

**Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of)	
)	
Amendment of Parts 2 and 25 to)	
Implement the Global Mobile Personal)	IB Docket No. 99-67
Communications by Satellite (GMPCS))	
Memorandum of Understanding and)	
Arrangements)	
)	
Petition of National Telecommunications)	
and Information Administration to Amend)	
Part 25 of the Commission's Rules to)	RM No. 9165
Establish Emission Limits for Mobile and)	
Portable Earth Stations Operating in the)	
1610-1660.5 MHz Band)	

COMMENTS OF INMARSAT VENTURES PLC

Inmarsat Ventures plc (“Inmarsat”) hereby submits its comments on the Further Notice of Proposed Rulemaking in this proceeding released on May 14, 2002.¹ Inmarsat supports the Commission’s implementation of the Global Mobile Personal Communications by Satellite (“GMPCS”) Memorandum of Understanding (“GMPCS-MoU”) and welcomes the opportunity to provide comments on the Further Notice of Proposed Rulemaking. For the reasons set forth below, Inmarsat urges the Commission to: (i) set December 31, 2007 as the compliance deadline for Inmarsat-A mobile earth terminals (“METs”) and December 31, 2012 as the compliance deadline for Inmarsat-B METs; (ii) exempt METs manufactured prior to the

¹ See *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements; Petition of National Telecommunications and Information Administration to Amend Part 25 of the Commission’s Rules to Establish Emission Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band*, IB Docket No. 99-67 and RM No. 9165, Report and Order and Further Notice of Proposed Rule Making (rel. May 14, 2002) (“*Order*” or “*Further NPRM*”).

implementation of the Commission's proposed equipment certification requirement in new Section 25.216(i) from any labeling requirements contemplated by the new regulations; and (iii) impose upon METs with assigned uplink frequencies between 1626.5 MHz and 1660.5 MHz ("L band METs") narrowband out-of-band limits that are no more stringent than those imposed on METs with assigned uplink frequencies between 1610 MHz and 1626.5 MHz ("Big LEO METs").

DISCUSSION

I. Compliance Deadlines for Inmarsat-A and Inmarsat-B Terminals

The Commission's newly established rules require that METs placed in service on or before July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz meet certain out-of-band emissions limits as of January 1, 2005.² The Commission, however, recognized that requiring users of Inmarsat-A terminals, which are used as Global Maritime Distress and Safety System ("GMDSS") ship earth stations, to modify or replace these terminals by January 1, 2005 might cause "disruption of maritime safety services."³ In order to avoid such disruption, the Commission excepted Inmarsat-A terminals from the compliance deadline and sought comment on a more reasonable compliance deadline.⁴

Inmarsat urges the Commission to set December 31, 2007 as the compliance deadline for Inmarsat-A terminals. Inmarsat-A terminals are an early generation design that is in the process of being replaced by more recent Inmarsat-B and Inmarsat-Fleet terminals. Currently, thousands of cargo, passenger, U.S. Navy and U.S. Coast Guard vessels carry Inmarsat-A, Inmarsat-B, and Inmarsat-Fleet terminals in order to comply with the GMDSS

² See *Order* at Appendix A.

³ *Order* at ¶ 47.

⁴ See *Id.* at ¶¶ 47 and 87.

requirements of the Safety of Life at Sea (“SOLAS”) Convention.⁵ These terminals provide vital safety and rescue services to military and commercial ships at sea. As Inmarsat has indicated, some Inmarsat-A terminals, as well as some Inmarsat-B terminals,⁶ do not meet the new out-of-band emissions limits established by the *Order*.

Inmarsat has already announced that Inmarsat-A services will be withdrawn as of December 31, 2007.⁷ Inmarsat believes that this announcement will encourage Inmarsat-A users to upgrade and replace, in an orderly and prompt manner, their current equipment with terminals that comply with the Commission’s new rules. If the Commission were to impose an earlier deadline, ship owners would need to be informed of this new requirement and determine whether their specific terminals would need to be replaced. Inmarsat-A users may become confused as to when and where they are permitted to use their terminals. This may result in users suffering disruptions in their GMDSS services if equipment they thought was usable until 2007 turned out not to comply with the Commission’s rules and therefore needed to be replaced immediately. If the Commission imposes the same December 31, 2007 deadline as Inmarsat has already imposed, the Inmarsat-A terminals will be removed from service in an organized manner and unnecessary disruptions to service will be avoided.

⁵ See *Id.* at ¶ 47; see also Inmarsat Petition for Reconsideration, IB Docket No. 99-67, RM No. 9165 at 4 (filed November 1, 2002) (“*Inmarsat Petition for Reconsideration*”).

⁶ See *Inmarsat Petition for Reconsideration* at 3; see also Comments of Inmarsat Ltd., IB Docket No. 99-67 at 7 (filed June 21, 1999). Certain Inmarsat-B terminals produced by one of three manufacturers would exceed the limit only above 1604.5 MHz and then only by about 3 dB. Because the Inmarsat-B terminals are also used for GMDSS and replacement of such terminals would result in the same difficulties as those implicated by the replacement of Inmarsat-A terminals, Inmarsat filed a Petition for Reconsideration that requested the Commission to except Inmarsat-B from the compliance deadline for new out-of-band limits as well. *Inmarsat Petition for Reconsideration* at 3.

⁷ See International Maritime Organization, *Future withdrawal of Inmarsat-A services by Inmarsat Ltd Submitted by the International Mobile Satellite Organization* (July 5, 2002) attached hereto as Exhibit A.

As mentioned in the *Inmarsat Petition for Reconsideration*, certain Inmarsat-B METs produced by one manufacture exceed the Commission's new out-of-band emissions limits only above 1604.5 MHz, and then by only about 3 dB. Some users in the U.S. may have only recently bought such Inmarsat METs, which, at the time of purchase, met all FCC regulations then in force. The estimated cost of purchasing and installing the METs to these users was many tens of thousands dollars. Based on past experience, these METs are likely to have an economic lifetime in excess of 20 years.

As shown in past tests of Inmarsat terminals, due to the high level of MET design and the need to avoid self-interference, the majority of METs will already be compliant with the new rules.⁸ In those few circumstances where the terminals may not be compliant, the non-compliance is marginal and the likelihood of interference into the Aeronautical Mobile Satellite Service will be very small, due to the maritime operation of the METs.

To avoid any economic hardship to those users falling in the above category, and also because Inmarsat-B is used as a part of the GMDSS, Inmarsat requests that the Commission extend the compliance deadline for Inmarsat-B terminals to December 31, 2012.

II. Existing METs Should Not Require Labels Under the Commission's Certification Procedures

The Commission has proposed that “[n]o mobile earth station subject to the requirement of this section may be operated after January 1, 2005 unless its conformance . . . has been demonstrated pursuant to the certification procedure prescribed in Part 2, Subpart J, of the Commission's rules.”⁹ In implementing this proposed rule, the Commission has invited

⁸ See *Initial Comments of Inmarsat* at 7.

⁹ See *Order* at Appendix B.

comment on whether some other procedure could better be used to ensure that METs meet emission limits.¹⁰

The Commission's proposed rule requires all FCC-licensed METs operating after January 1, 2005 to have demonstrated compliance with the Commission's certification procedure. This is a matter that every FCC licensee of an L band MET presumably would need to satisfy with respect to each of its terminals, as a technical matter. As written, however, the proposed rule also could be read to bar the operation of existing terminals that are compliant with the Commission's new limits, but lack Part 2 equipment authorization labeling.

Inmarsat does not oppose implementing a Part 2 certification requirement for FCC-licensed METs produced after the adoption of proposed Section 25.216(i). Inmarsat, however, requests a clarification that, under the proposed rule, those FCC-licensed METS that (i) were manufactured prior to the adoption of any new equipment authorization requirement, and (ii) are compliant with the proposed new rule, are exempted from any Part 2 equipment authorization labeling requirements that may be imposed by the Commission. The exemption of compliant existing terminals from any such labeling would avoid the onerous and impractical task of labeling compliant METs post-manufacture and installation, while also meeting the Commission's goal of ensuring that terminals operating after January 1, 2005 meet the new out-of-band limits.

Once the Commission has adopted new Section 25.216(i) and established any necessary equipment authorization procedures pursuant to Part 2, Subject J, Inmarsat does not object to having manufacturers comply with those procedures. Typically, this would require that certified equipment bear a label indicating compliance with Commission Rules. Inmarsat,

¹⁰ See *Id.* at ¶ 86.

however, believes that most of the Inmarsat terminals being manufactured today are already compliant with proposed Section 25.216(i) . Moreover, Part 2 certification with respect to Section 25.216(i) would not be available unless and until that rule actually is adopted. Exempting existing, compliant terminals from a Part 2 labeling requirement is the only reasonable way to avoid unintended but severe service disruptions for users, and significant costs to manufactures and retailers of METs, which otherwise could occur.

If, instead, the Commission were to require that all existing compliant FCC-licensed METs be labeled, MET users, including ship and airplane owners with permanently installed METs, would need to either send their units back to the manufacturer for labeling or obtain a label from the manufacturer and apply the label themselves. Either solution is impractical. Returning the equipment to the manufacturer would cause significant disruptions in service and impose tremendous costs for the formulative application of a label. Conversely, supplying labels to owners of compliant METs for self-application runs the risk that the labels could be applied incorrectly or used inappropriately.

Exempting existing compliant equipment from labeling requirements is consistent with Commission precedent. Recently, the Commission issued an order requiring radar detectors to comply with certain emission limits, and be appropriately certified and labeled prior to sale.¹¹ The International Mass Retail Association (“IMRA”) requested that the Commission waive its labeling requirements for compliant radar detectors previously manufactured but not yet sold. Because of the difficulty associated with individually labeling unsold, compliant radar detectors at the retailers’ stores and in warehouses, the Commission waived the requirement that each

¹¹ See *First Report and Order*, ET Docket No. 01-278, 17 FCC Rcd 14063 (2002).

radar detector be labeled and instead allowed the retailers to place signs in retail outlets confirming that their radar detectors complied with the new Commission rules.¹²

Inmarsat urges the Commission to follow past precedent and exempt compliant terminals existing at the adoption of proposed Section 25.216(i) from any individual labeling requirements.

III. Narrowband Limits for L band METs Should Be No More Restrictive Than Those Imposed on Upon Big LEO METs

The Commission has proposed to require that “the e.i.r.p. of discrete emissions of less than 700 Hz from Big LEO METs shall not exceed a level determined by linear interpolation from -80 dBW at 1605 MHz to -20 dBW at 1610 MHz. Similarly, we propose to require that the e.i.r.p. of such emissions from METs with assigned uplink frequencies between 1626.5 MHz and 1660.5 MHz shall not exceed a level determined by linear interpolation from -80 dBW at 1605 MHz to -56 dBW at 1610 MHz.”¹³ Although the general reason provided for imposing out-of-band limits in this proceeding is to protect the Aeronautical Radionavigation/Radionavigation Satellite (“ARNS”) systems, the specific reason stated for proposing more stringent limits on L band METs than Big LEO METs is an ITU recommendation that sets wideband limits for L band METs.¹⁴

Based on this analysis, however, there appears no legitimate reason for imposing stricter limits on L band METs (operating between 1626.5 MHz and 1660.5 MHz) than those imposed on Big LEO METs (operating between 1610 MHz and 1626.5 MHz). The potential for an MET to cause interference to an ARNS system is largely independent of whether it is a Big

¹² See Letter from Edmond J. Thomas, Chief, Office of Engineering and Technology, FCC to Morrison G. Cain, IMRA (dated Oct. 15, 2002).

¹³ *Further NPRM* at ¶ 84.

¹⁴ *See Id.* at ¶ 83.

LEO MET or an L band MET, and is determined only by the levels of unwanted emissions. Therefore, it does not make sense that L band METs should be subject to stricter out-of-band e.i.r.p. emissions limitations than Big LEO METs.

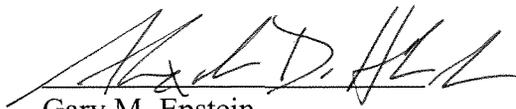
Moreover, neither of the ITU recommendations cited by the Commission, REC M. 1477 or REC M. 1480, addresses the appropriate level of narrow band protection from L band METs. Inmarsat does not believe that the Commission should derive narrowband limits simply by subtracting 10 dB from the wideband limits in REC M. 1480. Significantly, the Commission proposes narrowband limit for Big LEO METs ranging from -80 dBW at 1605 MHz to -20 dBW at 1610 MHz. But the Commission does not appear to seek to “tighten” these Big LEO limits to a range from -80 dBW at 1605 MHz to -56 dBW at 1610 MHz, presumably because such tighter limits are not needed to protect ARNS systems. Thus, to impose such more restrictive limits on L band METs, that operate further away from ARNS systems than Big LEO METs, would cause undue hardship upon existing L band MET users and manufacturers and would be fundamentally unfair. L band MET users would need to confirm that their METs comply with the Commission’s more stringent standards and replace METs that are non-complaint with the Commission’s Rules, but apparently not harmful to ARNS systems. Similarly, manufacturers would need to test, and may need to modify their production facilities to meet superfluous new limits.

Inmarsat urges the Commission not to implement a proposed narrowband limit that does not appear to be needed to protect ARNS systems and would unnecessarily impose significant costs and disruption on L band MET users and manufacturers.

CONCLUSION

For the reasons set forth above, Inmarsat urges the Commission to: (i) set December 31, 2007 as the compliance deadline for Inmarsat-A mobile earth terminals ("METs") and December 31, 2012 as the compliance deadline for Inmarsat-B METs; (ii) exempt METs manufactured prior to the adoption of proposed Section 25.216(i) from any Part 2 labeling requirements contemplated by the new regulations; and (iii) impose upon L band METs no more stringent narrowband limits than those imposed on Big LEO METs.

Respectfully submitted,



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Exhibit A



IMO

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MARITIME SAFETY COMMITTEE
76th session
Agenda item 18

MSC 76/18/1
5 July 2002
Original: ENGLISH

RELATIONS WITH OTHER ORGANIZATIONS

Future withdrawal of Inmarsat-A services by Inmarsat Ltd

Submitted by the International Mobile Satellite Organization (IMSO)

SUMMARY

Executive summary: This document informs IMO of the decision by Inmarsat Ltd to withdraw provision of Inmarsat-A services as from 31 December 2007

Action to be taken: Paragraph 8

Related documents: None

Introduction

1 This document provides information to IMO by the International Mobile Satellite Organization (IMSO) on the decision by Inmarsat Ltd to withdraw provision of Inmarsat-A services as from 31 December 2007.

Background

2 Inmarsat-A is the original analogue service provided via the Inmarsat satellites and was first introduced in 1982. The service has been widely used at sea but has been gradually superseded by other digital services.

3 The last type approval by Inmarsat for a new model of maritime Inmarsat-A mobile earth station (MES) was granted in 1991, since when no new Inmarsat-A MES models have been type approved. There is clear evidence of increasing difficulty in obtaining spare parts and expertise to maintain existing Inmarsat-A MESSs. As a result, the number of Inmarsat-A MESSs that remain active on board ships is declining.

4 Although Inmarsat-A is approved for fitting in ships as part of their GMDSS equipment, it is not mandatory and does not contribute any unique functionality that is not also provided by other equipment in the full GMDSS suite. The core satellite services in the GMDSS are provided via Inmarsat-C.

Withdrawal of Inmarsat-A service

5 Bearing in mind the need for ever more efficient use of the radio spectrum, and as part of its ongoing policy of evolving service provision, Inmarsat Ltd has reviewed the continued provision of Inmarsat-A service. Inmarsat Ltd had formerly indicated that a minimum of five years' notice would be given for the withdrawal of Inmarsat-A services and has now informed IMSO that this service will be withdrawn on 31 December 2007.

6 IMSO believes that five years' notice is reasonable and sufficient for the maritime industry to be able to make alternative arrangements for the mobile satellite communications currently carried via Inmarsat-A. A number of excellent alternative digital mobile satellite terminals is available for use in GMDSS installations, each of which offers potential advantages in terms of speed, facilities and cost.

7 IMSO remains satisfied that Inmarsat Ltd will continue to provide all of the capabilities for the GMDSS that are stipulated within the Public Services Agreement and that the withdrawal of Inmarsat-A services as from 31 December 2007 will not adversely affect the GMDSS or safety of life at sea.

Action requested of the Committee

8 The Committee is invited to note the information provided, to the effect that Inmarsat Ltd has given more than five years' notice of the scheduled withdrawal of Inmarsat-A services, which will take effect on 31 December 2007.