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RESEARCH ON THE APPLICATION AND DEMAND OF MARITIME AFFAIRS UNDER THE PNT SYSTEM BASED ON BEIDOU NAVIGATION SYSTEM

Abstract

As the most important information which could be provide by national PNT system, position navigation and timing have always been an important research area in nautical technology. In order to provide better management and services, maritime administration has also established multiple systems including marine navigation, marine search and rescue, prevention of marine pollution by ships, emergency communication, such as Vessel Traffic Service(VTS), Automatic Identification System(AIS), VHF communication system and even VSAT satellite communication system. In China, these systems are progressively compatible with the Beidou navigation system, therefore these systems can be regarded as integral parts of PNT system (i.e. enhancement, supplementary or integration), meanwhile, these systems need to get corresponding information from the PNT system to ensure their time synchronization and data accuracy between systems in different regions. The national PNT system of China has been considered as a multi-system integrated based on Beidou navigation system. From the perspective of maritime affairs and application, this paper analyzes the demands of integration of maritime information facilities and PNT system, points out the maritime user needs that should be considered in the construction of PNT system in China, puts forward the application prospect of China's PNT system in maritime affairs. It has a significant reference value to the construction of China's PNT system and the development of maritime information systems in the near future.