



GPS Tracking System for Sea Going Vessels

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Abstract

Fishing in Sri Lanka takes place all around the Sri Lankan coast, but primarily within the continental shelf which has a width rarely extending beyond 40 km and averaging 25 km, with a total area of about 30,000km². This is around 6 percent of the total area of our EEZ (Exclusive Economic Zone). Even though there is an allocated area for Sri Lankan fishermen to do their fishing, the multiday large fishing vessels tend to fish in other EEZs which belongs to our neighboring countries. This is called IUU (Illegal Unreported and Unregulated) fishing. This crossing of fishing borders has become a serious commercial issue. In order to minimize IUU fishing there is an already developed system called VMS, but the cost of that system is very much high. So as an alternative, we develop this system called VTS (Vessel Tracking System). The development is a stand alone system based on GPS and gives an independent recording of the sea vessel fishing voyage and maps the complete voyage to verify that no fishing has taken place in the IUU zones. When the device detects the vessel has started a fishing trip, it starts to collect location data and store them in the memory chip at each 6 hour interval. After the vessel reaches the port, it detects it as the end of the fishing trip and transmits all collected data automatically using GPRS with an optimized custom defined protocol to the central web server. Then the web server will store extract data and store them in a SQL database server. The authorized officials can observe data and take detailed reports using the web application.

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