

Master Thesis Announcement

Multi Echelon Optimization with upstream demand modeling

Synchron

Synchron is the global leader in inventory management software targeting the manufacturing aftermarket and distribution companies with customers like Volvo, Atlas Copco, Deutsche Bahn etc. Headquartered in Stockholm with offices in Europe, US and Asia Synchron combines a passion for innovation, business process expertise, and a global collaborative workforce to deliver immediate and measurable improvements for its clients.

Thesis Background and Subject

Synchron and the LTH PM-institution has a long history of collaboration on Multi Echelon Optimization where Synchron have successfully implemented LTH's multi echelon-model into its product.

One major obstacle for customers to adopt Synchron Multi Echelon Optimization is the occurrence of what is called "up-stream demand", i.e. direct customer demand taking place at the upper echelons of a supply chain. As these locations typically receive lower service levels by the optimization algorithm this is not compatible with the service that direct customer demand is commonly modeled with in practice.

It is interesting to notice that this problem also addresses challenges that occurs with the increasing e-commerce business for manufacturing companies where demand is being directed towards central warehouses.

The upstream demand-problem was addressed in a master thesis 2015 by modeling a "critical level policy". The thesis showed promising results but room for improvement. LTH has evaluated alternations of the model since and this master thesis should simulate, analyze and evaluate the updated model.

The thesis will be carried out together with Synchron, LTH and one of Synchron's customers. It requires both the analytical skills to work with the direct problem, but also the professional skills to work in a multi-stake holder project with global companies. Simulation will be performed on real customer data.

Practicalities

Location: Stockholm or Malmö

Compensation: Yes

Desired time period: Autumn 2017

Contact: mikael.blom@synchron.com

PHONE:

MOBILE:

FAX:

E-MAIL:

www.synchron.com

:

:

Synchron maximizes global supply chain performance, easily. Our groundbreaking IT solution, leveraging existing IT infrastructure, is rapidly implemented. Within six to twelve months, it yields performance improvements of 20-30% in three major areas: customer service levels, supply chain process efficiencies and stock level reductions.

We deliver superior results to our customers through combining software expertise with extensive experience from selected industry sectors within manufacturing and distribution.

Synchron delivers five key benefits: The ability to change a global business overnight, for example through connecting and disconnecting business relationships. The opportunity to increase service levels while lowering inventory, thanks to industry-leading algorithms. Increased lifespan of current IT investments through leveraging existing business process logic and IT systems. Quick results since implementation takes just three to six months. Access to industry thought leadership – we designed a revolutionary IT solution and continue ahead.

To stay ahead, many world-leading global companies have chosen Synchron: Alfa Laval, Atlas Copco, Electrolux, Metso, Renault Trucks, Sandvik, Smiths Aerospace, Tetra Pak, Toyota, Trelleborg, Volvo and VW.

Synchron has offices around the world.

Read more at www.synchron.com