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SATELLITE APPLICATION OF THE LAND-SEA-AIR-SPACE INTEGRATED MARITIME TRAFFIC
SAFETY AND RESCUE SYSTEM IN CHINA**Abstract**

China has always been making great efforts to fulfill the obligation of *the International Convention on maritime search and rescue, 1979*. According to *the Outline of National Integrated Transportation Plan*, China will establish a Land-Sea-Air-Space integrated traffic safety and rescue system by 2035. A proposal is being canvassed that the maritime administration would set up a new vessel traffic services system (VTS) in broad sense, with taking advantage of all facilities of land, sea, air, especially space. Actually the GPS, INMARSAT, COSPAS-SARSAT are playing an important role as part of space infrastructure in China's maritime traffic safety system. With the rapid development of the aerospace industry, more and more satellite systems are available in maritime affairs, for instance, the International Maritime Organization (IMO) has approved IRIDIUM satellite to carry out the Global Maritime Distress and Safety System (GMDSS) service, and BeiDou Navigation Satellite System (BDS) has been included in the Worldwide Radio navigation System during the IMO 94th session in London Nov 17-21, even suggestions came up that the maritime administration should improve their maritime safety system by launching VSAT satellites.

In this paper, satellite application is discussed on the aspects of communication, navigation, remote sensing and emergency rescue. Firstly, this paper analyzes the maritime demands of Land-Sea-Air-Space integrated traffic safety and rescue system, summarizes the requirements of maritime management, maritime alarm, search and rescue, navigation and communication, etc. Then sorts out the functions and performance of various satellite systems, puts forward the functional requirements and indicators of the safety and rescue system in China, also the possibilities and ways of participation. Finally, the future development and application of satellite in maritime affairs was prospected, suggestions on development strategy and business model of service providers are also involved.