

ABSTRACT

A positioning and recording information system for rescue at sea implemented with a multi-hopping technique but not the Global Positioning System (GPS). At least two stations transmit navigation information to one another in the form of data packets. The data packets are received and temporarily stored in the stations. The steps of transmitting, receiving and storing are repeated to form a network topology that records a track of a station mounted on a ship. When the ship meets with misfortune at sea, the latest data packet transmitted by the ship provides a position near the location of the ship accident. Consequently, the rescue can be started immediately, and efficiency of a rescue operation is improved when compared to traditional ways of estimating a ship's position.