

QUESTION ITU-R 96-2/5*,**

**Improved efficiency in the use of the band 156-174 MHz by stations
in the maritime mobile service with a view to enhancing maritime
safety and port security**

(1990-1997-2007)

The ITU Radiocommunication Assembly,

considering

- a) that the VHF radio spectrum available for use by the maritime mobile service is limited and that significant congestion exists in many parts of the world;
- b) that existing and new technologies different from those currently employed in the maritime mobile service may enable more efficient use of the available spectrum and accommodate foreseen future growth;
- c) that the introduction and implementation of new technologies will change how current technical- and operational maritime safety and port security requirements are defined;
- d) that the introduction and implementation of new technologies may have a considerable economical impact on the maritime community;
- e) that Recommendation ITU-R SM.1046 defines a procedure for assessing spectrum utilization efficiency;
- f) that the Automatic Identification System (AIS), as described in Rec. ITU-R M.1371, is designed for use aboard ships and at coast stations to improve maritime safety, port security and efficiency of navigation, and to help protect the marine environment;
- g) that the installation and use of AIS equipment is required under the International Convention on Safety of Life at Sea (SOLAS) aboard ships engaged in international commerce of 300 gross tonnage or more;
- h) that there exists an emerging need to detect and identify ships at sea at larger distances from coastlines than can be accomplished by normal terrestrial-based communications systems;
- j) that satellite detection of AIS messages using low-orbiting satellites may offer a means of detecting and identifying ships equipped with AIS at any location on the Earth;
- k) that the frequencies used by AIS are shared worldwide on a primary basis with other fixed and mobile radiocommunications services;

* This Question should be brought to the attention of the International Maritime Organization (IMO).

** Former Question ITU-R 96-2/8.

l) that the IMO Subcommittee on Radiocommunications and Search and Rescue (COMSAR 10/6) has noted that further study was needed on the questions of an additional AIS channel for satellite detection, and the means for ensuring that adequate protection could be afforded to AIS channels designated for the detection of AIS,

decides that the following Questions should be studied

- 1 What are the maritime mobile service's long-term maritime safety and port security requirements?
- 2 What would be the impact of the implementation of these requirements on existing VHF communications?
- 3 What improvement in spectrum utilization and operational capabilities can be achieved by use of various new radio technologies or techniques in the VHF maritime mobile service?
- 4 What technical and operational characteristics should be recommended for international application?
- 5 What impact will such technologies or techniques have on the existing VHF maritime or other co-channel service arrangements?
- 6 Which transition scenarios would be appropriate to introduce and implement any new technology in the current VHF-band and what would be the impact on distress and safety communication in the VHF-band?
- 7 What are the factors that describe the technical feasibility and operational limitations of satellite detection of AIS messages using low-orbiting satellite technology?
- 8 What are the relevant technical factors and constraints for satellite detection of AIS messages due to sharing with other radiocommunications services?
- 9 What are the spectrum options to overcome any identified technical limitations or spectrum sharing constraints of satellite detection of AIS messages, including possible identification of a third channel accessible to AIS equipment that can be dedicated to satellite detection?

further decides

- 1 that the results of these studies should be included in one or more Recommendations;
- 2 that the above studies should be completed by 2009***.

Category: S2

*** The completion of Recommendations which answer this Question should not delay the development of shipborne Automatic Identification Systems (AIS) now being prepared in IMO.