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TITLE OF DIPLOMA THESIS:

Supply chain time scheduling on a multiple project environment

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ABSTRACT

Time scheduling of a supply chain on a multiple project portfolio environment, examines every subcontractor /supplier, that participates in the different projects, supply chain management while taking into consideration, the desirable time constraints that processes' time windows suggest. At the same time, suppliers, due to limited production capability, add more problems concerning available quantities and early feasible delivery time. An introduction to the characteristics of supply chain, and to the factors that affect their programming, is made at current thesis. Next, two different model types for solving the supply chain time scheduling problem, are materialized and presented, a Linear Programming model and a Greedy Algorithm Solution. For this reason both of them are implemented and analyzed in Premium Solver for Excel and C++ environment respectively. For comparison needs, both of them are applied to case study , implemented for this purpose. This case study fulfills every demand, within time and as low cost as possible. Application results analysis and comparison extracts some conclusion about their operation, validity but most emphasize is made upon their technical characteristics and the implementation difficulties of each model.

KEYWORDS

Supply Chain Time Scheduling, Multiple projects, Greedy algorithm, Cost minimization, Linear problem, Desirable delivery time