Task Analysis
02/25/2003

1. Some background

Things aren't as apparent as they seem.

Email

In 1971, an engineer named Ray Tomlinson was assigned to a project called SNDMSG. This program was not new, in fact it had existed for a number of years. By today's standards it was more than primitive. All it did was allow users on the same machine to send messages to each other. Users could create text files which would then be delivered to mailboxes on the same machine.

A mailbox was simply a text file which could have additional text added to the end. Data could be added, but not deleted or changed. The name of the mailbox was the name of the text file.

Ray was assigned to make this simple application do a little bit more. As it turned out, he had been working on something called CYPNET, which was intended to transfer files between computers within the ARPANET (Advanced Research Projects Agency Network). "The idea occurred to me that CYPNET could append material to a mailbox file as readily as SNDMSG could," said Ray.

So he modified CYPNET to perform one additional task - to append to a file. This was pretty simple and the change was quickly made.

After that, Ray made a decision which changed history. He created the format of the email address. He defined it as a mailbox name, the @ sign, and the machine's node name. He used the @ sign because "it seemed to make sense. I used the @ sign to indicate that the user was 'at' some other host rather than being local."

He sent himself a message, the contents of which have been lost in time. The first email message was unceremoniously sent between two nodes of the ARPANET network. History had been made.

Retail

[Envirosell] discovered a phenomenon known as the butt-brush effect almost accidentally. As part of an early study for Bloomingdale's in New York City, we trained a camera on one of the main ground-floor entrances, and the lens just happened to also take in a rack of neckties positioned near the entrance, on a main aisle.

While reviewing the tape to study how shoppers negotiated the doorway during busy times, we began to notice something weird about the tie rack. Shoppers would approach it, stop and shop until they were bumped once or twice by people heading into or out of the store. After a few such jostles, most of the shoppers would move out of the way, abandoning their search for neckwear.

We watched this over and over until it seemed clear that shoppers -- women especially, though it was also true of men to a lesser extent -- don't like being brushed or touched from behind. They'll even move away from merchandise they're interested in to avoid it. When we checked with our client, we learned that sales from that tie rack were lower than they expected from a fixture located on a main thoroughfare. The butt-brush factor, we surmised, was why that rack was an underperformer.

Another such "accident" of patient observation and analysis happened during a supermarket study we performed for a dog food manufacturer. When we staked out the pet aisle, we noticed that while adults bought the dog food, the dog treats -- liver-flavored biscuits and such – were often being picked out by children or senior citizens. We realized that for the elderly, pets are *like* children, creatures to be spoiled. And while feeding Fido may not be any child's favorite chore, filling him up with doggie cookies can be loads of fun. Parents indulged their little ones' pleas for treats here just as they did over in the cookie aisle.

Because no one had ever noticed who exactly was buying (or lobbying for the purchase of) pet treats, they were typically stocked near the top of the supermarket shelves. As a result, our cameras caught children climbing the shelving to reach the treats. We witnessed one elderly woman using a box of aluminum foil to knock down her brand of dog biscuits. Move the treats to where kids and little old ladies can reach them, we advised the client. The client did so, and sales went up overnight.

From *Why We Buy: The Science of Shopping,* Paco Underhill, Simon & Schuster

Task Analysis Concepts
- Background: What knowledge do people have beforehand?
- Barriers: What kinds of things prevent people from succeeding?
- Errors: What mistakes do people make? Do they realize they're making them?
- Tasks: What primary tasks do people perform?
- Nomenclature: What language are people using?

2. In-class Activity: Mapping Tasks
- Watch video and record tasks.
- Overview of Microsoft Visio as a mapping tool.
- Goal: To understand the variables that can affect how people interact with products.

3. Homework
You homework is to observe, shadow, and talk with people performing one of these defined tasks:
- How do people choose a cell phone plan? (Comparison)
- How do people choose a restaurant in a new area? (Comparison)
- How do people find a movie at the video store? (Search/Browse)
- How do people find a book at the bookstore? (Search/Browse)

Answer the following questions when observing:
- How much time did the task take?
- What tools did they use?
- Who did they talk to?
- What words did they use? In frustration? In happiness?
- In what order did they perform the tasks?
- How did they narrow down their choices?

Observe and analyze **two** different people. Create a map that visually demonstrates your findings. (One map can represent both people.)

You may use any tool you are comfortable with (e.g., Visio, Illustrator, etc.).