

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
The FCC’s Advisory Committee for the)
2007 World Radiocommunications) IB Docket No. 04-286
Conference; Recommendations on WRC-)
07 Issues)

COMMENTS OF ORBCOMM INC.

ORBCOMM Inc. (“ORBCOMM”), through its attorneys, hereby comments in support of one of the recommendations presented by the Commission’s Advisory Committee for the 2007 World Radiocommunications Conference (“WRC”).¹ In particular, ORBCOMM urges the Commission to support Document WAC/058 – a proposal from the National Telecommunications and Information Administration (“NTIA”) to seek modifications to the domestic and international Table of Frequency Allocations to clarify the primacy of Automatic Identification System (“AIS”) operations on AIS Channel 2 (the 162.0125-162.0375 MHz

¹ *The FCC’s Advisory Committee for the 2007 World Radiocommunications Conference; Recommendations on WRC-07 Issues*, IB Docket No. 04-286, Public Notice, DA 05-1774, Released June 27, 2005. In another proceeding, the Commission is currently examining domestic limits to non-AIS use of VHF maritime Channels 87B (161.975 MHz) and 88B (162.025 MHz). *Amendment of the Commission’s Rules Regarding Maritime Automatic Identification Systems*, FCC 04-207, released October 15, 2004 (hereafter cited as “*WT Docket No 04-344 NPRM*”). ORBCOMM participated in that proceeding as well, urging the Commission to limit non-AIS services. See Reply Comments of ORBCOMM, filed January 31, 2005.

band), and additionally to permit satellite-based AIS services on that AIS channel.² These changes are needed in order to allow AIS to be used for critical homeland security functions without risk of interference from maritime mobile services.

ORBCOMM is a wireless telecommunications company that provides reliable, cost effective data communications services to customers around the world through its unique low-earth orbit (“LEO”) satellite network and global ground infrastructure. A diverse customer base uses ORBCOMM services to track, monitor and control mobile and fixed assets including trucks, containers, barges, fishing vessels, locomotives, heavy machinery, pipelines, oil wells, energy meters and storage tanks anywhere in the world.

Of particular relevance to this proceeding, ORBCOMM is working with the Coast Guard to develop and supply AIS capability over its global satellite system.³ Such an extension of the Coast Guard’s AIS capability will significantly expand the Coast Guard’s ability to identify and track ships beyond the limited range of terrestrial monitors. Moreover, the unique

² See Letter from Frederick R. Wentland to Donald Abelson, dated April 15, 2005.

³ See *Press Release*, “ORBCOMM Receives U.S. Coast Guard Contract to Develop Satellite Technology,” June 3, 2004 (available at http://www.orbcomm.com/wwwroot/public/news/readNewsArticle.jsp?ARTICLE_ID=80).

design of ORBCOMM's low-earth orbit satellite system will provide this functionality efficiently and economically.

There can be no legitimate dispute with regard to the importance of AIS. As the Commission recognized in WT Docket No. 04-344, AIS is an integral component of Maritime Domain Awareness – the Coast Guard's responsibility to monitor vessels as part of its homeland security duties.⁴ As detailed in the Comments submitted by the NTIA in that proceeding, AIS is essential to support the Coast Guard's efforts to utilize maritime domain awareness to protect our marine transportation system, and to deny terrorists' use or exploitation of those systems.⁵ AIS will assist the Coast Guard in saving lives, assisting people in distress, interdicting illegal immigrants and illicit drugs, responding to spills and inspecting foreign vessels (as required by the Maritime Transportation Security Act of 2002). Moreover, as NTIA's recommendation to the WRC Advisory Committee stressed, augmentation of the current terrestrial system by satellite-based capabilities will greatly enhance these critical monitoring functions.

ORBCOMM's integration of AIS capabilities into its LEO satellite system pursuant to the contract with the Coast Guard will significantly extend the Coast Guard's ability to monitor vessels on a truly global basis. The Coast Guard's operational goal is persistent wide area surveillance of

⁴ *WT Docket No 04-344 NPRM* at ¶ 7.

⁵ NTIA Comments in WT Docket No. 04-344 at pp. 7-8.

passenger and cargo vessels over 65' in length within 2,000 nautical miles of the United States, a mandate of the Maritime Transportation Security Act of 2002.⁶ ORBCOMM's satellite system is uniquely capable of fulfilling that mission – terrestrial stations simply cannot provide such reach. The Commission should seek agreement at WRC-07 to accommodate such satellite-based AIS services.

In addition, the Commission should seek global primacy for AIS for the 162.025 channel. Given the broad receive “footprints” of satellites providing AIS monitoring, use of this channel for non-AIS maritime mobile service is likely to interfere with the AIS surveillance. Due to the satellite receive antenna design and the altitude of the satellites, the ORBCOMM satellite receivers will pick up signals over a circular area approximately 2,700 nautical miles across. In addition, as a result of the LEO deployment, ORBCOMM's satellites' footprints constantly move relative to the surface of the earth, and therefore cannot be designed to encompass only the shorelines and the high seas. Thus, there will be many times that ORBCOMM's satellite receive footprint will extend significantly inland while simultaneously covering ships at sea. As a consequence, even if AIS Channel 2 is limited to non-AIS maritime mobile service within a country's borders, the ORBCOMM satellites would pick up non-AIS signals, and be unable to

⁶ NTIA Comments in WT Docket No. 04-344 at p. 24. *See also*, Testimony of Mr. Jeffrey P. High before the Subcommittee on Coast Guard & Maritime Transportation, U.S. House of Representatives, October 6, 2004.

monitor AIS signals because of such unwanted “noise” and congestion. This would make it difficult, if not impossible for the Coast Guard to fulfill its wide area surveillance goal, and hamper its homeland security and public safety mission. ORBCOMM thus fully supports NTIA’s request that the Commission support changes at WRC-07 to allow for exclusive AIS operations on AIS Channel 2, including satellite-based services.

Respectfully submitted,

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