Consolidation (2)

Interaction Design – the Tacit Dimension

- Starbucks.ca

Our Stores - default - Windows Internet Explorer

http://www.starbucks.ca/en-ca/_Our+Stores/

Live Search

SnagIt

Our Stores - default | Find A Person

Page ▼ Tools ▼

Merchandise and Gifts

Social Responsibility

Starbucks at Home

For Business

Some people come here to drink the world's best coffee. Some come here to be alone with their thoughts or together with a best friend. Some come here to listen to the incredible music. Some come here to take part in a neighbourhood event. Some come here for all of those reasons and a thousand more.

Store locator form

Enter the street address and city. Alternately, you may search by city, state, postal code, or country.

Country

Canada

Store Type

Select a Store Type

Search Radius

10 | Kilometer

Street Address

City

freelton

State/Province

on

Postal Code

Submit | Reset

http://www.starbucks.ca/en-ca/_Our+Stores/_Store+Locator/StoreLocatorPrxResults.htm?a=

Live Search

SnagIt

Store Locator - StoreLoca...   Find A Person

Page   Tools

Starbucks Coffee Company
Canada

Home

- The World's Best Coffee
- About Starbucks
- Our Stores
  - Literacy
  - Environment
  - Community Programs
  - Wireless
- Beverages and Food
- Merchandise and Gifts
- Social Responsibility
- Starbucks at Home

Canada
Locations found: 0

New Search

Done   Internet   100%

http://www.starbucks.ca/en-ca/_Our+Stores/_Store+Locator/StoreLocatorPrxResults.htm?a=

Live Search

SnagIt

Store Locator - StoreLoca... X | Find A Person

Page | Tools

Literacy

Environment

Community Programs

Wireless

Beverages and Food

Merchandise and Gifts

Social Responsibility

Starbucks at Home

For Business

Canada
Locations found: 8

New Search

1. **Clair & Gordon (Clairfields) –
   Guel**
   11 Clair Road West
   Guelph, ON N1L 0A6
2. **Milton CTC - D/T**
   20 Market Drive
   Milton, ON L9T 3H5
3. **Burlington Indigo**
   1250 Brant Street
   Burlington, ON L7P 1X8
4. **Appleby Line & Dundas**
   2500 Appleby Line
   Burlington, ON L7L 0A2
5. **Derry & Holly-Milton**
   611 Holly Avenue
   Milton, ON L9T 0K4
6. **Longos Fairview**
   1225 Fairview St
   Burlington, ON L7S 1Y3
7. **Mapleview Mall - Burlington**
   900 Maple Avenue
   Burlington, ON L7S 2J8
8. **Main & Thompson-Milton**
   870 Main St East
   Milton, ON L9T 0J4

Zoom In **Zoom Out**

Done

Internet

100%

NUTRITION CALCULATOR

About Us | In Our Store | Join Our Team | Community & Goodwill

Store Locator

Enter as much of your location information as you can to find the stores nearest you.

Going on a trip? Check out the Tim Hortons Trip Planner

Street or Intersection:

City:

Province/State:

Postal/ZIP Code:

Search Radius: 5 kilometres

Find a Store

Internet   100%
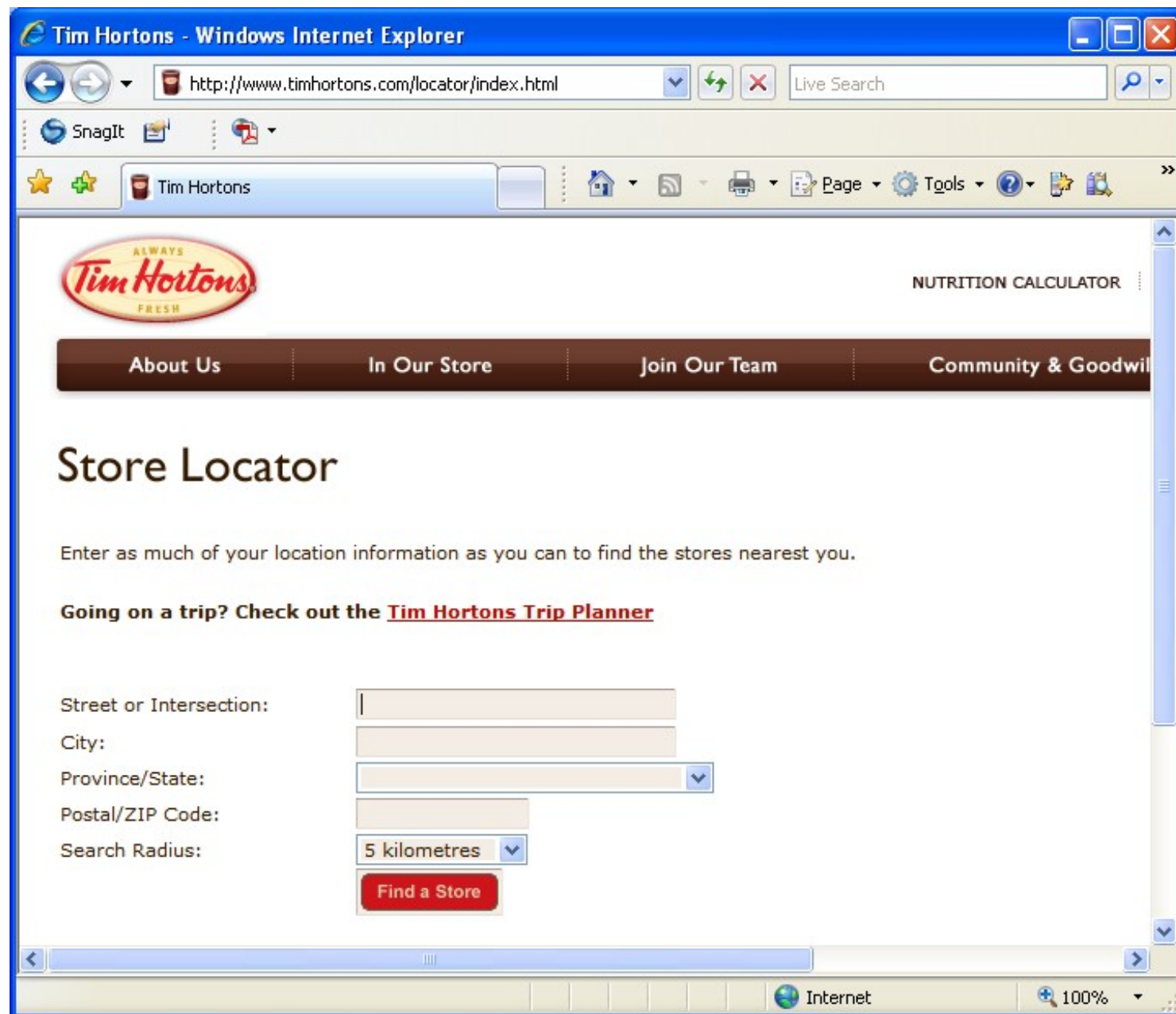
Pizza Box design

- Goal in the course is:
  - To understand what people do
  - To identify breakdowns
  - To come up with new designs that solve problems while preserving what's good about past systems

- http://www.swiss-miss.com/2010/09/building-a-better-pizza-box.html

Breakdowns

Consolidation

Consolidation

- Goal is to see whole picture of a group of users work
  - Opportunity for better design
  - Opportunity for niche applications
  - Think MS Office:
    - "There are millions of users and they all use the product differently. There is no one Office user."
    - But the document tasks of computer users do have cohesion
  - Think accounting software:
    - Is home-based business different or same as small business?
    - Is it appropriate to have a single application for home and school use for school-age children?
- People want to be different
  - Often say "I don't do things exactly the same as everyone else."
  - BUT, they do frequently have common pattern and structure to work
- Consolidation let's you see this common pattern and structure

Consolidation

- To develop a sense of whole user community from a set of instances
- Instances
  - Interviews + models
- Goal of consolidation
  - To show how instances of patterns define the whole population
  - To create concrete representations of those patterns
- Inductive reasoning
  - From the specific to the general

IMPORTANT

- **THIS** is where generalization begins to happen
- Up to this point, everything should be specific and concrete
  - Exactly what was done
  - Exactly what intent was
- **Now**
  - Understand overall patterns to work that generalize across users, and why those patters exist
  - *Actions + intents*

Caveats

- Intents are **not** based on rational arguments
  - Consider IT support staff
  - What is their goal?

  - What do they do when someone's computer is not working?
  - Why do they do that?

External Representations

- External representations are used in consolidation
  - Affinity diagrams
  - Consolidated models
- External representations serve three purposes
  - Manage complexity of the data
    - Single digit versus six digit multiplication
  - Externalizes the data so that it is collectively owned
    - Model focuses interaction around data
  - Breaks the initial ethnographic process of seeing data "in the small"
    - Need to design systems that generalize across a user community
- To accomplish this, start with affinity diagram to look for themes
  - Then move to consolidations of specific models built

Affinity diagram

- Organizes notes captured during interviews and interpretation sessions
- Goal is to combine all data in one place
  - Issues noted
  - Worries and comments of users
  - Key elements of work practice relevant to project focus
  - System requirements
    - Reliability, performance, hardware support
- Information is combined as a hierarchy
  - All data relevant to a theme is shown together

Affinity Diagram

Affinity diagram

- Affinity diagram is a diagram built from post-it notes
  - You will do this
- Affinity is built bottom-up
- No starting categories, instead start with individual notes
  - A quote, an idea, a work process, a requirement, a need
  - Put up one note
  - Look for notes that go with it
  - Anyone can add a note
  - No justifying why a note goes with another
- The affinities you look for are notes that focus on similar intents, problems, or issues
- The data for notes can be sourced from any location
  - interview notes, post-its from an interpretation session, quote from transcripts (if available) or from memory (check with audio record).

Constructing Affinity Diagrams

- When a group of notes gets large enough, add a label to the group
- Try to express affinities in language of users
  - Sourcing fresh vegetables is essential – catering chefs
  - Parents care about details – school teachers
- Also form groupings of groups
  - Post-its allow frequent repositioning, which is essential to effective affinities
- Discuss placement and differing ideas, but don't over-focus on justifying combinations
- Police each others notes
- When misunderstandings occur, go back to data
- Try to put aside sufficient time to complete affinity
  - May take a day

Affinity Diagrams

- Capture the things that matter to users
  - Things that may lead to good design opportunities
- Essentially a single resource that you can turn to so you can fully understand big-picture concerns
- Also want to understand aspects of work that generalize across users
  - Consolidated versions of models …

Consolidated Models

- Flow, sequence, artifact, cultural and physical models can all be consolidated
- Purpose is to partially abstract from specific models
  - Two real estate agents, one with home office, one in traditional office
  - However, similarities (and differences) in flow, sequence, artifact, cultural and physical models
  - Consolidating helps designer see across user community
    - What is common to real estate agents regardless of office environments?

Consolidating Flow Models

- Depicts who customers are and what they do
- Reveals all different structures that underlie how group of users does job
- Does this by focusing on roles
  - Collections of responsibilities that accomplish a coherent part of the work, a specific intent
  - To be coherent, must include all responsibilities that accomplish that specific intent
 - Start with primary job function of your users, then add necessary additional responsibilities

Consolidating Flow Models

- While roles are preserved, mapping to individuals is much more idiosyncratic
  - Real estate agents
    - In an office, an admin might serve as call screener and greeting walk-ins
    - In a home office, call display and call waiting might serve as call screener, and agent might handle walk-ins
- Don't worry about including all responsibilities of a particular user
  - Think of it like a job advertisement
  - You want to combine similar roles across individuals and separate different roles that one individual may serve

Consolidating Flow Models

- **After roles, add in artifacts and communications**
  - Represent interaction between roles
- **Artifacts may need to have a general term assigned**
  - e.g. calendaring tool
  - Electronic file storage

NOT a Consolidated Model
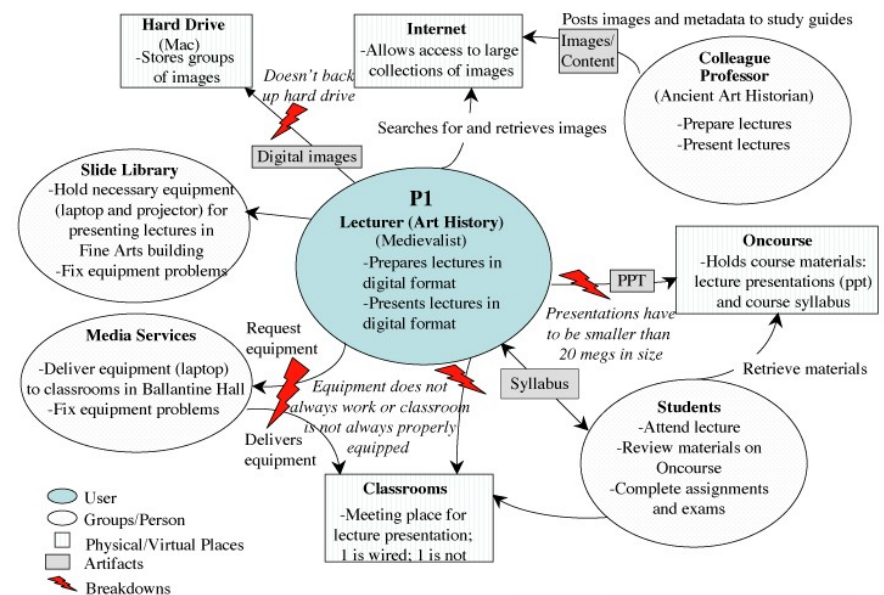
Work Flow Model, "Reviving DIDO", DLF Spring 2004, Michelle Dalmau, Indiana University

Consolidating Sequence Models

- Many instances of users trying to accomplish the same task
- People typically only use a few strategies to perform a task
  - Stage managers
  - School teachers
 - Small restaurant owners
  - Videographers

Intent: Needs to prepare 4 lectures for A214: Life and Art of Ancient Rome – Roman Religion	
	Trigger: Class meets tomorrow afternoon, need to have first lecture ready
Note: In progress: PPT, Netscape 4.x and file Finder windows open before we arrived. Loyal MAC (OS 9.x) user.	Prompted by syllabus – topic for this week, Roman Religion
Intent: Recycle PPT – use a base PPT rather than start from scratch	Find existing PowerPoint (PPT) lecture on similar topic
Note: Keeps all the existing images/PPT slides	Copies (Saves As) PPT as A214 for Roman Religion Lecture
Intent: Colleague normally teaches this class (A214)	Goes to Classical Art Historian's course web page (A210) – Bookmarked
Intent: Colleagues usually has good images (from DIDO)	Browses "Roman Gods" link (see Artifact A210 home page)
Note: Image quality assessment is automatic and very subjective	Identifies desired image /assesses quality
Intent: Expand lecture with reliable resource	*Downloads image (CTRL+Click) to "Download Image to Disk"
Note: Knows keyboard shortcuts	
Intent: Dynamically builds own image collection	*Saves image to "Roman Art" folder
	No sub-folders – many, many unique images in one folder
	*Renames image (long, descriptive names)
Note: Steps identified with * are done fluidly and repetitively while preparing lecture. Steps will not be represented for every image found as such but in shorthand: Integrates image	*Copy and Paste image into PPT slide
	*Resizes/Positions image in PPT

Consolidating Sequence Models

- Consolidation process:
  - Consolidate triggers for tasks with similar intents
    - Abstract trigger
  - Describe steps in general terms that abstract the specifics
    - Intents can help with this
- Often not necessary to consolidate everything
  - Consolidate those sequences that represent a good design opportunity in your area

# Consolidating Sequence Models

Note Triggers
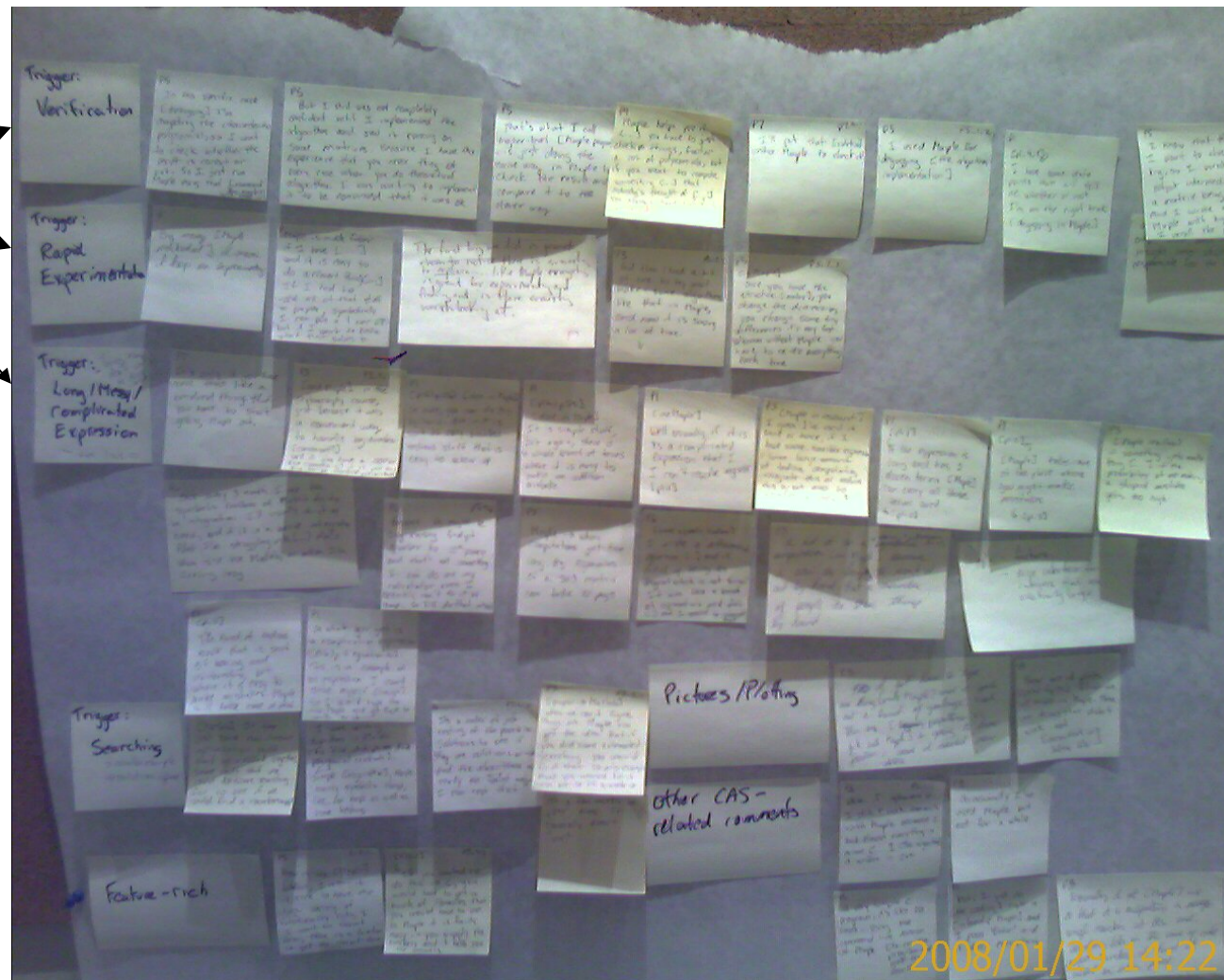
Consolidating Artifact Models

- Artifacts are very unique to different users
- Consolidated artifact is a 'typical' artifact that incorporates details of the original set of artifacts
- Process
  - Group artifacts that have same intent or usage in work
  - Identify common parts of different artifacts
  - Identify structure, intent, usage of each part
  - Note breakdowns
    - Especially when structure violated
  - Build a 'typical artifact' showing all parts with usages, intents, and any breakdowns

Consolidating Physical Models

- Aspects of work space repeat
  - Think real estate agents, restaurant owners, school teachers
  - Office has common structure
  - Try to show this common structure across users
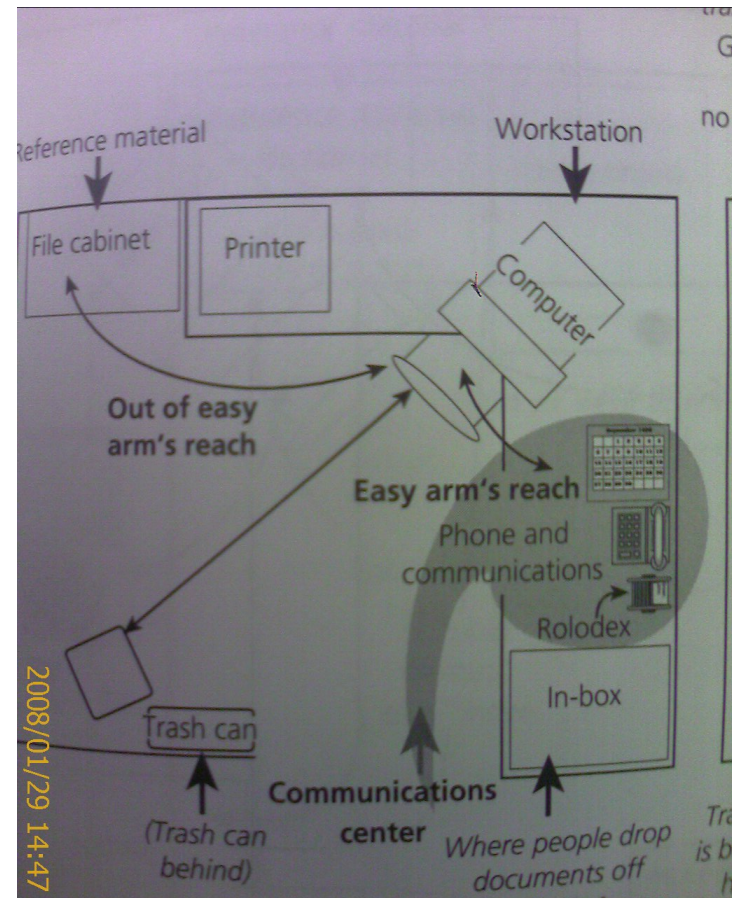
Consolidating Physical Models

- Steps to create:
  - Group physical models by type of place
  - Walk each model and identify places
  - Identify common logical structure
    - e.g. phone is always near computer in CS prof offices
  - Look at movement on each of the models and show movement within space
    - Document any insights about work
- Fairly easy with only two or three subjects

Consolidating Cultural Models

- Although cultural model is a depiction of a specific subject's cultural perceptions, there are common characteristics across subjects
  - Are managers highly mobile?
  - Are salespeople closely monitored?
  - Is the industry closely regulated by government?

Consolidating Cultural Models

- First find all influencers from individual models
- Group influencers who constrain work in same way
  - Could even be same group
- Look at influences from individual models and group by pairs they go between
- Eliminate any duplicate or similar influences
- Copy over any breakdowns

Approaching Consolidation

- Goal is to collect data points that are similar across interviewees and build them into groups
  - Having more than one subject will always create applications that are more general
- Interviewees **intent** for each sequence and artifact is most critical to draw from consolidated models
  - As long as your new design supports the intent, it will be useful for your subjects
- Note that individual strategies will have commonalities and differences
  - Consolidated models allow you to highlight common intents behind strategies, and to build common strategies into anything you design

Approaching Consolidation

- Consolidation is very difficult when number of subjects gets large and heterogeneous
- Can often short circuit the entire process
  - Review models that have been created
    - Typically start with flow models, then sequence, and use artifact, physical, and cultural models to augment sequences
  - Look for common breakdowns across your interviewees
    - Use your affinity diagram, and add post-its using additional details
    - If you feel you don't know enough, expand your observations
  - Select two or three that you think might be worthy of intervention and create consolidated models around these

So What Do I Do?

- In this course, project has more in common with attributes of rapid contextual design
- Rapid CD works well for:
  - Usability fixes, low-hanging fruit, quick-fixes
  - Market or population characterization for new systems
  - Web site redesign
  - Next gen system
  - One coherent task
  - Reporting issues
  - Essentially anything where group/task is constrained or where data is very sparse at beginning.

So What Do I Do?

- Real world, start-ups, etc.
  - 2 people working full time for between 1 and 10 weeks
- Rarely consolidate everything

Rapid CD Process	Contextual Interviews + Interpretation	Work Models with Consolidation	Affinity Diagrams
Lightning Fast 1 – 4 weeks	~4 - 12 Participants 1 – 3 days 1 or 2 re-interviews		Interpret via affinity
Minimalist 4 – 8 weeks	6 – 12 Participants 1 – 2 weeks 3 or 4 re-interviews	During/after affinity, consolidation as needed	Do affinity, build models as needed
Focused 6 – 10 weeks	8 – 12 Participants 2 – 3 weeks Re-interview as needed	Models then affinity, then back to consolidation	Build affinity, then go back and consolidate reasonable set

So What Do I Do?

- Our lab:
  - Interviews by student + affinity by student
  - "Walks" with faculty to introduce collective ownership
  - Faculty challenge interpretations in data or ask for justification from data
  - Collaborative to look for themes in the data
  - Back to models when stuck – faculty suggest models to build

Affinity Diagram and Consolidation

- What to look for:
  - Interpretations of events, use of artifacts, problems and opportunities
  - Important characteristics of work
  - Attitudes and constraints, i.e. cultural influences
  - **Open questions for future interviews**
  - Neat or insightful quotes, organized into above categories
  - **Design ideas (but flag these!)**
- Don't include:
  - Demographics
  - Information already captured on work models

Contextual Design: Stages

- Interviews and observations
  - Done this
- Work modeling
  - Done this
- Consolidation
  - Part-way through this
- Work redesign
- User environment design
- Prototypes
- Evaluation
- Implementation

Plan Forward

- Looked at consolidation
- Need more information on interpreting data
  - Coding exercise next day