

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the matter of)
)
Request for Declaratory Ruling to Remove the)
Minimum Sub-carrier Requirement for) MM Docket No. 01-145
Orthogonal Frequency Division Multiplexing)
Modulation in Multipoint Distribution and)
Instructional Television Fixed Services)

**COMMENTS OF
WIRELESS COMMUNICATIONS ASSOCIATION INTERNATIONAL**

The Wireless Communications Association International, Inc. (“WCA”), by its attorneys, hereby responds to the Commission’s *Public Notice*¹ soliciting comments on a request by Cisco Systems, Inc. (“Cisco”) for elimination of the Commission’s requirement that Multipoint Distribution Service (“MDS”) and Instructional Television Fixed Service (“ITFS”) licensees employing orthogonal frequency division multiplexing (“OFDM”) modulation transmit with a minimum of 256 Quadrature Amplitude Modulated (“QAM”) modulated carriers or tones.² For the reasons set forth below, WCA urges the Commission to grant promptly the relief requested by Cisco.

The background surrounding Cisco’s request is set forth in detail in its filing and, in the interest of brevity, need not be repeated here. Suffice it to say that Cisco has provided ample technical argument establishing that the 256-tone requirement adopted by the

¹ “Pleading Cycle Established For Comments On Request for Declaratory Ruling To Remove Minimum Sub-carrier Requirement For Orthogonal Frequency Division Multiplexing Modulation In Multipoint Distribution and Instructional Television Fixed Services,” *Public Notice*, DA 01-1582 (rel. July 5, 2001).

² Petition of Cisco Systems, Inc. for Declaratory Ruling, MM Docket No. 01-145 (filed Mar. 13, 2001)[hereinafter cited as “Cisco Petition”].

Commission when it first authorized the use of OFDM can be eliminated without increasing the risk that MDS and ITFS stations operating with OFDM will cause harmful electrical interference.³ Of course, Cisco recognizes, and WCA agrees, that lower-tone OFDM (like all other modulation schemes) can be used only where the signal falls within the Commission's MDS/ITFS emissions mask rules and the applicable desired signal-to-undesired signal ("D/U") ratios are met.⁴ Although Cisco only references the D/U ratios that are utilized to protect reception at MDS/ITFS subscriber premises, WCA assumes that Cisco also intends for OFDM usage to be subject to compliance with the provisions of Sections 21.909(i) and 74.939(i) relating to the protection of response station hubs from interference (protection which is not based on D/U ratios).⁵ With all of these safeguards in place, WCA is satisfied that lower-tone OFDM can be introduced without increasing the risk of interference.

Expeditious grant of the relief requested by Cisco will be fully consistent with the Commission's efforts "to facilitate, to the extent possible, the variety of service offerings available to MDS and ITFS licensees through use of different digital emissions."⁶ The Commission's regulatory regime for MDS and ITFS is based on the premise that affording

³ See *id.* at 7, 16.

⁴ See Cisco Petition, at 7, 16. It should be noted that in first authorizing the use of OFDM, the Commission not only required that a minimum of 256 QAM-modulated carriers be used, but also insisted that "the transmitted signal complies with the spectral mask and power limitations set out in our MDS and ITFS rules for digital emissions." *Request for Declaratory Ruling on the Use of Orthogonal Frequency Division Multiplexing Modulation by Multipoint Distribution and Instructional Television Fixed Services*, 14 FCC Rcd 4121, 4125 (1999)[hereinafter cited as "*OFDM Report and Order*"].

⁵ See 47 C.F.R. §§ 21.909(i), 74.939(i) (2000).

⁶ *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd 19,112, 19,123 (1999).

licensees the greatest degree of flexibility possible will promote the deployment of innovative new service offerings in response to consumer demand. The Commission has recognized that the offering of these new services is dependent upon “the availability and use of sophisticated digital transmission facilities configured with differing modulation formats, depending on the service being offered, the bandwidth used, path lengths, line-of-sight conditions and many other factors.”⁷ For this reason, the Commission has acknowledged that “it is in the public interest to authorize the use of additional types of modulation when it can be demonstrated that the potential for interference will not exceed that provided by the existing protection standards in the Rules.”⁸ Grant of the relief requested by Cisco will provide MDS and ITFS licensees that choose to utilize OFDM modulation with additional technical flexibility in the design and operation of their facilities. Particularly during this period when system operators are exploring a wide array of technology options for deploying second generation broadband systems, prompt action on Cisco’s request will assure that proponents of lower-tone OFDM have a fair opportunity to find success in the marketplace.

⁷ *OFDM Report and Order*, 14 FCC Rcd at 1425.

⁸ *Id.*

WHEREFORE, for the foregoing reasons, WCA urges the Commission to issue a declaratory ruling that MDS and ITFS licensees may employ OFDM modulation without any restriction on the number of tones used, so long as the transmitted signal complies with the MDS/ITFS spectral masks and the other applicable interference protection rules.

Respectfully submitted,

THE WIRELESS COMMUNICATIONS
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July 19, 2001

CERTIFICATE OF SERVICE

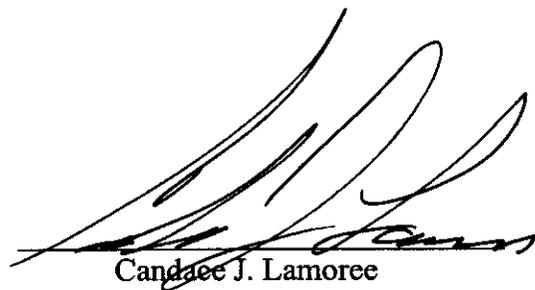
I, Candace J. Lamoree, hereby certify that the foregoing Comments of The Wireless Communications Association International, Inc. were served this 19th day of July 2001 by hand delivery upon:

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