

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**

Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

File No. SAT-ASG-20010302-00017

Received

APR 23 2001

Satellite Policy Branch  
International Bureau

In the Matter of )  
)  
Motient Services Inc. )  
)  
and )  
)  
Mobile Satellite Ventures )  
Subsidiary LLC )  
)  
Application for Assignment of Licenses and )  
For Authority to Launch and Operate a )  
Next-Generation Mobile Satellite Service System )

PETITION TO DENY IN PART

Aeronautical Radio, Inc. ("ARINC"), by its attorneys, hereby petitions the Commission to deny the above-referenced application insofar as it requests a waiver of the FCC's Rules and Table of Allocations to license terrestrial base stations in the L-band spectrum designated worldwide for the mobile-satellite service ("MSS") and aeronautical mobile-satellite(R) service ("AMS(R)S").<sup>1</sup> In support whereof, the following is shown:

ARINC is the communications company of the air transport industry, owned by the United States and foreign airspace user community. For more than seventy years, ARINC has represented

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<sup>1</sup> The application and that filed earlier by TMI seek to transfer authorizations to a new jointly-owned subsidiary, Mobile Satellite Ventures Subsidiary LLC, and to bring in additional equity participation. The proposed transaction would represent a transfer of control and would increase foreign ownership of the system over the 25 percent benchmark. ARINC does not oppose the transfer of control nor does it object to the increase in foreign ownership of the licensee.

the interests of that industry before domestic and international regulatory bodies relating to spectrum use and allocation and telecommunications policy affecting aviation. ARINC also provides essential communications facilities to members of the industry, that conform to domestic and international standards for these important safety communications services.

This year, some 700 million Americans will board aircraft for domestic and international flights. The air transport industry early recognized the need to establish an efficient communication system with high reliability and availability. For this reason, they established ARINC. Today, ARINC ensures the availability of a system of communications facilities for the safety of air transportation covering the United States and extending to the international flight information regions ("FIRS") committed to the United States in the Atlantic and the Pacific. ARINC also provides its GLOBALink® satellite services throughout the world utilizing INMARSAT space segment, and today, some 2,500 aircraft rely upon the Inmarsat-based system for safety of life communications. These critical operations share the L-band MSS allocation with the Motient system.

Motient asserts the need to add terrestrial base stations to its MSS system and has requested waiver of Part 25 and the Table of Allocations to use its licensed spectrum for what amounts to a cellular land mobile service. If granted, this waiver could completely change the nature of this MSS/AMS(R)S band. Such a fundamental change would cause interference to, or severely limit, use of, this band for AMS(R)S beyond the continental United States, and should be considered, if at all, only in the context of a comprehensive rulemaking. Motient has failed to meet its burden of proof that such a waiver is required by the public interest, and the waiver should be denied.

## **I. Motient Has Not Met Its Burden of Proof to Justify a Waiver of the Rules**

Motient requests a waiver of the Table of Frequency Allocations and the creation of a new Public Mobile Radio Service in the context of a waiver proceeding. This request raises a number of policy questions better fleshed out on the record in a rulemaking. First, the waiver addresses matters considered by the Commission in making the MSS Allocation and seeks to overturn those prior determinations. Second, the waiver does not meet the criteria of Section 2.102 of the Rules for deviation from the Table of frequency Allocations. Third, the waiver seeks to create a new Public Mobile Radio Service under Part 22 of the Rules without soliciting the views of the public and without the creation of the basic service rules to govern this nationwide cellular land mobile assignment to Motient.

Motient seeks to supplement, or potentially to supplant, its MSS service with terrestrial facilities. Waivers may be granted only in “special circumstances” where “the relief requested would not undermine the policy objectives of the rule in question.”<sup>2</sup> The current problem faced by Motient does not represent special or exceptional circumstances and, was, in fact, discussed by the parties and Commission in the Land Mobile Satellite Allocation proceeding (Docket 84-1234). The Motient request does not meet the normal standards for a waiver.

During Docket 84-1234, the FCC and the parties recognized that MSS would have limited application in urban areas due to limitations in line of sight to the satellites and building penetration issues. For this reason, MSS applicants sought a UHF allocation to simplify the production of dual

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<sup>2</sup> The Boeing Company, File SES-LIC-20000838-01578, Order and Authorization released April 13, 2001 (DA-01-658), citing *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (DC Cir. 1969). *See also* 47 C.F.R. §1.925(a)(3) (concerning Wireless Telecommunication Applications).

mode satellite/cellular mobile units. The FCC, however, concluded that a dual mode L-band/UHF transceiver was essentially as feasible as a dual mode UHF cellular/satellite transceiver, and placed MSS in L-band.<sup>3</sup> Since that decision in 1986, the electronic industry has produced dual mode and trimode cellular handsets covering analog and digital cellular and digital PCS. To the extent that better coverage in urban areas is required of Motient customers, a multimode transceiver can be produced that would permit use of satellites in remote areas and land mobile systems in urban areas. Thus, the waiver would be contrary to the policy adopted by the Commission that a single organization be created to provide MSS as a supplement to cellular telephone systems.

Moreover, a waiver for Motient would completely alter the FCC's allocation. Motient's situation is not unusual or extraordinary for L-band MSS systems in the United States. Where the entire rule would be overturned by a waiver, the Commission should proceed by rulemaking rather than by waiver.<sup>4</sup>

Section 2.102 of the Rules sets out the requirements for deviations from the Table of Allocations. This Rule specifies any operation in derogation of the Table must be on a non-interference basis (which is addressed further in the next section) and that it must be temporary in nature, developmental, or experimental. Motient proposes none of these accepted reasons for assignment of spectrum in violation of the FCC's Table of Frequency Allocations in Section 2.106 of the Rules. Deviation from the Table of Allocations to create a new radio service, not authorized by the Table, is not normally permitted, although the FCC has authorized temporary waivers

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<sup>3</sup> Land Mobile Satellite Allocation Order, 2 FCC Rcd 1825, 1843 (1986).

<sup>4</sup> *See, e.g.*, 1998 Biennial Review - Depreciation for ILECs, 15 FCC Rcd 6588 (2000).

pending rulemaking where a strong public interest showing has been made. Such a showing has not been made here.

If the FCC's Rules were waived, Motient would be granted an authorization to use the L-band nationwide for a cellular land mobile service indistinguishable from those governed by Part 22 of the Rules except for the MSS "fill-in" service. Unlike the Part 22 operations, however, the FCC has no rules to govern this new Public Land Mobile Radio service. If the FCC finds any possible public interest benefits from the Motient proposals, it should be explained in a rulemaking where service rules can be developed and the impact on spectrum auctions can be evaluated.

Finally, Motient's principal reason for its requested waiver is its own financial benefit. However, Motient has submitted no information on its financial situation and how this waiver might affect its future. Motient has offered no projections of traffic loads that might be expected and how this traffic would affect the L-band allocation. Analysis of the market for the proposed service and how the market can be accommodated are critical to a determination of whether the public interest would even support the institution of a rulemaking. In the absence of any hard data from Motient, the Commission has no basis for rulemaking, and, *a fortiori*, the waiver should be denied.

**II. If Authorized by the FCC, Land Base Stations in the L-band MSS Allocation Could Cause Interference to, or Limit the Use of, the Band by Aviation Safety Communications**

Motient promises to operate on a non-interference basis, but concedes that the only way it can do so is to operate in exclusive spectrum obtained through international coordination.<sup>5</sup> The

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<sup>5</sup> Motient Application, App. A at 38.

more powerful land base stations will overpower satellite signals on the same channel, and perhaps on adjacent channels.

To the extent that Motient coordinates additional spectrum for its land mobile services, this spectrum will come at the expense of AMS(R)S service. Motient might use land mobile traffic to justify the coordination of additional spectrum away from satellite services. Motient does not even provide an MSS that is “interoperable with the aeronautical-mobile satellite (R) service” and thus is supposed to operate on a secondary basis in the United States.<sup>6</sup> Although Motient has from time to time asserted that its system is interoperable, it has never implemented an aeronautical earth terminal that would make its facilities usable by aviation. A number of Inmarsat participants have implemented service meeting the Standards and Recommended Practices (“SARPS”) of the International Civil Aviation Organization (“ICAO”). Motient has never demonstrated how an aircraft using its existing avionics, which comply with ICAO SARPs and Technical Service Orders (TSOs) of the Federal Aviation Administration (“FAA”), can communicate through Motient’s current satellite. This incompatibility with the international AMS(R)S systems may be further exacerbated by the use of “MSV proprietary technology” for sharing the spectrum with Motient’s land mobile service.<sup>7</sup>

Motient’s system, of course, does not provide service where aviation requires the service. Motient’s coverage ends just outside the coastal waters of the United States and Canada. The addition of land base stations by Motient, however, would extend the interference from Motient’s continental service more than 300 miles (483 km) off-shore for aircraft operating at an altitude of

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<sup>6</sup> See 47 C.F.R. § 2.106 Note US308.

<sup>77</sup> See Motient Application, App. A at 3.

45,000 feet. This would cause interference to, or limit the ability of, INMARSAT to use this L-band spectrum to serve aviation on these routes. Like Motient, INMARSAT is moving towards the use of narrower beams and more spectrum reuse, but use of land base stations by Motient would decrease the ability of other systems to reuse the spectrum up to 300 miles off shore.<sup>8</sup>

Aviation service will be further impaired by the possibility that the band will be converted from an MSS allocation with specific protections for AMS(R)S to a land mobile band and that land mobile will crowd AMS(R)S out of the band. Aviation invested hundreds of millions of dollars to use this band for safety communications on over-ocean air routes. L-band is one of the few bands reasonably available for this AMS(R)S everywhere in the world. This band uniquely meets aviation's requirements, but would become just another regional land mobile band if the waiver were granted.

### **Conclusion**

L-band is vital and unique to aviation but would fungible for land mobile, and yet Motient has not offered any public benefit that might be served by such a change. True, Motient asserts, without offering any specifics, that it needs more revenues. However, increased revenues to Motient, without more, is not a public benefit. It is a private benefit taken at the expense of the public's interest in aviation safety and, perhaps, the private interests of competing land mobile systems who have invested heavily in spectrum and facilities to provide service. The requested

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<sup>8</sup> Motient agrees to provide priority and real time preemptive capabilities in its new system. The application, however, does not fully explain how this level of performance can be assured in a mixed satellite/land base station environment.

waiver is not based on special circumstances, but rather the circumstances are those that were considered by the Commission in making the allocation. A waiver is inappropriate and unsupported by the public interest.

Respectfully submitted,

AERONAUTICAL RADIO, INC.

By:



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April 18, 2001




CERTIFICATE OF SERVICE

I hereby certify that on this 18th day of April, 2001, I caused copies of the foregoing  
Petition to Deny in Part to be mailed via first-class postage prepaid mail to the following:

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