

ORBCOMM License Corp.
Experimental Application
Response to Question # 4

ORBCOMM License Corp. is requesting experimental authority with regard to a satellite it will be launching in the second quarter of 2006 in order to fulfill a contract with the United States Coast Guard (Contract # HSCG23-04-C-ADA001). The satellite is intended to provide a “real world” demonstration of how the ORBCOMM satellite system can support the Coast Guard’s maritime Automatic Identification System (“AIS”) program. ORBCOMM is working with the Coast Guard to develop and supply AIS capability over its global satellite system. 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 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 its *NPRM* considering this service,¹ AIS is an integral component of Maritime Domain Awareness – the Coast Guard’s responsibility to monitor vessels as part of its homeland security duties. 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. 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).

In order to fulfill this contract, ORBCOMM will be placing an additional receiver (in the 161-163 MHz band) on what is otherwise a “standard” replacement satellite for the already-licensed ORBCOMM system (S2103). The satellite will be launched to an altitude of approximately 950 km, at an inclination of 83 degrees. The information obtained from the AIS receiver will be downloaded to the Coast Guard via ORBCOMM’s already-licensed feeder link transmitters operating in the 137–138 MHz band.

Under the Commission’s Rules, as an NVNG licensee, ORBCOMM is permitted to launch “technically identical” replacement satellites without prior Commission approval, 47 C.F.R. § 25.142(a)(5). However, the Commission has not yet had occasion to discuss in detail what constitutes a “technically identical” replacement satellite for the NVNG satellite service.² Thus, it is not clear whether this ORBCOMM satellite would

¹ *Amendment of the Commission’s Rules Regarding Maritime Automatic Identification Systems*, 19 FCC Rcd 20071 (October 15, 2004).

² ORBCOMM has found only one case in which the FCC addressed this issue, and it did so summarily. *VOLUNTEERS IN TECHNICAL ASSISTANCE*, 12 FCC Rcd 3094

be considered “technically identical” – its transmission characteristics are “technically identical,” but it will contain an additional receiver (and operate in a slightly different plane), and so presents no greater risk of interference and requires no additional coordination. However, in an abundance of caution, ORBCOMM is seeking this experimental authority to ensure that this satellite is authorized by the Commission, and it is the “technically identical” transmitting equipment that is listed in the application. The “experimental” portion of the payload is purely a receiver, and is therefore not listed.

As noted above, the ORBCOMM satellite will demonstrate the capability of the ORBCOMM system to support the Coast Guard AIS program, which could lead to subsequent refinements of the ORBCOMM satellite constellation to incorporate these capabilities. As a result, grant of this application will support critical homeland security needs and well serve the public interest. ORBCOMM therefore requests expeditious grant of this application.

(1997) at ¶ 12 (Commission determined that VITA’s replacement satellite did not require prior approval because it was technically identical -- “VITASAT-1R will use the same frequencies as VITASAT-1, will have the same bandwidth specifications, and will be operated in compliance with the conditions previously established by the National Telecommunications and Information Administration (NTIA) for VITASAT-1”).