

# Who is Far Corner Technology?

Far Corner Technology is a cutting edge technology company, providing rapid, turnkey access to millions of customers worldwide through eCommerce sales channels. Serving clients of any size who desire to sell virtually any product, Torrential Systems utilizes its proprietary, state-of-the-art software and decadelong expertise to manage the entire process of selling products around the world regardless of currency.

#### **Our Specialties Include:**

- eCommerce Web Hosting
- Order Management
- Complete Sales Venue Integration
- Automated Pricing Decisions
- Catalog and Inventory Management
- Full Supply Chain
- Customized Reporting
- And more!



# Who is SuperBookDeals?





Established in 2001, *SuperBookDeals* kept physical inventory of varying types of media (books and videos) all of which are considered commodities. As the number of required inventory grew and the competitive nature of the open markets took off, new systems were required to stay competitive and maintain margins.

How SBD is different from other marketplaces:

- They don't sell, they leverage marketplaces that do that for them
- Don't promote their own website
- Limited time & effort spent on promoting

## SuperBookDeals Challenges

#### **Mission**

To be the lowest cost provider of any commodity

#### **Challenges**

- Entering the world of virtual inventory
- Pricing as high as 250 million items daily
  - —could no longer enter manually
- Competition and increase in inventory
- Limitations on how many times you can request API information
- Price matching was very time consuming





### The Tool Must Provide:

- ✓ The capability of 250,000,000 pricing events per day
- ✓ Multiple Currencies
- ✓ Increased profit potential of multiple marketplaces
- ✓ Quick listing and the lowest possible pricing system to win the maximizing margin
- ✓ The ability to add, remove and change products on the large online market places when availability changes
- ✓ Reductions in fulfillment costs combined with increase in positive feedback and above standard performance
- ✓ A ranking system
- ✓ Optimal pricing for visibility and profit



# **The Pricing Tool Process**

**Don't Underestimate Collaboration** 

- 1. Inventory Management and Feeds
- 2. Floor Calculation Process
- 3. Pricing
- 4. Warehouse Integration

# Step 1: Inventory Management and Feeds

- We price over 200 vendors across the world,
- Over 30 million products,
- Over 1,000 feed files per day,
  - Full Delta
  - Cost
  - Quantity
  - Daily/hourly/real time



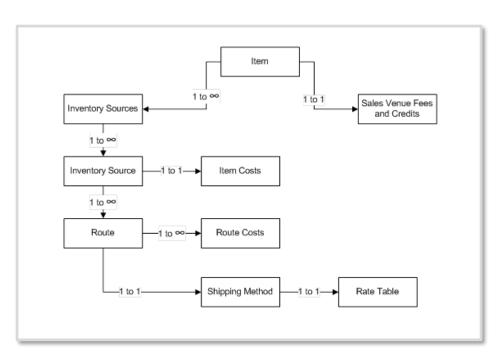


## Step 2: Floor Calculation Process

**Floor:** The lowest possible price to maximize profit according to the appropriate market price.

#### Calculates Floor **700 times per day** based on:

- Marketplace
- Native currency
- Commission
- Fee(s)
- Origin
- Destination
- Weight
- Shipping to warehouse
- Shipping to customer



## Step 3: Pricing

#### 1. Inventory Management

- •Benefits Include:
- •No longer Constrained by amount of products
- •Increase in number of products
- •Can search by identifiers, including: ISBN, EAN, UPC, ect.

#### 4. Update Sales Venue Model

- •SVM updates back to menu
- Price Management and changes occur—doesn't go below floor
- •Remove/add items
- •Sell

#### 2. Sales Venue Model

- •Get Product
- •Request Price
- Download to Far Corner Pricing Tool

#### amazon.com

#### **VALOREBOOKS**



### BARNES & NOBLE



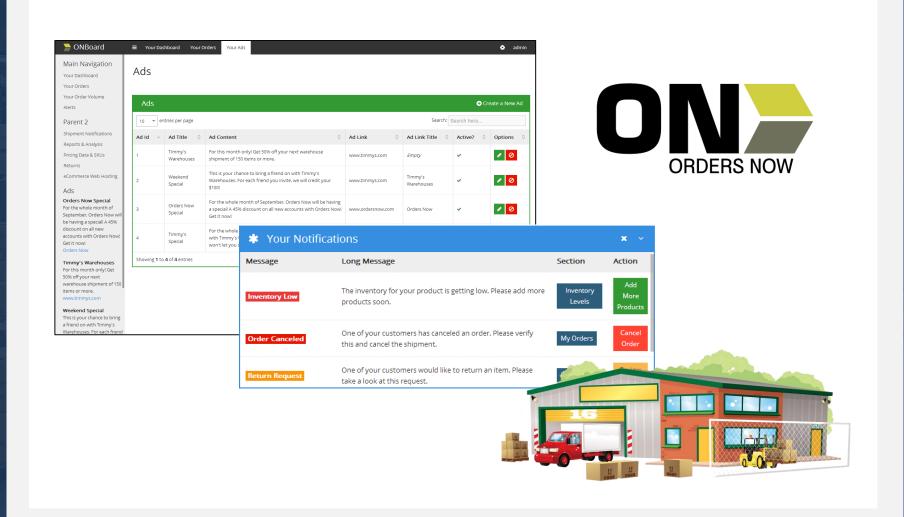


#### 3. Business Rule Model

- Price Comparison
- Adjust pricing accordingly
- Different sets of rules based on company
- Identifies our position amongst sellers
- Ranks Products using the tier system

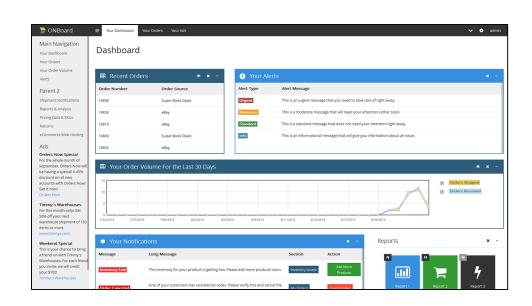
#### **Currencies include:**

- United States Dollar
- Canadian Dollar
- Euro

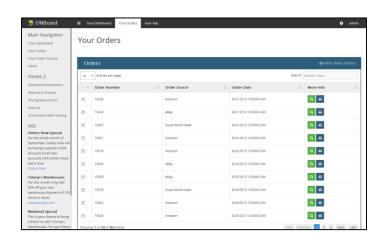


### The Onboard Dashboard





Create stronger connections with your customers by giving them reliable, real time data about their business.





Simple Tools for the Customer

**Track Orders & Returns** 

View Inventory Levels

Set-Up & Receive Alerts

**Manage Shipment Notifications** 

Access Reports & Analysis

View Pricing Data & Search SKU's



Provide your clients with a fully customizable e-commerce platform & special offers all in one place!

### **Common Issues Resolved**

### **Customers:**

- Requiring web services or complex IT integration
- Adding sales channels
- Requiring direct connection online markets (Half, Amazon, Buy, ect...)
- With no technology
- Who have order information in formats that don't match any standard

### Warehouses:

- That have limited or expensive IT support
- That have inflexible or limited WMSs
- That do not have a WMS

### Hardware

1 server with the following specs to crunch the pricing data: HP DL380 G7, 2 x X5650 CPU, 96 GB RAM, 1 TB local storage, 320 GB Fusion IO drive (PCI express, not SAS)

4 virtual machines hitting Amazon Web Services to get pricing data. These machines are each allocated ten public IP addresses. The program cycles through the IP addresses to increase throughput to Amazon, which throttles based on IP address.

#### Specs on Fusion IO

The ioDrive Duo can easily sustain 1.5 Gbytes/sec of read bandwidth and nearly 200,000 read IOPS.

Its performance metrics are as follows:

- Sustained read bandwidth: 1500 MB/sec (32k packet size)
- Sustained write bandwidth: 1400 MB/sec (32k packet size)
- Read IOPS: 186,000 (4k packet size)
- Write IOPS: 167,000 (4k packet size)
- Latency < 50 μsec

# The Tier Ranking System

Different venues and markets have limitations on how many times you can request API Information. To compensate for the limited bandwidth we built a tier system to speed up price matching.

The ranking system is determined by the business model which determines the ranking based on what other sellers are selling and the date the product was last sold.

# The Tier Ranking System

Pricing Date	Venue	Tier	Items In Tier	Items Priced	# of times Tier Priced
12/16/2013	Amazon CA CA1	100	166,243	2,029,668	12.21
12/16/2013	Amazon CA CA1	500	60,837	1,402,372	23.05
12/16/2013	Amazon CA CA1	1000	300,414	1,352,270	4.50
12/16/2013	Amazon CA CA1	1500	62,258	1,018,893	16.37
12/16/2013	Amazon CA CA1	3000	871,694	672,925	0.77

- 5 different tiers (100, 500, 1000, 1500 & 3000)
- We are able to price more frequently
- Based off the combination of where you are and when was the last time you sold the item
- Products can jump tiers; promotion or demotion

## The Leaking Bucket Algorithm

Leaking at a rate of 8 call requests per second and the bucket size can only hold 20 requests.

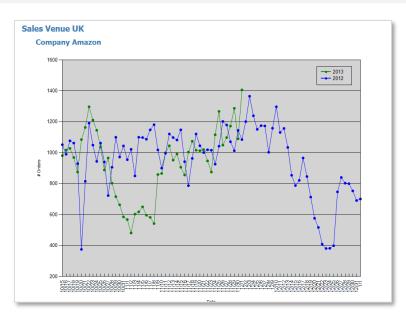
You want to keep the bucket full at a leaking rate.

Because we are at the top of the sellers pole, we can call 8 times per second. When you start out you can only call 0.5 times per second. In each call there are 20 ISBNs.

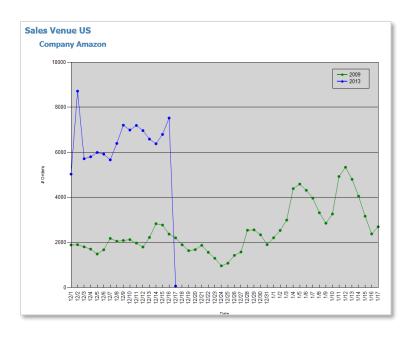
1 day = 86,480 seconds x 8 calls x 20 ISBNs x 3 accounts = 41,510,400

In one day we can price 250 million products across all venues and we haven't even hit capacity yet!

### Order Volume Directly Depends on Pricing Performance

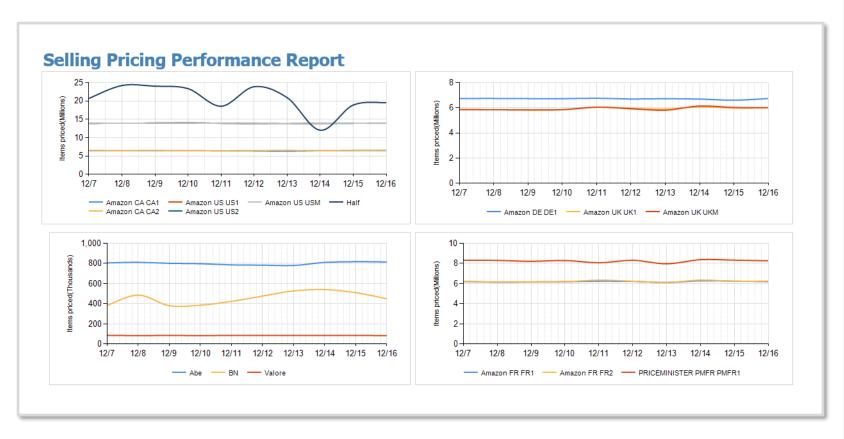


Dive related to the data collector sets issue.

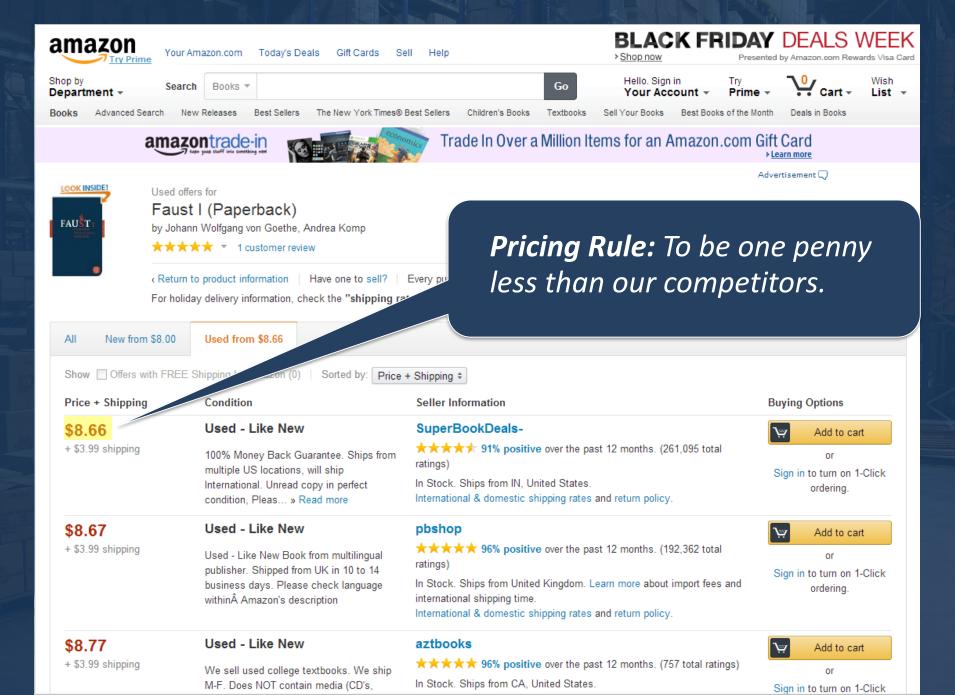


Before the pricing tool was in effect, the # of sales weren't as high.

## **Pricing Performance**



Pricing Performance is the daily number of products that we price.





# **Contact Information**

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