MULTI-AGENT SIMULATION FOR ANALYSING INLAND CONTAINER TERMINAL NETWORKS

Edith Schindlbacher\textsuperscript{(a)}, Manfred Gronalt\textsuperscript{(b)}, Hans Häuslmayer\textsuperscript{(c)}

\textsuperscript{(a), (b)} University of Natural Resources and Applied Life Sciences Vienna, Feistmantelstraße 4, 1180 Vienna, Austria
\textsuperscript{(c)} h2 projekt.beratung KG, Obere Viaduktgasse 10/7, 1030 Vienna, Austria

\textsuperscript{(a)} edith.schindlbacher@boku.ac.at,  \textsuperscript{(b)} manfred.gronalt@boku.ac.at,  \textsuperscript{(c)} hh@h2pro.at

ABSTRACT

Using a multi-agent system, representing the nodes in the network of the Austrian inland container terminals, and using system dynamics to depict the terminals’ internal structures and processes in an aggregate manner, we perform network flow analyses of intermodal load units in case of unforeseen disturbances. Comprehensive case studies of disturbances and irregularities in the flow of goods in Austrian container transport chains and transport systems are the basis of the definition of several risk scenarios, and are used in order to investigate the robustness of the network.

Keywords: multi-agent simulation, network flow analyses, disruption risks, inland container terminals
REFERENCES


