Intermodal Container Terminal Simulation Model

International sea-freight container transportation has grown dramatically over the last years and container terminals represent nowadays a key actor in the global shipping network. The growths of containerization and transporting goods in containers have created many problems for ports. Therefore, container terminals face the challenge to cope with the growing number of containers. To meet these challenges, the container terminals have to innovate and often automate equipment and optimized their logistic processes.

The objective is the minimization of the total (weighted) service time for container, defined as the time elapsed between the arrival the ship in the harbor and the completion of handling the container to the customer.

The skills needed to achieving the main objective of this work model developer and programming language.

This work including the following tasks:

Review the most recent contributions in the operations research (OR) literature concerns container terminal optimization.

Develop simulation model to investigate the main activities in the intermodal Container terminal including the following Key Performance Indicator:

- Quay Crane utilization/ throughput.
- Berth utilization measures/ ship service time
- Yard Crane / land utilization-storage productivity.
- Gate throughput measures how many containers each hour and each lane.
- Truck turnaround time.

Contact
Fathi Rhoma
Tl. 02033793004
Email: fathi.rhoma@uni-due.de
Container Terminal Simulation Model

Sime-Trailers/Train Wagen

Shuttles

YC

YQ Queue

QC

QC queue

empty fule

Ship

Fathi.rhoma@uni-due.de