Week 4:

ClearOrbit
World Wide Technology, Inc.

Case

MIS 3537: Internet & Supply Chains

Prof. Edward (Ed) Beaver
Today
World Wide Technology, Inc.

2015:
- A global systems integrator
- $7.4 Billion Sales, 3,700 employees
- Regularly achieves average growth >20% per year
- A proven and innovative approach to help large public and private organizations discover, evaluate, architect and implement advanced technology
  - Configuration, Integration and advanced logistics solutions
- Private Minority owned Enterprise
- $27.5 million venture capital investment repaid in 2005.
June 2007: TAKE Solutions acquired ClearOrbit to combine with existing supply chain management divisions.

Technology solutions and service provider in:
- Life sciences
- Supply Chain Management

$35 MM Sales, 200 employees

Private Company
Break Time
Week 4:

Beer (Root) Game Introduction

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Learning Objectives

- Have some fun with the beer game
  - ‘Experience’ working in a simulated supply chain
  - ‘Real’ introduction to Bullwhip Effect
- Have fun in class while learning
The beer game

- Originally conceived at MIT
- A very good exercise in understanding the bullwhip effect
- The structure and rules...
Game Roles (SC Players)

- **Factory** (1): Manufactures syrup
- **Distributor** (3): Bottling and package (case)
- **Wholesaler** (10): Local warehousing
- **Retailer** (10,000): Sale to customer
Game Flows

- **Types**
  - Physical
  - Information (orders)

- **Frequency:** once per period

- **Delays** (displayed on the ordering box)
  - 2 weeks order to ship
  - 2 weeks ship to delivery
The rules of the game

- You, the player, can play one of the four roles; you are the manager at the
  - Retailer
  - Wholesaler
  - Distributor
  - Factory

- The factory has access to unlimited amounts of raw materials, labor etc.
The Rules: Routine

- Each week you will receive orders from downstream.
- You ‘must’ ship the order if you can. If you can’t – it goes into backlog and must be shipped in later week when stock is available.
- Each player replenishes stock from ordering from the partner upstream (except factory which produces).
The rules: Decisions

- Each player must work with these parameters
- Order: the order amount received from the next level along your supply chain
  - A retailer’s orders are dependent on the perceived demand; a wholesaler’s order amount is based on what demanded by the retailer and so on.
- Inventory: the numbers in stock
- Backlog: unfulfilled orders from past week(s)
The rules: On the Clock

This Week (Intro)
- You’ll have as much time as you need
- Proceed to next week when all orders have been placed

Next Week (Round 1)
- There will be a timer (upper right of screen)
- If counter is zero without your input, system will reuse previous decision
The rules: Silence

- You may **not** speak to each other or communicate in any way. Only place orders and ship product.
The rules: Winning

How do you win?

Lowest Total Cost for entire Supply Chain
(inventory cost + backorder cost)

- Inventory cost: For every item in the inventory, the holding entity (retailer, etc.) is charged $0.50

- Backorder cost: For every item unfulfilled, the entity unable to fulfill the order is charged $1.00
Let’s play the game!
Your thoughts

- Any Questions about the Logistics, Process of Playing the Game?
- Which role are you playing?
- How are you Feeling?
Next week (February 11)...

- In class Beer Game: Complete Round One

Follow Up

- Each team Decides Change to make for Round 2 (by February 25)
- Each team on their own completes Round 2 with the change (By March 10)
- Beer Game Write-up (By March 10)
Extra – Future Slides
Your thoughts

- Which role did you play?

- What were your individual costs? What was the total supply chain cost?

- Share your thoughts about the game

- What could have helped you bring down the costs?