

RFID IN ECOMMERCE SUPPLY CHAIN MANAGEMENT

Nikhil Vartak

Flipkart Internet Private Ltd.
Bangalore, Karnataka 560034, India
nikhil.vartak@flipkart.com

Swadesh Srivastava

Flipkart Internet Private Ltd.
Bangalore, Karnataka 560034, India
swadesh.srivastava@flipkart.com

Abstract

In large scale supply chain logistics, RFID (Radio Frequency Identification) technology is becoming a critical for enabling world-class efficiency, reliability, hands-free & pilferage proof operations.

Supply chain in ecommerce differs from that of retail in terms of the dynamics and complexity of order and fulfillment process. In following paper we have addressed various challenges faced in a typical ecommerce setup in India by use of RFID technology:

1. Losses due to pilferage in transit and in warehouse as no item-level trace-and-track is available
2. Need for faster picking and putting process in the warehouse and easier product location changes in warehouse basis demand trends
3. Not having near-real-time and accurate stocktake in warehouse for availability promise to consumer & accurate inventory management
5. Lack of automatic reconciliation and batch-level hand-shake between various nodes in supply chain, that can speed up process and reduce manpower dependency
6. Need for faster and bulk inter warehouse transfer of goods as per demand forecasting

This paper is a result of two years of research done in collaboration with world's best RFID technology players on developing and optimizing RFID tags and hardware; and multiple pilots to reach the 100% reliability & accuracy at best speed and lowest cost for item-level trace-and-track in ecommerce supply chain in India.

Keywords: RFID, IOT, Automated Ecommerce, Best Customer Experience, Item-level trace-and-track

Biography

Nikhil Vartak is currently working as Manager in Automation Design department in Flipkart Internet Pvt Ltd and is involved with end-to-end operational efficiency improvement, through automation in field of material handling and sortation. He has completed his MBA from SP Jain College of Management and Research, Mumbai & a Degree of Advanced supply chain management from Michigan State University – Eli Broad College of Business. His bachelor studies were in Electronics Engineering and has worked in Industrial and ecommerce automation domain from past 7 Yrs.

Swadesh Srivastava is currently Director of Automation Design at Flipkart. Prior to Flipkart, he has worked at leading technology companies like Intel, Lam Research and Apple in the US. He is a

Proceedings of the International Conference on Industrial Engineering and Operations Management Rabat, Morocco, April 11-13, 2017

technology leader with diverse global experience across R&D, Product Development, Design & Operations in different industries such as ecommerce logistics, consumer electronics, semiconductors, high-tech equipment. He has a PhD from University of Minnesota and B.Tech from Indian Institute of Technology. Swadesh is also active in non-profit sector, playing executive & entrepreneurial roles.