Discussion of Projects (continued)
Example 1

- Music/content auction site
- Like eBay, but different auction model:
  - Artist proposes to release work
  - Potential buyer bids “I will buy for at most $7.50”, puts bid in escrow
  - Buyer can change / revoke bid at any time
  - Seller can choose price at any time to maximize revenue
- Sell once!
Example I (continued)

- Capability for users to search offerings
  - e.g. by artist, genre, title
- Query capability for sellers
  - revenue as function of price
  - price for max revenue
• Search need not be atomic
• Deciding to sell is a big (atomic) query
• Sale is a big transaction
Example 2

- “WebVan” a huge failed dot-com
- An online grocery store
- Huge warehouse / distribution center
Example 2 (continued)

- Large (> $10^{**5}$ items) searchable catalog
- Parts of catalog are very dynamic
  - e.g. produce unavailable or out of season
Example 2 (continued)

• Customer profiles
  • Credit card info, delivery address, ...
  • Product brand preferences
  • Custom “grocery list” form

• Recommendations
  • Data mining on purchase history
    • Not too important if lose some of it
    • (Wegmans and Safeway do this now)
Example 2 (continued)

- Durable Shopping Cart
  - Very bad to lose a big shopping cart

- Schedule deliveries
  - A complex scheduling problem
  - In the purchase transaction, or a promise to schedule? Very bad to miss promised delivery window

- Schedule warehouse
  - Filling baskets ...
Example 2 (continued)

- Inventory control
  - Very bad to sell item if out of stock
  - Generate orders to suppliers
  - Predict out-of-stock situations
Getting Started ...

• 2 or 3 person projects
  • We can negotiate how much is expected for 2 vs 3 persons
  • Maybe testing strategy?

• “Initial conception” due Tues 17 Feb
  • Submit to CMS