrictive assumptions that differ considerably from the conditions characterizing competition among MVPDs. Second, more recent work by Riordan and Salant[33] has shown that, depending on the theoretical assumptions employed in modeling preemption, dominant firms may or may not have an incentive to always outbid their rivals. In fact, they show that there are situations in which dominant firms will always be outbid by their smaller rivals.

A close examination of the Lewis model relied on by Baseman and DOJ shows just how restrictive are the assumptions on which Lewis' preemption result rests. Of particular importance, Lewis' assumptions regarding the control of production capacity in a market are completely at odds with the reality of competition among multichannel video programming distributors. Lewis' results are driven by his assumptions that: (1) There is a single dominant firm that controls most of the production capacity in the market; (2) Existing fringe competitors cannot expand sales because their capacity is limited; (3) Fringe competitors can only expand sales by acquiring more capacity; and (4) The only way fringe firms can acquire the capacity needed to expand sales is by bidding it away from the dominant firm. In fact, the ability of the dominant firm to earn supracompetitive profits and keep competitors in a perpetual fringe status rests entirely on its control of the production capacity that fringe firms need to expand output and sales. Because DBS services and most other alternative MVPDs will have the capacity to serve all viewers in an entire cable franchise area, none of the assumptions regarding capacity constraints on which Lewis' preemption result depends are satisfied in the market for MVPD services. Furthermore, the recent and continuing entry of new MVPDs using technologies other than LMDS with financing from communications industry heavyweights like AT&T, MCI, News Corp., and the Bell Operating Companies, is completely at odds with the Lewis model assumption that the dominant firm controls all of the capacity required for entry into its industry.

Baseman goes beyond the standard preemption argument to suggest that the situation with LMDS poses an even greater threat that spectrum acquired by a dominant firm will be either warehoused or otherwise employed in less than optimally productive uses. This is, he says, because we are likely to have two firms (a LEC and a cable company) dominant in different markets bidding for the spectrum. Since each is a potential entrant into the other's market, Baseman argues that each would have an incentive to refrain from using LMDS spectrum to provide the other's primary service, as well as its own, for fear of inciting retaliatory entry.

While conceptually innovative, this argument just does not square with the facts of the competitive situations faced by cable companies and local exchange carriers. First, as with the standard preemption argument, the incentive to preempt still depends on the dubious claim that cable operators will have market power at the time LMDS services enter the market. Second, we

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[33] Michael Riordan and David Salant, "Preemptive Adoptions of an Emerging Technology," Journal of Industrial Economics, September 1994, pp. 247-262.

are already seeing extremely vigorous efforts by telephone companies to offer MVPD services, with both wireless (MMDS) and wireline (traditional Title VI cable and open video systems) delivery systems. So the threat of retaliatory entry into telephony by cable plainly is not having the effect of keeping telephone companies out of MVPD services. Third, while LECs and cable companies certainly view each other as potential, and some cases actual, competitors in each other's primary service markets, in each case they are just one among many and neither stands out as especially prominent among the current and future competitors that each will face. Baseman actually reinforces this point regarding cable entry into telephony when he observes that "there is evidence that the provision of telephone service via the cable companies' infrastructure is extremely unlikely, at least in the near term, due to many technical hurdles inherent today throughout their existing networks." At best, one might salvage this countervailing threat argument by claiming that cable has an incentive to acquire LMDS spectrum to establish a credible threat of retaliatory entry into telephone services. However, while telephone companies are making their presence felt as MVPDs, it is the DBS services that currently are providing the stiffest competition for cable subscribers, and these are not LEC ventures.[34] More than just the LECs would have to be driven out to substantially lessen competition in video entertainment services.

By the same token, the primary local service threats to LECs to date have been other telephone service providers, such as the interexchange carriers and competitive access providers (who now call themselves ALTS--alternative local telephone service providers). Furthermore, given the problems identified by Baseman in developing the technology for utilizing cable plant for telephony, combined with the fact that deployment will take some time once the technology is developed, just when cable companies will even have the capability to be significant players in local telephony is a matter of speculation.

IV. It is wrong to assume that the opportunity cost of keeping cable companies out of LMDS in their own service areas is low.

An argument that echoes through the comments of the Department of Justice, the FTC, and WebCel/Baseman is that there is little to be lost in forbidding cable operators to participate in LMDS in BTAs in which they have even a limited wireline presence. This is so, it is claimed, because "the record in this proceeding contains no specific evidence ... of efficiencies that are uniquely available to in-region cable companies".[35] Furthermore, the efficiency benefits that are identified, such as the possibility of using a potentially more efficient mix of technologies to deliver telecommunications services, or the chance for companies that have demonstrated their ability to successfully offer communications services to make use of their expertise and experience in

[34] In fact AT&T and MCI, are new entrants and direct competitors with incumbent LECs in local telephone services, are partners in two of the DBS services, DirecTv and ASkyB, respectively.
[35] DOJ, p. 12.

developing this new technology, are dismissed by proponents of a bar on cable companies as "nonspecific assertions."[36]

This argument is mistaken on a number of grounds. Perhaps most important is the fact that it ignores the nature of competition for the resources required to develop truly new technologies. New technologies often develop in ways that are completely unanticipated by their inventors. For example, the telephone was initially promoted as a medium for broadcasting entertainment programming. Its value as a medium for personal communication at a distance was discovered only after the initial attempts to commercialize the "more obvious" broadcast application failed.[37] Similarly, as is well-known, the Internet arose from technical innovations designed to serve national defense needs. Even today, the most promising uses for the PCS spectrum are waiting to be discovered in the marketplace. The flexibility given PCS licensees to explore a variety of uses for the PCS spectrum reflected, in part, lessons learned from the licensing of cellular spectrum--where licensing restrictions prevented the use of cellular spectrum to develop meaningful alternatives (and competition) to LEC telephone services. The claim that cable companies have not identified in the record efficiencies that could not also be realized by other prospective bidders for LMDS spectrum might be given some policy weight if LMDS were a fully developed technology that had been in sufficiently long and intensive commercial use that its various applications were fully understood by all market participants.[38] But this is not the case. LMDS is a new technology still under development that has yet to be used to offer commercial telecommunications services anywhere in the world, or even market-tested on a substantial scale. Therefore, no one will know how it can best be utilized until a substantial amount of marketplace trial and error experimentation has shown what works and what does not.

In a competitive economy, companies exploring the commercial possibilities of a new technology should be fully occupied just figuring out what potential it holds for them and how they can best exploit it. This is the current situation in the development of LMDS. To ask that cable companies develop their competitors' LMDS business plans as well as their own so regulators can weigh their relative merits is to establish an impossible burden of proof. The marketplace, through competitive bidding for rights to critical resources, is the only reliable mechanism for accomplishing such a comparison. This works because competitive bidding forces companies to reveal their valuations of the resource.

The complaint that cable companies have shown no cable-specific efficiencies is misguided. Rather, the Commission should ensure that cable companies, like their competitors, have access to the resources required to be

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[36] FTC, p. 9.

[37] For a history of early efforts to commercialize the telephone, see Marvin, C., When Old Technologies Were New: Thinking About Electric Communication in the Late Nineteenth Century, Oxford University Press, 1988.

[38] Even this watered-down version of the argument rests on the implausible assumption that it is possible to know all of the prospective applications of a technology.

full participants and vigorous competitors in the developing market in multiservice communications packages. Increasingly firms are competing for large commercial accounts, and for residential customers, by selling bundled packages of communication services.[39] The moves of long distance companies AT&T and MCI to offer consumers communications packages that include internet access, DBS services, and wireline and wireless options in local telephony, in addition to their strongly-branded, market-leading toll services is an example of the bundling of consumer services. Business service bundles are more likely to include combinations of voice, video, and fast data services provided via networks linking geographically dispersed buildings and offices. Another example of a multiservice business package would be communications services linking employees telecommuting from their homes with their corporate headquarters via voice, data, and fax connections. The sale and creation of service packages like these is greatly facilitated if a vendor has a ubiquitous presence throughout the geographic markets occupied by their prospective corporate clients. With incomplete coverage of their BTAs, cable companies who must rely exclusively on their wireline facilities will be at a significant competitive disadvantage to competitors, such as LECs and certain wireless providers, who will have a ubiquitous, facilities-based presence in their BTAs. Furthermore, as Baseman noted, progress toward development of the requisite multiservice capabilities for cable plant has proven to be much slower and hindered by much greater technological hurdles than was once anticipated.[40] So it is not clear that cable companies will be able to offer multiservice packages even within their cable franchise areas, if they aren't allowed to utilize other communication technologies, such as LMDS, to augment what can be done with their cable facilities. On the other hand, access to complementary technologies such as LMDS would enable them to be vital multiservice competitors throughout their BTAs.

Finally, it should be noted that the Competition Report recognized the possibility that cable companies may be precluded by their incomplete coverage of geographic trading areas from taking full advantage of the advertising opportunities presented by local television broadcasters and other regional media. These marketing economies of scale would be realizable if cable companies could utilize LMDS to fill in the holes in the geographic coverage of their cable plant. Marketing efficiencies such as these are both real and specific.

V. Summary and Conclusions.

A careful examination of the market for MVPD services has shown than this market already appears competitive and certainly will be so by the time LMDS services are being offered to the public. Thus any concerns that cable companies can or would utilize LMDS spectrum to promote anticompetitive

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[39] In their 1996 report, "Branding & Bundling Telecommunications Services: Telephony, Video & Internet Access," the telecommunications consulting firm MTA-EMCI identifies a number of strategic advantages to packaging and marketing telecommunications services in bundles.

[40] Baseman, p. 8.

ends are unfounded, including concerns that cable operators would preemptively acquire LMDS licenses to keep multichannel video competitors out of their markets. Furthermore, the economic models used to predict preemption rest on assumptions that are substantially at odds with the conditions under which MVPDs compete and provide service. On the otherhand, the possibility of harm to the efficient development of LMDS spectrum from limiting cable companies' rights to participate in that development has been shown to be real and potentially substantial. The public interest would not be served by preventing cable companies from participating fully in the development of this new technology by holding LMDS licenses and offering LMDS services in BTAs where they operate cable systems.