

ABSTRAK

Judul : **Sistem Monitoring Keamanan Ekspedisi Metode Port-To-Port Berbasis Sistem Informasi Geografi (SIG)**
Nama : Albani Soeleman
Program Studi : Teknik Informatika

Keamanan dan keselamatan kargo freight telah menjadi perhatian bisnis transportasi baik nasional maupun internasional. Kejahatan kargo merupakan tantangan terbesar dalam bisnis rantai-pasok (supply chain) maka solusi yang tepat untuk mengatasi isu keamanan dan keselamatan pada aset kargo adalah menggunakan Sistem Monitoring Keamanan Ekspedisi Metode Port-to-Port Berbasis Sistem Informasi Geografis (Global Information System). Sistem akan secara real-time dengan mengirimkan laporan melalui jaringan komunikasi data ke kantor pusat. Penelitian ini difokuskan pada penerapan sistem monitoring dan telusur-jejak (tracking), dispatch (bongkar muat kargo), dan otoritas akses kedalam operasional kargo. Metode pengembangan sistem yang digunakan yaitu *Waterfall System* dan perancangan sistem dengan diagram UML. Operasional ekspedisi pada sistem ini menggunakan teknologi GPS tracking dilengkapi dengan digital lock. Dimana, pergerakan aset kargo direkam secara real-time termasuk lokasi pengambilan, lokasi pengeluaran kargo, status buka dan tutup setiap gembok pintu kontainer ketika aktivitas bongkar muat logistik dilapangan.

Kata kunci : *Sistem Monitoring Keamanan Ekspedisi, Digital Lock, Kargo.*

ABSTRACT

Title : Expedition Security Monitoring System on Port-To-Port
Method Based on Geographic Information System

Name : Albani Soeleman

Study Program : Information Technology

The safety and security of cargo freight has become a concern for both national and international transportation businesses. Cargo crime is the biggest challenge in the supply chain business, so the right solution to address the security and safety issues in cargo assets is to use a GIS-based Port-To-Port Expedition Safety Monitoring System (Global Information System). The system will be in real-time by sending reports through the data communication network to the central office. This research is focused on the application of tracking and traceability systems (tracking), dispatch (loading and unloading of cargo), and access authority into cargo operations. The system development method used is Waterfall System and system design with UML diagrams. Expedition operation on this system uses GPS tracking technology equipped with digital lock. Where, cargo asset movements are recorded in real-time including the location of the pick-up, the location of the cargo dispatch, the open and close status of each door container padlock when loading and unloading activities of the logistics in the field.

Keywords : *Expedition Security Monitoring System, Digital Lock, Cargo*