**P.P. Janssen** *Uitbreiding van het CTS container terminal simulatie model van ECT.*
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Europe Combined Terminals (ECT), in Rotterdam, is one of the largest stevedoring companies in the world. ECT has developed a simulation program for capacity calculation and dimensioning of container terminals.
The optimization of existing terminals or the development of new terminals asks for high investment on long term. CTS supports this sort of problems, because of its high level of aggregation. Therefore in the model only container flows are modelled rather than individual containers.

The purpose of this study is to analyze suggestions from users concerning improvements of the current CTS-model and if possible add these improvements to the model.

The next changes are included in the current CTS-model:

1. Transshipment containers.
2. Connection between deepsea ships and feeders.
3. Distinction of container types, e.g. empty and full containers.
4. More types of external transportation-equipment, e.g. trains and barges.
5. Capacity restriction of the stack-equipment.
6. The possibility to have more then one terminal, with different yards and different quays. From these changes an extended simulation model with extra functionality has resulted. Comparison with the old model shows that the extended model matches with the old model. But in the new model one must specify the means of transportation very carefully.

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