A DECISION SUPPORT SYSTEM TO MITIGATE THE IMPACT OF BERTH ERRORS

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The term berth error can be used to define the difference between the berth schedule determined 'a priori' with the information known beforehand and the schedule that has to be planned dynamically during the planning horizon. No error means the schedule is being performed as planned; an error disturbs one or more processes at a container terminal which may or may not influence other logistic partners, and provokes the replanning of related operations. In the worst case one berth error may lead to subsequent berth errors at other container terminals which are included in the route of the late coming ship. The occurrence of such errors is often dependent on the punctuality of ships, but also on the availability of berths fit for necessary performances.

Decision Support System (DSS) with an integrated Information System

Example of Chosen Solution based on Key Performance Indicators (KPIs)
- Extra costs
- Fulfilment of contractual deadlines
- Total time to process the combination of actions
- Reduction of the impact in percent

Resulting Schedule

Concept of a framework
- Change of - time of arrival - available equipment
- Data from shipping companies
- Data from simulation
- Information on available resources

Terminal Processes

Berth Error Schedules

Examples of Berth Errors at the Container Terminal Burchardkai