Models of intermodal node representation

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Abstract

This paper analyses three different approaches of supply representation for intermodal nodes and proposes some functional and topological models for the representation of ports and Freight Villages. Besides in the paper functional and topological representation of container port and freight village are proposed.

Further research is directed to the specification and calibration of cost functions, useful for cost estimation for different components of node network, with a view to facilitate the analyses of freight mobility on multimodal large networks.

Keywords: Intermodal node; Supply representation; Functional representation; Graph; Cost functions.

1. Introduction

Intermodal nodes, which are different in structure and functions, are essential elements of the transport network and their functionality considerably affects the overall efficiency of the intermodal chain.

A basic element for the implementation of procedures to optimize the global processes of intermodal logistic node management is supply representation.

In particular, intermodal terminals can be represented following three different approaches: functional, topological (graph theory) and analytical (cost functions).

This paper analyses the three different approaches of supply representation for intermodal nodes and proposes certain functional and topological models for the representation of ports and of the Freight Villages.

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