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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Amendment of Parts 74, 78, and 101)
of the Commission's Rules to) ET Docket No. 96-35
Adopt More Flexible Standards for)
Directional Microwave Antennas)

To: The Commission

DOCKET FILE COPY ORIGINAL

REPLY COMMENTS

In the above-captioned Notice of Proposed Rule Making ("NPRM"), the Commission proposes modifying its fixed point-to-point microwave service rules.¹ Pursuant to Section 1.415 of the Commission's Rules,² the Fixed Point-to-Point Communications Section, Network Equipment Division of the Telecommunications Industry Association ("TIA"),³ hereby replies to comments on the NPRM.

Under its current rules, the Commission limits the beamwidth of fixed point-to-point links in a given area. To accommodate these new antenna designs, the Commission, in the NPRM, proposes

¹NPRM at para. 1.

²47 C.F.R. Section 1.415 (1996).

³TIA is the principal industry association representing fixed point-to-point microwave radio manufacturers. TIA members serve, among others, companies, including telephone carriers, utilities, railroads, state and local governments, and cellular carriers, licensed by the Commission to use private and common carrier bands for provision of important and essential telecommunications services.

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amending its rules to "allow directional antennas to comply with requirements for either minimum antenna gain or maximum beamwidth."⁴

SIDELOBE SUPPRESSION

In its comments, the TIA generally supported the Commission's proposed rules as appropriate to accommodate emerging technologies, but it strongly urged the Commission to maintain sidelobe suppression specifications at their current level to ensure that manufacturers and existing users would not be required to change their operations.⁵ The record supports adoption of TIA's proposal.

ANTENNA SPECIFIC INFORMATION

In the NPRM, the Commission proposes a requirement that frequency coordinators treat every antenna as if its radiation mask were identical to a "conventional" parabolic dish antenna.⁶ The National Spectrum Managers Association ("NSMA"), in its comments on the NPRM, opposed this Commission proposal to use a "default" antenna pattern.⁷ It urged the Commission not to deviate from its current rules, which require that applicants always provide proper reference to actual radiation pattern information on PCNs and applications.⁸

Alcatel agreed with NSMA:

It is essential that frequency coordinators have actual antenna radiation mask data available to ensure accuracy in interference computations and to maximize spectral efficiency. If PCNs specify a "default" antenna pattern(s) based on the antenna

⁴NPRM at para. 6.

⁵TIA at 2. See also Alcatel Network Systems, Inc. ("Alcatel") comments at 2-3.

⁶NPRM at para. 8.

⁷NSMA at 5.

⁸NSMA at 4-6.

performance standards set forth in the Commission's rules, as proposed in the NPRM, less accurate computations and inefficient use of scarce spectrum would result.⁹

TIA supports NSMA and Alcatel. It is absolutely critical that accurate, system-specific antenna data be provided to permit appropriate interference evaluations and related system management.

SPECIFICATIONS FOR 10 GHz BAND ANTENNAS

Under the current antenna standards for the 10 GHz band, 2 foot Category A and Category B antennas are permitted, but they must have a minimum 3 dB beamwidth of 3.4 degrees and a minimum antenna gain of 34 dB. However, under the new Part 101 antenna standards, which take effect on June 1, 1997, 2 foot antennas no longer will be permitted. The minimum antenna size that can meet the new standard will be 4 feet.

In its comments, Alcatel proposed different standards for 10 GHz band antennas to accommodate emerging wireless technologies:

Many PCS providers have plans to use the 10 GHz band for cell site interconnects in urban areas. They want to use small antennas to reduce the physical loading on the antenna structure and to minimize the visual appearance of the antennas. The path lengths are short (typically less than 3 miles) and the higher antenna gain of a 4 foot antenna is not required to meet path reliability requirements.

* * * * *

To accommodate these PCS user needs, [Alcatel] recommends different standards for 10 GHz band antennas. Under [Alcatel's] proposed standard for the 10 GHz band, 2 foot antennas would be permitted under Category B and 2.5 foot antennas would be permitted under Category A. One antenna manufacturer currently makes a 2.5 foot antenna that meets the proposed Category A standard. The proposed standard would encourage other manufacturers to design similar antennas.

* * * * *

⁹Alcatel at 3.

Furthermore, [Alcatel's] proposed antenna standard also would be an incentive to use the 10 GHz band, instead of the 11 GHz, for low capacity systems. Under the new Part 101 regulations, microwave operators will be able to start operating immediately after filing for a license in the 11 GHz band, but not in the 10 GHz band. As a result, microwave operators, which want to start operating as quickly as possible, will tend to prefer the 11 GHz band. However, the 11 GHz band is primarily used for high capacity microwave systems carrying 1, 2, or 3 DS3s of traffic, which should not normally be used for low capacity systems. [Alcatel's] proposed antenna standards for the 10 GHz band would make it more attractive for low capacity systems, like PCS cell interconnects.¹⁰

TIA supports adoption of Alcatel's proposal. It will provide PCS and other wireless technology licensees with needed flexibility to design their systems.

CONCLUSION

TIA appreciates the Commission's ongoing efforts to ensure that its rules keep pace with emerging technologies. It generally supports adoption of the rules proposed in the NPRM.

Nevertheless, TIA herein requests that the Commission: (i) adopt its proposal to maintain existing sidelobe suppression criteria; (ii) adopt NSMA's proposal that all PCNs and applications must include antenna-specific, instead of default, technical information; and (iii) adopt Alcatel's proposed

¹⁰Alcatel at 4 (footnote omitted).

specifications for 10 GHz antennas so they conform with PCS user needs. Implementation of these proposals would ensure that the new directional antenna rules, in fact, serve the public interest.

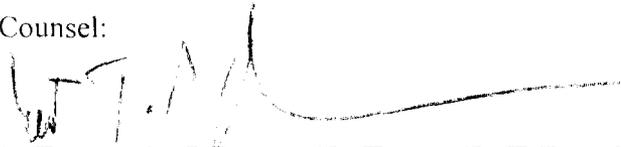
Respectfully submitted.

FIXED POINT-TO-POINT COMMUNICATIONS
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May 10, 1996

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CERTIFICATE OF SERVICE

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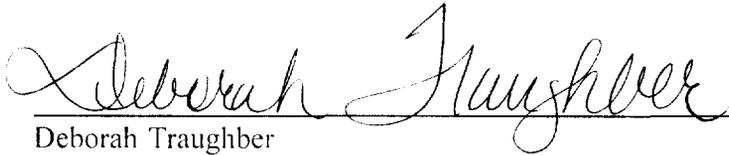
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