

Inmarsat Mobile Networks, Inc.
IBFS File No. SES-MSC-20150122-00035
MARCH 23, 2015

The request of Inmarsat Mobile Networks, Inc. (Inmarsat), IBFS File No. SES-MSC-20150122-00035, to modify a waiver of Section 25.131(j) of the Commission's rules, 47 C.F.R. § 25.131(j), IS GRANTED. Accordingly, unlicensed Radionavigation-Satellite Service (RNSS) terminals may receive transmissions over L1 and L5 GPS frequencies (1573.42-1577.42 MHz and 1166.45-1186.45 MHz, respectively) from the Wide Area Augmentation System (WAAS) transmitter on the U.K.-authorized Inmarsat 4F3 satellite at the 98° W.L. orbital location. *See Inmarsat Hawaii Inc.*, Stamp Grant, IBFS File No. SES-MSC-20100415-00483 (granted July 13, 2010) (waiving Section 25.131(j) to permit unlicensed WAAS reception from Inmarsat 4F3 at 97.65° W.L.). This action is based upon the following findings and conclusions:

1. The FCC has previously received and favorably reviewed required information (*see, e.g.*, 47 C.F.R. § 25.114(d)(14)) concerning the debris mitigation plans for the Inmarsat 4F3 satellite. *See* IBFS File No. SES-MFS-20080228-00207, Exhibit D.
2. The FCC has previously received and favorably reviewed, in connection with requests involving different frequency bands, required information with respect to legal, technical, and policy aspects of access by the Inmarsat 4F3 satellite to the U.S. market. The findings and conclusions that formed the basis of that prior review are equally applicable to this request. *See* IBFS File Nos. SES-MFS-20080228-00207, SES-AFS-20080410-00448, and SES-AFS-20080915-01200; *see also* IBFS File Nos. SES-MFS-20100204-00162 and SES-MFS-20141003-00786 (market access related to WAAS transmissions).
3. The RNSS signals offered by this non-U.S. licensed satellite are provided pursuant to a contract with the Federal Aviation Administration (FAA) for use in connection with the FAA's Wide Area Augmentation System, and will further the FAA's goals of improving the functionality and reliability of the Global Positioning System.
4. The waiver is granted in connection with operations of an RNSS system that is compatible with other U.S. Government and U.S. non-Federal radiocommunication systems. The Inmarsat 4F3 WAAS operations have completed ITU coordination with U.S. systems.



File # SES - MSC - 20150122 - 00035

Call Sign _____ Grant Date 3/23/2015
(or other identifier)

Term Dates
From _____ To: 8/18/2023

Approved: Paul E. Black

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

In the Matter of

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SES-MS-20150122-00035

Inmarsat Mobile Networks, Inc.

Inmarsat Mobile Networks, Inc., Waiver of
Section 25.131(j) of the Commission's Rules
with Respect to Inmarsat-4 F3 at 98° W.L.

PETITION FOR WAIVER

The Commission has granted market access for the Inmarsat-4 F3 satellite ("I4F3") for a satellite located nominally at 98° W.L. and operating under the authority of the United Kingdom.¹ Based in part on the grant of market access, the Commission also granted, at Inmarsat's request, a waiver of Section 25.131(j) of the Commission's rules to facilitate the ability of Global Positioning System ("GPS") terminal users to receive from I4F3 certain GPS-related data generated by the Federal Aviation Administration's ("FAA") Wide Area Augmentation System ("WAAS") over "L1" and "L5" GPS frequencies (1573.42-1577.42 MHz and 1166.45-1186.45 MHz, respectively).²

I4F3's station keeping box originally was centered at 97.65° W.L. As a result of coordination related to its feeder links, its station-keeping box has since been modified so the spacecraft is now centered at 98.0° W.L. The Commission has modified the ISAT List to reflect the operation of I4F3 at 98° W.L. (with no station-keeping offset) in the L band (1525-1559

¹ Inmarsat Hawaii, Inc., File Nos. SES-MFS-20080228-00207, SES-AFS-20080410-00448, SES-AFS-20080915-01200 (granted Dec. 18, 2008).

² See Inmarsat Hawaii Inc., Petition for Waiver of Section 25.131(j) of the Commission's Rules, File No. SES-MS-20100415-00483 (granted July 13, 2010).

MHz, 1626.5-1660.5 MHz).³ In addition, Inmarsat has been granted authority to modify its gateway earth station in Paumalu, Hawaii (call signs E080059) to specify I4F3 located at 98° W.L. as a point of communication, including for the receipt of GPS data in the L1 and L5 GPS frequencies.⁴

By this submission, and to the extent necessary, Inmarsat requests that the previously granted waiver relating to WAAS operations from I4F3 be modified to reflect the 98° W.L. location, or in the alternative, that a new grant of waiver be issued. The public interest rationale previously provided remains fully relevant because the same satellite and nominal orbital location are being utilized. Inmarsat therefore respectfully incorporates by reference its previous petition for waiver, which is attached as Exhibit 1 for the Commission's convenience.⁵

Respectfully submitted,

/s/

Christopher J. Murphy
Inmarsat Mobile Networks, Inc.
1101 Connecticut Avenue, N.W.
Suite 1200
Washington, D.C. 20036
Telephone: (202) 248-5158

John P. Janka
Elizabeth R. Park
LATHAM & WATKINS LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, D.C. 20004
Telephone: (202) 637-2200

January 22, 2015

³ See File No. SAT-PPL-20141003-00106 (granted Jan. 8, 2015).

⁴ See File No. SES-MFS-20141003-00786 (granted Jan. 13, 2015). The Commission also granted special temporary authority for this gateway terminals to communicate with I4F3 at 98.0° W.L. See File No. SES-STA-20141013-00798 (granted Dec. 10, 2014).

⁵ 47 C.F.R. § 1.3.

EXHIBIT 1

File # SES-MSC-20100415-00483READ INSTRUCTIONS CAREFULLY
BEFORE PROCEEDINGFEDERAL COMMUNICATIONS COMMISSION
REMITTANCE ADVICE
FORM 159

Call Sign

Grant Date

7/13/2010Approved by OMB
3061-0589
Page No. 1 of 1

Term Dates

From:

SPECIAL USE ONLY

FCC USE ONLY

(1) LOCKBOX #
979093**GRANTED**

International Bureau of Standards

(2) PAYER NAME (If paying by credit card, enter name exactly as it appears on the card)
Inmarsat Hawaii Inc.(3) TOTAL AMOUNT PAID (U.S. Dollars and cents)
\$175.00

(4) STREET ADDRESS LINE NO. 1

1101 Connecticut Avenue NW

(5) STREET ADDRESS LINE NO. 2

Suite 1200

(6) CITY

Washington

(7) STATE

DC

(8) ZIP CODE

20036

(9) DAYTIME TELEPHONE NUMBER (include area code)

(202)248-5155

(10) COUNTRY CODE (if not in U.S.A.)

FCC REGISTRATION NUMBER (FRN) REQUIRED

(11) PAYER (FRN)

0017460478

(12) FCC USE ONLY

IF MORE THAN ONE APPLICANT, USE CONTINUATION SHEETS (FORM 159-C)

COMPLETE SECTION BELOW FOR EACH SERVICE. IF MORE BOXES ARE NEEDED, USE CONTINUATION SHEET

(13) APPLICANT NAME

(14) STREET ADDRESS LINE NO. 1

(15) STREET ADDRESS LINE NO. 2

(16) CITY

(17) STATE

(18) ZIP CODE

(19) DAYTIME TELEPHONE NUMBER (include area code)

(20) COUNTRY CODE (if not in U.S.A.)

FCC REGISTRATION NUMBER (FRN) REQUIRED

(21) APPLICANT (FRN)

(22) FCC USE ONLY

COMPLETE SECTION C FOR EACH SERVICE, IF MORE BOXES ARE NEEDED, USE CONTINUATION SHEET

(23A) CALL SIGN/OTHER ID

(24A) PAYMENT TYPE CODE

CGO

(25A) QUANTITY

1

(26A) FEE DUE FOR (PTC)

\$175.00

(27A) TOTAL FEE

\$175.00

FCC USE ONLY

(28A) FCC CODE 1

(29A) FCC CODE 2

(23B) CALL SIGN/OTHER ID

(24B) PAYMENT TYPE CODE

(25B) QUANTITY

(26B) FEE DUE FOR (PTC)

(27B) TOTAL FEE

FCC USE ONLY

(28B) FCC CODE 1

(29B) FCC CODE 2

SECTION D - CERTIFICATION

CERTIFICATION STATEMENT

I, Christopher J. Murphy, certify under penalty of perjury that the foregoing and supporting information is true and correct to the best of my knowledge, information and belief.SIGNATURE Chris J. MurphyDATE 4/14/10

SECTION E - CREDIT CARD PAYMENT INFORMATION

MASTERCARD ☐ VISA ☒ AMEX ☐ DISCOVER ☐ACCOUNT NUMBER XXXXXXXXXXXXEXPIRATION DATE XXXX/XX/XX

I hereby authorize the FCC to charge my credit card for the service(s)/authorization herein described.

SIGNATURE Chris J. MurphyDATE 4/14/10

SEE PUBLIC BURDEN ON REVERSE

FCC FORM 159

FEBRUARY 2003

Attachment to Grant
IBFS File Nos. SES-MSC-20100415-00483
July 13, 2010

The request of Inmarsat Hawaii Inc. (Inmarsat) for a waiver of section 25.131(j) of the Commission's rules, to permit radionavigation satellite service (RNSS) terminals to receive transmissions over L1 and L5 GPS frequencies (1573.42-1577.42 MHz and 1166.45-1186.45 MHz, respectively) from the Wide Area Augmentation System transmitter on the U.K. authorized Inmarsat 4F3 satellite, without obtaining a U.S. license, IS GRANTED. This action is based upon the following findings and conclusions:

1. The FCC has previously received and favorably reviewed required information (see, e.g., 47 C.F.R. § 25.114(d)(14)) concerning the debris mitigation plans for the Inmarsat 4F3 satellite. See File No SES-MFS-20080228-00207, Exhibit D.
2. The FCC has previously received and favorably reviewed, in connection with requests involving different frequency bands, required information with respect to legal, technical, and policy aspects of access by the Inmarsat 4F3 satellite to the U.S. market. The findings and conclusions that formed the basis of that prior review are equally applicable to this request. See File Nos. IBFS File Nos. SES-MFS-20080228-00207, SES-AFS-20080410-00448 & SES-AFS-20080915-01200.
3. The RNSS signals offered by this non-U.S. licensed satellite are provided pursuant to a contract with the Federal Aviation Administration (FAA) for use in connection with the FAA's Wide Area Augmentation System, and will further the FAA's goals of improving the functionality and reliability of the Global Positioning System.
4. The waiver is granted in connection with operations of an RNSS system that is compatible with other U.S. Government and U.S. non-Federal radio-communication systems. The Inmarsat 4F3 WAAS operations have completed ITU coordination with U.S. systems.

This action has been coordinated with the National Telecommunications and Information Administration.



File # SES-MSC-20100415-00483

Call Sign _____ Grant Date 7/13/2010
(or other identifier)

Term Dates
From: _____ To: 8/18/2023

Approved: _____

Robert B. Nelson
Chief Satellite Division

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

In the Matter of)
)
Inmarsat Hawaii Inc.)
)
Petition for Waiver of Section 25.131(j) of the)
Commission's Rules)

PETITION FOR WAIVER

Pursuant to Section 1.3 of the Commission's rules,¹ Inmarsat Hawaii Inc. ("Inmarsat") submits this petition for waiver of Section 25.131(j) of the Commission's rules² to permit Global Positioning System ("GPS") terminals to receive transmissions from the Inmarsat 4F3 ("I4F3") spacecraft over "L1" and "L5" GPS frequencies (1573.42-1577.42 MHz and 1166.45-1186.45 MHz, respectively) without obtaining individual licenses to do so. As detailed below, this request is expressly subject to the Commission having *separately* granted United States "market access" in these frequencies to the I4F3 spacecraft, which operates under the authority of the United Kingdom.

As discussed herein, there is "good cause" for such waiver because:

- (i) The I4F3 spacecraft is operated under the authority of the United Kingdom, which is a WTO member; thus, the Commission should ensure—as it would in the market access context—that the I4F3 spacecraft is treated in a manner similar to a U.S.-licensed spacecraft;
- (ii) The United States will retain necessary authority over the GPS operations at issue by virtue of: (x) existing Commission licenses that are used to uplink data to the I4F3 spacecraft before those data are transmitted from that spacecraft over the "L1" and "L5" GPS frequencies;³ and (y) Inmarsat's pending application to

¹ 47 C.F.R. § 1.3.

² 47 C.F.R. § 25.131(j).

³ WAAS incorporates redundancy throughout the system and uses two earth station

modify the license for its Paumalu, Hawaii gateway earth station (Call Sign E080059) to allow it to receive those transmissions;⁴

- (iii) Grant of a waiver would facilitate the ability of GPS users to receive from Inmarsat spacecraft certain GPS-related data generated by the Federal Aviation Administration's ("FAA") Wide Area Augmentation System ("WAAS"), and thereby compute better positional accuracy than they could with standard GPS data alone;
- (iv) The Inmarsat spacecraft would merely serve as a "bent pipe," retransmitting WAAS data controlled by the FAA, pursuant to a contract with the FAA, and providing greater redundancy for the larger, U.S. government-administrated GPS system;
- (v) Strict application of the licensing requirement found in Section 25.131(j) would sharply limit the utility of these data, while imposing a significant administrative burden on the Commission; and
- (vi) The Commission already has reviewed the operations of the I4F3 spacecraft, such that grant of the requested waiver would not undermine the purposes for which Section 25.131(j) was adopted.

Accordingly, Inmarsat respectfully requests that the Commission grant the requested waiver on an expedited basis.

I. BACKGROUND

Inmarsat's WAAS Operations. Inmarsat operates a global fleet of spacecraft that provide mobile satellite services, including some of the most advanced commercial communications satellites now in orbit. Examples of the users that rely on Inmarsat services for their critical communications needs include: the U.S. military, the FAA, the Department of Homeland Security (including the Federal Emergency Management Agency (FEMA) and the Coast Guard), U.S. Executive Branch officials, the New York City Fire Department, CNN, ABC,

facilities for each satellite. In this case, the two earth station facilities are Inmarsat's in Paumalu, Hawaii and Vizada's in Santa Paula, California. See IBFS File No. SES-MOD-20091105-01418 (Inmarsat); IBFS File No. SES-MFS-20100119-00089 (Vizada).

⁴ See IBFS File No. SES-AFS-20100204-00162.

CBS, National Public Radio, the Red Cross, and nearly every major airline and shipping line throughout the world.

WAAS, administered by the FAA, provides augmentation data containing corrections for timing and positioning errors in the GPS message from GPS and commercial bent pipe satellites. These data allow GPS users to compute better positional accuracy than they could with standard GPS data alone. The FAA has contracted Inmarsat to: (i) uplink certain WAAS data from Inmarsat's licensed earth station facility in Paumalu, Hawaii (the "Paumalu Gateway") to the I4F3 spacecraft, operated under the authority of the United Kingdom;⁵ and (ii) use that spacecraft as a "bent pipe" to retransmit these data to the Earth for reception by GPS users in the "L1" and "L5" GPS frequencies.

The GPS users that would receive the FAA-initiated transmissions are not customers of or otherwise in privity with Inmarsat, and Inmarsat itself would not control the GPS terminals that they operate. Inmarsat is seeking waiver of Section 25.131(j)'s licensing requirement: (i) out of an abundance of caution, to facilitate the implementation of WAAS, and ensure that the public is able to realize the benefits of WAAS data; and (ii) because Inmarsat is in the best position to seek such waiver, given the dispersed nature of GPS users.

Section 25.131(j). Since the early 1970s, the Commission generally has required the licensing of receive-only earth stations communicating with non-U.S. spacecraft.⁶ This policy is reflected in Section 25.131(j) of the Commission's rules, which provides that "receive-

⁵ As noted above, Vizada is separately licensed to uplink similar data from its earth station in Santa Paula, California.

⁶ See *Deregulation of Domestic Receive-Only Satellite Earth Stations*, 74 FCC 2d 205, 218 (1979).

only earth stations operating with non-U.S. licensed space stations shall file an FCC Form 312 requesting a license or modification to operate such station.”⁷

In 2003, the Commission created an exception to this rule to permit unlicensed earth stations to receive C- and Ku-band transmissions from spacecraft on the Permitted List.⁸ Spacecraft on the Permitted List have been approved for “market access” to the United States after undergoing a thorough review to ensure their proposed operations are consistent with Commission requirements and do not present any trade, national security, law enforcement, or other policy issues. The Commission created this exception to the receive-only licensing rule after finding that: (i) the process of placing a spacecraft on the Permitted List would have allowed the Commission to conduct a full analysis of the spacecraft serving the unlicensed end users, obviating the need to conduct that analysis in an earth station licensing context; and (ii) the Commission would retain adequate jurisdiction with respect to the operations of the spacecraft.”⁹ Although the policies underlying the Permitted List apply with equal force here, L-band spacecraft are not able to be included on the Permitted List.

II. A WAIVER OF SECTION 25.131(J) WOULD SERVE THE PUBLIC INTEREST, CONVENIENCE, AND NECESSITY

For the reasons provided below, granting a waiver of Section 25.131(j) to permit end users to receive WAAS transmissions from the I4F3 spacecraft, without obtaining a receive-only license, would serve the public interest, convenience and necessity. The Commission may

⁷ 47 C.F.R. § 25.131(j).

⁸ The Commission permitted the registration of C-band earth stations for interference protection purposes.

⁹ See *Amendment of the Commission's Space Station Licensing Rules and Policies*, Second Report and Order, 18 FCC Rcd 12507, at ¶¶ 20-22 (2003).

waive its rules for “good cause shown.”¹⁰ More specifically, the Commission may exercise its discretion to waive a rule where special circumstances warrant a deviation from the general rule and such deviation will serve the public interest, or where the particular facts make strict compliance inconsistent with the public interest.¹¹ The Commission may grant a waiver of its rules in a particular case if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest.¹² In addition, the Commission may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis.¹³

There is “good cause” to waive Section 25.131(j) in this case. As discussed above, Inmarsat seeks such waiver to allow GPS users—including consumers, businesses, and government users—to receive WAAS data from the I4F3 spacecraft, and thereby compute better positional accuracy than they could with standard GPS data alone. At the same time, because operations would be receive-only in nature, and coordinated as part of the U.S. GPS system, they would not pose any risk of harmful interference into licensed (or unlicensed) operations.

Notably, the I4F3 spacecraft is operated under the authority of the United Kingdom, which is a WTO member. At a minimum, then, the Commission should give careful consideration to the instant request for waiver, and ensure—as it would in the market access context—that the I4F3 spacecraft is treated in a manner similar to a U.S.-licensed spacecraft.¹⁴

¹⁰ 47 C.F.R. § 1.3.

¹¹ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

¹² *See WAIT Radio*, 418 F.2d at 1157.

¹³ *Id.*

¹⁴ *See Amendment of the Commission’s Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, Report and Order, 12 FCC Rcd 24094, at ¶¶ 21-22 (1997) (noting that “all WTO

Moreover, the I4F3 spacecraft would serve a quasi-governmental function for the U.S. government. The spacecraft would transmit WAAS data generated by the FAA, pursuant to a contract with the FAA, as part of the larger U.S. GPS system administered by the U.S. Air Force. Thus, special circumstances warrant a deviation from the general rule.

Significantly, the United States will retain necessary authority over the WAAS transmissions at issue, by virtue of: (x) existing Commission licenses that are used to uplink the data transmitted over the "L1" and "L5" GPS frequencies; and (y) Inmarsat's pending application for separate authority to operate a fixed earth station that would receive the "L1" and "L5" GPS frequencies. Grant of the requested waiver will not undermine the authority held by the Commission by virtue of these licenses.

In addition, the particular facts in this case make the strict enforcement of Section 25.131(j) inconsistent with the public interest. Notably, millions of portable navigation devices ("PNDs") capable of receiving WAAS data from the I4F3 spacecraft are sold in the U.S. each year—a figure that does not account for the millions of units already in use.¹⁵ These units are manufactured by numerous companies, in a wide variety of configurations. Licensing these terminals on an individual basis, or even through a series of blanket licenses, would be highly impractical; any attempt to do so would sharply limit the utility of WAAS and the accuracy of GPS, while imposing an enormous (and unnecessary) administrative burden on the Commission.

Members must provide [Most-Favored-Nation] treatment to like services and service suppliers of all other WTO Members" and that the U.S. has undertaken "specific commitments with respect to market access and national treatment."); *see also id.* at ¶ 173 (subjecting non-U.S. satellite operators to the same rules as U.S. satellite operators with respect to operations in the U.S. market).

¹⁵ *See, e.g., PND Sales to Hit Wall at 48M by 2015*, CBOUTLOOK (Feb. 12, 2010), available at <http://ceoutlook.com/pnd-sales-to-hit-wall-at-48m-by-2015/>.

Finally, grant of the requested waiver would not undermine the purposes for which Section 25.131(j) was adopted. In creating the "Permitted List" exception to Section 25.131(j) in 2003, the Commission recognized that Section 25.131(j) is intended to: (i) provide the Commission with a vehicle through which it may conduct a legal, technical and policy analysis of a non-U.S. satellite before allowing it to serve the U.S. market; and (ii) facilitate the Commission's ability to assert jurisdiction for enforcement purposes. In this case, the Commission already has granted market access for the I4F3 spacecraft, and in the course of doing so conducted a thorough market access analysis of that spacecraft.¹⁶ In addition, the Commission has placed the I4F3 spacecraft on the ISAT List, which is functionally similar to the Permitted List, and thereby concluded that this spacecraft meets the requirements set forth in Section 25.137 of the Commission's rules with respect to its L-band operations.¹⁷

As noted above, Inmarsat holds Commission authority to uplink WAAS data to the I4F3 spacecraft from the Paumalu Gateway, and the Commission is reviewing Inmarsat's application to modify the Paumalu Gateway to permit it to receive WAAS data from that spacecraft over the same "L1" and "L5" frequencies that are the subject of this waiver request. Therefore, the Commission has had and will have ample opportunity to review the particulars of Inmarsat's WAAS operations, and sufficient ability to ensure that those operations are consistent with the Commission's rules.

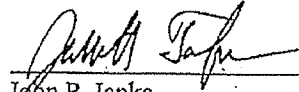
¹⁶ See IBFS File No. SES-AFS-20080410-00448.

¹⁷ See *Public Notice: Satellite Communications Services Information Re: Actions Taken*, Report No. SES-01097 (IB Dec. 24, 2008); *Inmarsat, Inc. Request to Streamline Licensing of L-band Mobile-Satellite Service Terminals Using Inmarsat Satellites as Points of Communication*, Order, 23 FCC Red 15268 (2008). See also 47 C.F.R. § 25.137.

III. CONCLUSION

For the reasons set forth herein, Inmarsat respectfully requests that the Commission waive Section 25.131(j) of the Commission's rules to permit GPS terminals to receive transmissions from the I4F3 spacecraft over "L1" and "L5" GPS frequencies (1573.42-1577.42 MHz and 1166.45-1186.45 MHz, respectively) without obtaining individual licenses to do so. As detailed above, this request is expressly subject to the Commission having *separately* granted United States "market access" in these frequencies to the I4F3 spacecraft, which operates under the authority of the United Kingdom.

Respectfully submitted,



John P. Janka
Jarrett S. Taubman
LATHAM & WATKINS LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, D.C. 20004
(202) 637-2200

Counsel for Inmarsat Hawaii Inc.

Diane Cornell
Director
Inmarsat Hawaii Inc.
1101 Connecticut Avenue, N.W.
Suite 1200
Washington, D.C. 20036
Telephone: (202) 248-5155

Christopher J. Murphy
Senior Director, Government Affairs
Inmarsat, Inc.
1101 Connecticut Avenue, N.W.
Suite 1200
Washington, D.C. 20036
Telephone: (202) 248-5158