Modeling Methodologies for Optimization and Decision Support on Coastal Transport Information System (Co.Tr.I.S.)

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Abstract : The aim of this paper is to present the optimization methodology developed in the frame of a Coastal Transport Information System. The system will be used for the effective design of coastal transportation lines and incorporates subsystems that implement models, tools and techniques that may support the design of improved networks. The role of the optimization and decision subsystem is to provide the user with better and optimal scenarios that will best fulfill any constrains, goals or requirements posed. The complexity of the problem and the large number of parameters and objectives involved led to the adoption of an evolutionary method (Genetic Algorithms). The problem model and the subsystem structure are presented in detail, and, its support for simulation is also discussed.