

## Information Requirements for Vessel Traffic Service Operations

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**Abstract :** Operators of vessel traffic service (VTS) center provides three different types of services; namely information service, navigational assistance and traffic organization to vessels. To provide these services, operators monitor vessel traffic through computer interface and provide navigational advice based on the information integrated from multiple sources, including automatic identification system (AIS), radar system, and closed circuit television (CCTV) system. Therefore, this information is crucial in VTS operation. However, what information the VTS operator actually need to efficiently and properly offer services is unclear. The aim of this study is to investigate into information requirements for VTS operation. To achieve this aim, field observation was carried out to elicit the information requirements for VTS operation. The study revealed that the most frequent and important tasks were handling arrival vessel report, potential conflict control and abeam vessel report. Current location and vessel name were used in all tasks. Hazard cargo information was particularly required when operators handle arrival vessel report. The speed, the course, and the distance of two or several vessels were only used in potential conflict control. The information requirements identified in this study can be utilized in designing a human-computer interface that takes into consideration what and when information should be displayed, and might be further used to build the foundation of a decision support system for VTS.

**Keywords :** vessel traffic service, information requirements, hierarchy task analysis, field observation

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