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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

August 12, 1996

Mr. William F. Caton, Acting Secretary
Federal Communications Commission
Room 222
1919 M Street NW
Washington DC 20554

Re: Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, CC Docket No. 92-297

Dear Mr. Caton:

On behalf of Sierra Digital Communications, Inc., I enclose the original and nine copies of "Comments of Sierra Digital Communications, Inc." in the above-captioned rulemaking.

Kindly date-stamp and return the enclosed extra copy of this cover letter.

If there are any questions about this filing, please call me directly at the number above.

Respectfully submitted,

Mitchell Lazarus

Mitchell Lazarus

Enclosure

cc (w/encl): Hal Tenney
Sierra Digital Communications, Inc.

No. of Copies rec'd 0+9

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554

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AUG 12 1996

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of

Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services

CC Docket No. 92-297

COMMENTS OF SIERRA DIGITAL COMMUNICATIONS, INC.

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August 12, 1996

TABLE OF CONTENTS

SUMMARY

I. PRESENT USE OF THE 31 GHz BAND IS IN THE PUBLIC INTEREST 2

II. THE LACK OF INTERFERENCE PROTECTION AT 31 GHz IS NO BASIS FOR REALLOCATION TO LMDS 6

III. THE PROPOSED ALLOCATION IS BOTH EXCESSIVE AND PREMATURE 9

A. LMDS Interests Have Not Justified a Present Need for 300 MHz at 31 GHz 9

B. The Commission Should Not Impose an Application Freeze at 31 GHz 11

IV. THE PROPOSED ALTERNATIVE TO 31 GHz IS IMPRACTICABLE 12

A. 23 GHz Cannot Accommodate 31 GHz Users 12

B. If the Commission Does Require 31 GHz Licensees to Relocate, LMDS Applicants Should Pay the Cost 13

CONCLUSION 14

SUMMARY

The Commission's proposal to designate the 31.0-31.3 GHz band for LMDS on a primary protected basis is based on mistaken factual assumptions and an incorrect legal analysis, and should be abandoned.

Contrary to implications in the Notice, applications in the 31 GHz band are diverse in function, geographically widespread, and growing rapidly. They provide efficient, cost-effective solutions to a range of real-world problems. Applications in use today include not only traffic light control and LAN interconnection, but also traffic video monitoring, interconnection of cellular and PCS cell sites, last-mile connection to fiber optic rings, PBX extension, remote medical imaging, and point-to-point video distribution. Traffic control operations alone are used by more than thirty state, county, and city governments spread over at least ten states.

The Commission appears to justify its proposal in part on the fact that 31 GHz users have no *legal* protection against interference from co-users, in that they lack primary status in the band and frequency coordination is not required. Many users consider the lack of frequency coordination to be an advantage, because it permits more rapid licensing. In any event, users are afforded very effective interference protection from the low transmitter power and narrow-beam antennas imposed by the technical regulations. The fact that users rely successfully on these to avoid interference problems, rather than on legally-imposed primary status or frequency coordination, hardly justifies reallocating the band to another service. The Commission must make its allocation decisions in the public interest, and that requires it to consider the interest of the present users of the band.

In view of recent technological and regulatory developments, LMDS may not need the 31 GHz band for a considerable period of time, if ever. Its initial applications, wireless cable and local exchange services, will be subject to intense competition from other technologies, including recently-authorized digital ITFS/MMDS wireless cable and CMRS fixed local-loop services. Other proposed applications, such as two-way video, teleconferencing, and telemedicine, are still too conjectural to justify extinguishing the present 31 GHz applications. For the same reasons, an application freeze at 31 GHz would unfairly deny present users the full use of their investment without serving any useful purpose.

The Commission's suggestion that 31 GHz users move to 23 GHz is impractical for a range of technical and financial reasons. Not only does it overlook the congestion in that band and the major expense of relocation, but it fails to acknowledge that the smaller antenna size at 31 GHz is critical to some applications.

Finally, Sierra has begun preliminary discussions with LMDS interests, and hopes to be able to report a successfully negotiated sharing arrangement before the Commission must act on the Notice.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554

In the Matter of	)	
	)	
Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services	)	CC Docket No. 92-297

COMMENTS OF SIERRA DIGITAL COMMUNICATIONS, INC.

Sierra Digital Communications, Inc. ("Sierra") files these Comments in response to the First Report and Order and Fourth Notice of Proposed Rulemaking ("Notice") in the above-captioned proceeding.

Sierra is the primary innovator and leading U.S. supplier of fixed service point-to-point microwave radio links operating at 31.0-31.3 GHz. Its products cover a broad line of 31 GHz radio links including traffic network radios, single and multiple T1 links, studio quality RS250C video radios, surveillance video radios, and full 10 Mb/s Ethernet and Ethernet + T1 radios.[1] Sierra's business would suffer severely adverse consequences from adoption of the Commission's proposal to redesignate 31.0-31.3 GHz for use by LMDS providers on a primary protected basis.

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[1] Sierra's product line is described more fully at its web site: www.sierra-digital.com/sdci.

I. PRESENT USE OF THE 31 GHz BAND IS IN THE PUBLIC INTEREST.

The Commission rests its proposal to designate the band for LMDS in part on its assertion that "existing use of the 31 GHz band is relatively light and is concentrated in only a few areas of the country."[2] But it seems likely that the Commission has underestimated current use of the band. The *ex parte* comments on which the Commission relies in part for its assessment were both filed by LMDS interests with little incentive to find heavy use of the band.[3] The Commission's other cited source is its own databases, but even these appear to be incomplete. The Commission staff provided Sierra with a copy of the 31 GHz database on which it apparently relied in preparing the Notice, and Sierra has identified licensees that are missing from the database.[4] Sierra has no way to determine how many other licensees were overlooked, but is confident that the Commission's count of 27 licensees is low.[5]

More important, the rate of growth in the band is prodigious. Sierra, which accounts for majority of the 31 GHz transmitters in use, is shipping 75% more equipment in 1996 than it did in 1995, and it expects to ship four times more equipment in 1997 than in 1996.[6]

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[2] Notice at ¶ 99.

[3] Notice at ¶ 99.

[4] For example, stations WNTZ-734 and WNTZ-735 appear in the files of the Commission's contractor, Interactive Systems Incorporated, as licensed to Budget Rent-A-Car of Arizona. But these stations are absent from the listings the Commission provided to Sierra.

[5] Notice at Part IV.

[6] This is a conservative estimate based on Sierra's existing business with governmental entities and master contract relationships with its common carrier customers. But it does not take into account the chilling effect of the Notice, which has already begun to take a toll on Sierra's sales.

In addition, the market for private network equipment continues to double steadily about every two years. Even if the Commission were correct in characterizing present use of the band as "relatively light," the present rate of growth -- accelerated by a steep increase of the rate of growth -- would soon leave that description behind.

The Commission also underrates the importance and diversity of the applications served by the 31 GHz band. These include:

- ***Traffic Signal Interconnection***: Governmental entities use 31 GHz equipment to interconnect and coordinate traffic lights, improving traffic flow by putting green lights where they do the most good. Such systems not only speed motorists on their way, but reduce the pollution caused by vehicles idling at stoplights. And, by making better use of the existing pavement, they can often postpone or eliminate the financial and environmental costs of new roadway construction.

- ***Traffic Monitoring***: The California Department of Transportation and California Highway Patrol, and parallel agencies in other states, monitor traffic congestion and possible accidents at key locations along state and federal highways, using 31 GHz equipment to relay video from the monitoring cameras to a fiber backbone or central monitoring station.

- ***Interconnecting Cellular and PCS Cell Sites***: 31 GHz T1 and multiple T1 radios move mobile telephone signals between cell sites and ultimately back to the switch. For example, Pacific Bell Mobile Services uses Sierra 4T1 31 GHz radios in its California and Nevada PCS system infrastructure. The popularity of this application is likely to increase with the nationwide deployment of PCS.

- ***Last Mile Drop-Off for Fiber Optic Rings***: 31 GHz T1 and Ethernet links are being used to connect customers to fiber optic networks where the customer's location is not close enough to the cable for direct attachment. In addition to private users, at least one Competitive Access Provider, GST Telecommunications, employs this application, and others are likely to do so in response to the Commission's recent actions to promote local exchange competition.

- ***PBX Range Extension***: Where it is not feasible or cost-effective to extend PBX coverage to additional buildings with copper or

fiber, 31 GHz T1 radios are used to interconnect buildings without the need for trenching or suspended cabling.

- ***Remote Medical Imaging***: Studio quality 31 GHz RS250C video radios are used in several medical center installations to transmit full motion images from operating rooms or intensive care units to other locations in the complex or to doctors' offices in remotely located buildings.

- ***Television Programming Distribution***: Video program providers use point-to-point 31 GHz video radios to move program material among studio and other facilities and to transmitter sites.

- ***Extending Coverage of LAN and WAN Networks***: 10 Mb/s 31 GHz Ethernet radios are used to move full speed Ethernet data among buildings in industrial campus environments, multi-unit hospitals, and primary, secondary, and advanced education facilities, across streets, over rivers, and past other obstructions that make cabling impracticable. For example, the Engineering Department of the City of Roseville, California uses a 31 GHz radio link to move Ethernet data from its downtown headquarters across a large railroad yard to its remote engineering building.

These applications are not conjectural or speculative.[7] Each is in use today. Each is an efficient, cost-effective solution to a real-world problem, and each is in direct furtherance of the public interest.

Far from being concentrated in only a few areas of the country,[8] 31 GHz traffic control systems are used by more than thirty state, county, and city governments spread over at least ten states.[9] Contrary to the Commission's impression,[10] these include a number of

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[7] The Notice acknowledges only the first and last of these applications. Notice at ¶ 99.

[8] Notice at ¶ 99.

[9] Because Sierra sells its radios primarily through value-added resellers, it does not know the identities of all end users or the precise nature of their applications.

[10] Notice at Part IV (stating that a majority of 31.0-31.3 GHz licensees are small entities).

large cities and counties, as well as the state departments of transportation in California, Wisconsin, and Washington State.

Non-governmental users of 31 GHz equipment are similarly dispersed. They include such entities as Pacific Bell Mobile Services, Chevron, Arco, GST Telecommunications, and a variety of small companies that provide an assortment of wireless voice, video, and data communication solutions for private and common carrier applications.

The need for short-range point-to-point microwave services has increased in recent years. Although the ongoing deployment of fiber optic cable may have reduced the need for long microwave hops, it is often impractical to route a fiber cable to every building it serves, so users require some means of connecting their facilities to the cable. Coaxial cable is sometimes used for this purpose in locations where trenching is feasible, but in many cases a wireless solution is less expensive and environmentally preferable, and often it is the only solution possible. The 31 GHz band is ideally suited to these applications. Thus, even as fiber makes some microwave applications obsolete, it is increasing the need and the market for the short-range hops that 31 GHz can provide economically and on short notice.

When the Commission originally allocated the 31 GHz band, it explained it was "trying to find spectrum for those who do not fall within the traditional service categories, but yet have unfulfilled communications requirements."[11] Sierra took up the Commission's challenge, and today its products fill a socially useful niche by meeting just the need the Commission identified. The proposal to reallocate 31 GHz to LMDS on a primary protected basis is a direct threat to the state and local governments that are relying on the current

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[11] Fixed and Mobile Services, 57 R.R.2d 1162, 1164 (1985) (Second Report and Order).

allocation to provide vital services, and to the common carriers and private users that benefit from the inexpensive and efficient services currently available using 31 GHz technology.

II. THE LACK OF INTERFERENCE PROTECTION AT 31 GHz IS NO BASIS FOR REALLOCATION TO LMDS.

The Commission explains its reallocation proposal in part by noting that 31 GHz licensees are not afforded interference protection from other licensed operations.[12] The Commission goes on:

> This means that a licensee choosing to place its operations in this band is not entitled to protection from interference by any other licensee regardless of whether the interfering licensee was authorized prior or subsequent to the licensee receiving interference. Thus, we believe that any operations that an entity believes are critical in nature and should otherwise warrant interference protection should be operated in a frequency band where such necessary protection is provided for in our rules.[13]

This statement overlooks the manner in which stations licensed in the 31 GHz band currently operate, and particularly how they receive interference protection under the technical regulations. The Commission proposes to force existing licensees to operate under a far more burdensome regulatory regime than they do currently. Such a move would be directly contrary to the clear deregulatory thrust of both Commission and Congressional philosophy.

While 31 GHz users may have no *legal* protection against interfering co-users in the form of primary status or frequency coordination, they are nonetheless afforded effective protection against interference in the technical rules. Transmitter power levels in this band

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[12] Notice at ¶ 102.

[13] Notice at ¶ 102 (citation footnote omitted)

are limited to 0.05 watts, and antennas have a minimum gain of 38 dB, which in practice provides a half-power beamwidth only 2.4 degrees wide.[14] These requirements provide a high degree of immunity from other licensed operators. The area over which a transmitter casts an interfering signal is small, and the high directionality of receiving antennas rejects all interfering sources except those aligned with the corresponding transmitter. The Commission itself, in making the original 31 GHz allocation, noted that the combination of high free space and atmospheric attenuation, low transmitter power and high antenna gain, plus the expected geographic diversity of use, would limit the potential for harmful interference.[15]

Many 31 GHz users regard the lack of frequency coordination in the band as an asset, not a liability, because it speeds the licensing process and so permits greater agility in deploying equipment to meet changing circumstances.[16] This flexibility is not fortuitous, but was part of the Commission's goals for the band. The original proposal for 31 GHz was based on comments that pointed out "a need for a spectrum allocation having greatly reduced licensing and coordination requirements."[17]

Existing users chose the 31 GHz band, rather than some other frequency, because its propagation characteristics, antenna size, equipment availability, and regulatory environment matched their particular requirements. Those users committed their resources with the

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[14] 47 C.F.R. § 101.113(a), 101.115. Although the rules allow a 4.0 degree beamwidth at 3 dB, the front-to-back gain requirement effectively limits the beamwidth to 2.4 degrees.

[15] Fixed and Mobile Services, 57 R.R.2d 1162, 1164 (1985) (Second Report and Order).

[16] The frequency coordination process in other microwave services typically adds more than a month to the application process, in addition to increasing the monetary costs. *See* 47 C.F.R. § 101.103(d)(2)(iv) (30-day notification period ordinarily required).

[17] Fixed and Mobile Services, 57 R.R.2d at 1163.

knowledge and expectation that other point-to-point licensees would enter the band using the same low-power transmitters and narrow-beam antennas, and with full confidence that the licensees could work out any interference problems among themselves. But the prospect of LMDS multipoint hub transmitters, and widespread subscriber-to-hub transmitters, was not -- and could not have been -- part of their calculation. Neither the present users' lack of primary status in the band, nor the lack of any provision for frequency coordination, constituted meaningful notice that they might some day have to contend with LMDS.

While 31 GHz licensees have no property rights in the spectrum they use,[18] the Commission cannot justify the reallocation of those users to another band on the ground that they have no legal protection against interference. Rather, the Communications Act requires the Commission to make its allocation decisions in the public interest.[19] And that requires the Commission to consider the interest of the present users of the band. The fact that licensees rely on technical rules for interference protection, rather than on legal requirements, is irrelevant to that assessment.[20]

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[18] 47 U.S.C. § 304.

[19] 47 U.S.C. § 303(c).

[20] H&B Communications Corp. v. FCC, 420 F.2d 638, 642 D.C. Cir. 1969) (Commission required to weigh benefit from unprotected transmitters in determining public interest).

III. THE PROPOSED ALLOCATION IS BOTH EXCESSIVE AND PREMATURE.

A. LMDS Interests Have Not Justified a Present Need for 300 MHz at 31 GHz.

This proceeding has a history of contention between LMDS and satellite interests for primary status at 28 GHz. From the beginning, the Commission and the parties hoped to arrive at a sharing arrangement across the band, but the parties eventually concluded that only a very limited sharing arrangement is technically feasible: between LMDS hub-to-subscriber links and feeder links for non-geostationary mobile systems.[21] As a result of this failure to agree, neither group could have as much spectrum as it wanted. The Commission went casting for more, and on its own motion proposed to give LMDS the frequencies used by Sierra's customers at 31.0-31.3 GHz -- a band whose suitability LMDS interests had previously questioned on technical grounds.[22]

Missing, however, is a justification for LMDS's needing more spectrum than the full 1,000 megahertz already allotted to it on a primary or co-primary basis -- 850 megahertz on a primary basis at 27.5-28.35 GHz, and another 150 megahertz co-primary at 29.1-29.25 GHz.[23] That is a lot of spectrum for LMDS's proposed applications -- wireless cable and local exchange service[24] -- both of which will be subject to intense competition from

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[21] Notice at ¶ 10.

[22] Notice at ¶ 100.

[23] Notice at ¶ 42.

[24] Notice at ¶ 14. By comparison, just the primary LMDS allocation is more than six times the total allocation for all of broadband PCS. Personal Communications Services, 9 FCC Rcd 4957, 4970 (1994), and twice the total allocation for all AM and FM radio and VHF and UHF television combined.

emerging technologies that were not a factor when this proceeding began. LMDS wireless cable must compete not only with traditional cable, traditional home satellite dishes, and rapidly-expanding direct broadcast satellite, but with recently-authorized digital operations for ITFS/MMDS services, which immediately increases the available video channels in those services from 33 to at least 130, and possibly far more, depending on the technology used.[25] And in providing local exchange service, LMDS will have to compete not only with the installed copper local loop, but also with Commercial Mobile Radio Service providers, which the Commission recently authorized to offer wireless local loop services.[26] The other proposed LMDS applications -- two-way video, teleconferencing, telemedicine, telecommuting, data services, global networks, broadband video-on-demand, and distance learning[27] -- may hold some promise for the future, but wide-scale markets for these services are still too conjectural to warrant shutting down the applications that presently flourish at 31 GHz.

Even if the demand for LMDS services may some day overtax the full gigahertz already allocated, that day is well into the future. The Commission may, and should, leave the 31 GHz allocation unchanged for now, inasmuch as it always has the option of revisiting the issue later if developments so warrant. In the meantime, Sierra applauds the

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[25] Declaratory Ruling on the Use of Digital Modulation, FCC 96-304 (released July 10, 1996).

[26] Flexible Service Offerings in the Commercial Mobile Radio Services, WT Docket No. 96-6, First Report and Order and Further Notice of Proposed Rule Making, FCC 96-283 (released Aug. 1, 1996).

[27] Notice at ¶ 15.

Commission's continuing efforts to acquire access to 25.25-27.0 and 27.0-27.5 GHz,[28] and urges it to explore other nearby bands as well

B. The Commission Should Not Impose an Application Freeze at 31 GHz.

The Commission says,

> In light of the proposed "secondary" nature of the non-LMDS fixed services in this band, we believe it is also appropriate to seek comment on whether we should accept any new applications, modifications, or renewal applications in the 31 GHz band.[29]

The proposed application freeze would serve no useful purpose and would do affirmative harm. Presumably its goal is to protect would-be applicants from investing in equipment that may later become subject to interference from LMDS. But members of the 31 GHz user community are sophisticated in communications technology and FCC regulation. They do not need the Government to guide their investment decisions. They are fully aware of the present Notice and its implications. Indeed, the mere release of the Notice has all but imposed a *de facto* freeze on 31 GHz equipment orders

Users at 31 GHz should be permitted to continue employing their equipment as they see fit until the Commission makes its decision on the future of the band. Even if the Commission ultimately designates the band for LMDS, the present users should still have access to it until their applications become unworkable due to LMDS operations. There is no sound reason to deny users the right in the meantime to squeeze what remaining value they can from their investments by renewing their licenses, or modifying or expanding their

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[28] Notice at ¶ 39.

[29] Notice at ¶ 104.

systems -- or even constructing new systems, all subject to the risk of interference from LMDS.

IV. THE PROPOSED ALTERNATIVE TO 31 GHz IS IMPRACTICABLE.

A. 23 GHz Cannot Accommodate 31 GHz Users.

The Commission proposes inviting 31 GHz systems to move to 23 GHz.[30] Sierra also manufactures equipment for 23 GHz.[31] Based on its first-hand experience in that band, Sierra believes it would not be a workable substitute for 31 GHz. *First*, the 23 GHz band is heavily congested, particularly in areas with high population densities. But it is in just those areas that the primary 31 GHz applications -- such as traffic signal coordination, PBX extension, and LAN connections -- are most needed. Available capacity at 23 GHz cannot accommodate the very rapid growth in demand for these services. *Second*, frequency coordination is required at 23 GHz.[32] As noted above, this adds both delay and expense to the application process. *Third*, equipment at 23 GHz is more expensive than at 31 GHz to achieve the same ends, thus imposing an unnecessary financial burden on users. The cost of modifying existing 31 GHz radios to operate at 23 GHz would be about the same as replacing them outright with 23 GHz equipment -- between $5,000 and $15,000 per terminal, depending on the radio type and manufacturer, which is significantly more than the original cost of the

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[30] Notice at ¶ 102.

[31] These products are a relatively small part of Sierra's business because most U.S customers prefer the flexibility and small size of 31 GHz equipment. Sierra's 23 GHz products are used primarily for hops that exceed about 2 miles and for applications overseas.

[32] 47 C.F.R. § 101.103.

31 GHz equipment. Modification would also take the link out of service for a significant period.

Equally important, 23 GHz equipment must be larger than 31 GHz. The antenna for a 31 GHz unit used for traffic light coordination, for example, fits neatly inside a standard traffic light housing. These units can be installed in one hour, bolted in place, plugged in, and aimed. But a 23 GHz antenna with a small enough beamwidth for efficient frequency re-use is too big for the housing. Thus, a shift to 23 GHz would entail not only changing out the transmitters and antennas, but also devising, fabricating, and installing a new casing that is weatherproof and environmentally acceptable, and can be safely mounted on the traffic light. This is a large burden to impose on the tax-supported municipalities and other governmental entities that use these systems.

In short, eliminating the 31 GHz band for fixed service point-to-point radio use would remove the most cost-effective solution to the needs of many private network operators and common carriers. The Sierra 31 GHz radios use very mature technology, are relatively inexpensive, and draw little power. Those advantages, in combination with the lack of need for frequency coordination, have provided affordable wireless solutions to customer needs that cannot be replicated at 23 GHz.

B. If the Commission Does Require 31 GHz Licensees to Relocate, LMDS Applicants Should Pay the Cost.

The Commission asks,

> Given that [31 GHz] incumbents are only authorized to operate on a non-interference basis, should they be entitled to any recovery for reasonable relocation costs? If so, should any of the 28 GHz band

applicants be required to contribute to the recovery of such reasonable costs?[33]

The fact that 31 GHz users operate on a non-interference basis is irrelevant to the equities of subjecting them to the expense of relocation. The Commission cannot mean that a lack of primary status and frequency coordination has put 31 GHz users on notice that they must replace 31 GHz transmitters and antennas with all-new equipment, undergo wholesale frequency coordination, and apply for new licenses across the board. Sierra estimates the cost of such a migration at about $10 million overall, above and beyond the $20-30 million that users have already invested in their network systems.[34] The 28 GHz applicants would be the sole beneficiaries of these unanticipated expenses, and so they should bear the cost, just as the Commission required PCS providers to pay the relocation costs of incumbent 2 GHz microwave users.[35]

CONCLUSION

For the reasons given above, the Commission should leave the 31 GHz band to its present users. Their applications are diverse in function, geographically widespread, expanding rapidly, and in the public interest. Indeed, they closely match the expectations expressed by the Commission when it initially allocated the band. While it may be true that users have no legal protection against interference from co-users, they do have very effective

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[33] Notice at ¶ 102.

[34] These are only the costs of successful migrations. They do not include the costs to users that cannot successfully coordinate suitable frequencies, whose service provider refuses to convert, or whose applications cannot accommodate the larger antennas required for 23 GHz.

[35] New Communications Technologies, 7 FCC Rcd 6886, 6890-91 (1992).

protection in the low power and narrow-beam antennas imposed by the technical regulations. The fact that users rely successfully on these to avoid interference problems, rather than on primary status or frequency coordination, is irrelevant to the equities of making them secondary to a service that threatens massive interference. In any event, LMDS may not actually need the 31 GHz band for a considerable period of time, if ever, so that designating the band for LMDS now would be premature at best. *A fortiori*, a licensing freeze at 31 GHz would serve no useful purpose, and would unfairly disadvantage present users. Finally, the Commission's suggestion that 31 GHz users move to 23 GHz is impractical for a range of technical and financial reasons, and in addition overlooks the problems of congestion in that band.

The Commission says, "[W]e encourage cooperation among the LMDS providers and existing licensees in exploring any methods which would allow the services to coexist. . . ."[36] Although the Notice provides no incentive for the LMDS interests to negotiate, Sierra is nonetheless attempting to respond to this opportunity, and has already conducted preliminary discussions with Cellularvision, Texas Instruments, Hewlett-Packard, and Endgate. These initial contacts have been encouraging, and Sierra believes there is a reasonable chance that the parties can reach a mutually acceptable plan to share the 31 GHz band. Accordingly, Sierra will continue to pursue these negotiations. It should take only a short time to determine if they can bear fruit, and Sierra hopes to complete discussions before

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[36] Notice at ¶ 104.

the Commission must act on the Notice. It will keep the Commission informed of progress through *ex parte* communications, and will serve those communications on its negotiating partners.

Respectfully submitted,

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August 12, 1996

CERTIFICATE OF SERVICE

I, Mitchell Lazarus, do hereby certify that on this 12th day of August, 1996, I have caused copies of the foregoing Comments of Sierra Digital Communications, Inc. to be served by hand upon the following:

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