Expeditors International: Internet of Things for Global Supply Chain

-Varun Darak

Introduction: The project researches market for off the shelf commercially available new advanced trackers and sensors for their Ocean solutions to help them venture into a new market.

Problem Statement: The new trackers and sensors should meet the challenges of Ocean shipping and the business requirements of Expeditors International.

Business Requirements/Constraints:

1. Battery Life
2. Weight
3. Size
4. Excellent Cost to Benefit Ratio
5. Technology (sensors working in tandem)
6. Availability in large quantities
7. Excellent Customer Service

Proposition: After the initial assessment of the business process, current set of trackers and sensors, and the new market a set of requests were made to alter requirements:

1. Look for set of devices which work in tandem with each other.
2. Relaxing in weight constraints
3. Increasing spending
4. Relaxing the size constraint
5. Reducing the number of required sensors

Research Method: Approach taken to solve the problem.

1. Understanding the business Model of Expeditors International
2. Analyzing the specifications of the current set of trackers
3. Research the new market and identifying the new requirements
4. Searching market for tracker and sensors

Scenaro: Steps in the shipping process:

1. The shipment loads in Mumbai, IN, and taken to docks to shipping containers.
2. The shipment goes takes at least 2 weeks to reach the NY, USA.
3. The shipment takes another week to reach final destination through air or road transport.

Problems:

1. Limited cellular coverage during ocean transit
2. Limited battery life
3. All in one device with all the required sensing and tracking capabilities

Solution:

1. Wireless devices working together
2. Can work with external sensors and GPS receivers
3. Long battery life to last more than one shipment
4. Within the budget of the sponsor.
5. Keeps the size and weight in check

Result: The solution presented stands true to all of the business requirements and overcomes most of the constraints. Expeditors International have approved the solution presented.