ISM 50 - Business Information Systems

Lecture 9

Instructor: John Musacchio
UC Santa Cruz
October 21, 2010
Class announcements

- Assignment 3 due Thursday

- Reading for next class
  - Messerschmitt Ch 5, Sun Case
  - Suggestion: Read Messerschmitt Ch5 first.

- MIDTERM NEXT WEEK!!!
  - 10/28
Student Presentations
E-Commerce

- **Major Categories**
  - **Consumer (B2C)**
  - Inter-consumer (C2C)
  - Inter-enterprise (B2B)
Consumer e-commerce (B2C)

- What have you bought on the Internet, or what do you buy most often?

- What are the advantages and disadvantages compared to a retail store or direct mail catalog?
Some Advantages

- **For the Consumer**
  - Check prices at many vendors with minimal effort
  - Price many options
  - Anonymity
  - Order tracking

- **For the Business**
  - Global reach
  - Automate order taking (cost savings)
  - Price Discrimination
Inter-Consumer (E-commerce)

- **Prime Example**
  - E-Bay

- **Other examples?**

- **What value does something like E-bay add over a simple classifieds listing like craigslist?**
Inter-Enterprise E-Commerce (B2B)

- **Procurement**
  - One enterprise purchases goods or services from another

- **Direct Procurement**
  - Ongoing, consistent, and scheduled procurement

- The relationship between firms involved in direct procurement often called a **Supply Chain**

- The set of problems associated with managing a supply chain is called **Supply Chain Management (SCM)**
### SCM

- Thousands of orders per day, each with different requirements!
- Adjusting orders from suppliers constantly according to demand
- Minimal inventories
  - Cut costs
  - Much more sensitive to errors or disruptions
- **mass customization** requires sophisticated SCM
Networked Computing in direct Procurement

- History predates Internet
- *Electronic Data Interchange* (EDI)
  - Exchange order information between firms involved in direct procurement
  - Usually large firms who could afford proprietary communication links
  - Initially order and invoice
  - Existed since 70’s
- *Financial EDI* (FEDI) later added EFT payment capability
Networked Computing in direct Procurement

- XML (Extensible Markup Language) is another data interchange format making an impact on inter-enterprise commerce

- We will talk more about this later in the quarter.
Indirect Procurement

- Sporadic purchase of goods and services to support organizational objectives
  - Example: Office Furniture
Alibris

- Why did Interloc succeed so early on?
Alibris

- If Interloc is so successful, why change it?

- What will change as Interloc becomes Alibris?
Alibris

- Why did Manley feel they needed the Sparks facility?

- How does the Sparks facility keep them from becoming disintermediated?
Alibris

- Should Alibris actually buy books and fill up the Sparks facility?
What problems is Alibris having with its e-commerce capabilities?

Why is Alibris having so much trouble setting up simple e-commerce capabilities?

Is this really that hard??

Is it rare for a new-software product from an established, reputable vendor not to work properly?
Should Alibris stick with Oracle? Or switch back to Thunderstone?
Alibris

- Should Manley take the “white knight’s” offer and fire the whole IT staff??!
Alibris

- Rejects “white knight” offer
- Manley secures another bridge loan
- Goes Live 1998
- Thunderstone’s software works ok
- 1 million books at Sparks warehouse by 2000
  - Originally all on consignment from dealers
  - Later, purchases books
- 2002 - Revenue $31 million, loss $7.2 million
- 2003 - Revenue $45.5 million, loss $4.8 million
- March 2004 files for “auction based” IPO
  - May 2004, withdraws IPO after price too low
  - Still Relying on Private Financing
Data and information

by

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Key concept

The key commodity manipulated by information technology is information.

To be manipulated in a computing/networking environment, information must be represented by data.

What is information?
Information

From a user (human) perspective...
....recognizable patterns that influence you in some way
(perspective, understanding, behavior...)

In the computing infrastructure, information has a somewhat different connotation as structure and interpretation added to data
Data

A bit is “0” or “1” — the atom of the information economy

Data is a collection of bits, like

- “0101110111010110”
- “0000011”
- “111011101011010110101111011011010”

Note: the terms data and information are not always used consistently!
Representation

- Take the place of the original
- Equivalent to, in the sense that the original can be reconstructed from its representation
- Often the original can only be approximately reconstructed, although it may be indistinguishable to the user
  - e.g. audio or video
# ASCII

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</table>

Note that this representation is not unique…

…this one happens to be a standard (ANSI X3.110-1983)
A picture

This picture conveys information

This information is represented in this computer, but how?
Representation of picture: image

Expanding a small portion of the picture, we see that it is represented by square pixels....

....300 tall by 200 wide.....

....with a range of 256 intensities per pixel

An approximation!

300 \times 200 \times 8 \text{ bits} = 480,000 \text{ bits} (but it can be compressed)
A color picture can be represented by three monochrome images…

At the expense of three times as many bits
Terminology

Information

Representation

Data

Communicate data to another user or organization

Data processing

Information

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