

ABSTRACT SUBMISSION –– SOUMISSION DE RESUME

**Topic No.: / Sujet n° :2or / ou**

**proposed topic / sujetproposé:A novel Navigational Data system using e-Navigation Framework**

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ABSTRACT / RESUME:

The Navigational Data (NAVDAT) is a novel shore-based digital broadcasting system , which has very outstanding performance in long distance, and is working on the 495-505 kHz, or medium frequencies. In particular, a NAVDAT system can be only used as a one-side data-link. Hence, it is basically designed as a maritime communication device, which broadcasts navigational notices and other information to the ships in the available area. In general, the possible forms of information transmitted by NAVDAT include texts, binary files, and images. Therefore, it can be used to updateelectronic chart conveniently. In the field testing, one single NAVDAT base-station is capable of covering an area as far as A2 distance withappropriate algorithms. NAVDAT systems are practical for broadcasting maritime safety information, which is exactly a vital part of a modern GMDSS system and e-Navigation. Since 2013, Donghai Navigation Safety Administration (DNSA) has taken the lead in the establishment and industrialization of NAVDAT systems. Facing the complex environment of the Yangtze river estuary waters, DNSA has encountered many difficulties, including how to meet the high demands of vessels, the design of NAVDAT client terminals, the optimization of NAVDAT base-stations and the updating of relevant facilities. From 2016, DNSA has formally started NAVDAT service in several test-beds, which generally broadcast safety notices and received very good response from navigators.  Thispaper outlines the framework of the NAVDAT system of China, and accomplishes the corresponding supply/demand analysis of users, which can be a guideline for the further construction.