

Abstrakt

Teorie skladu je důležitou součástí některých druhů podnikání. Slouží k efektivnímu snížení nákladů spojených s objednáváním a skladováním zboží. V této práci jsou popisovány algoritmy a modely, které jsou používány k určení optimálního pohybu zboží ve skladu. Také je prezentováno několik rozdílných metod určených k předpovědi poptávky. Tyto algoritmy a metody jsou aplikovány na reálná data. Cílem je ukázat způsob, jakým lze dosáhnout optimálního pohybu zboží ve skladu.

Declaration of Authorship

I hereby proclaim that I wrote my bachelor thesis on my own under the leadership of my supervisor and that the references include all resources and literature I have used.

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Prague, July 22, 2014

Signature

Acknowledgment

I would like to express my deepest gratitude to my supervisor, RNDr. Michal Červinka, Ph.D. for helpfulness and guiding. I am also very grateful to my mother and her colleague who provided me the data for the case study. Last but not least I deeply thank to my family and friends. Without their support this thesis could have never been written.

Bachelor Thesis Proposal

In the thesis, the author will describe models suitable for modeling utilization of inventory capacity, material consumption (demand) and system of purchase orders. First, the author will summarize model with known demand, fixed or variable. Then, based on several time-series prediction techniques, the author will generalize the model to incorporate also stochastic demand. In the last part, the author will illustrate described solution techniques on an academic or a practical example. The theoretical part of the thesis will be based primarily on [1] and [2] and references therein.

Preliminary structure of the thesis:

1. Introduction
2. Inventory Control Problem with Constant Demand
3. Inventory Control Problem with Variable Demand
4. Methods of Demand Estimation and Prediction
 - 4.1. Moving Averages
 - 4.2. Exponential Smoothing
5. Numerical Example - Simulation
6. Conclusion

Literature:

- [1] I. Morgenstern: Introduction Theory of Inventory Control, Faculty of Physics, University of Regensburg, 2007.
- [2] F.S. Hillier, G.J. Lieberman: Introduction to Operations Research, 9th edition, Prentice Hall, 2010.

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