

# Media Computing Project

## *Lecture 1: Field Gathering Techniques*



# Goals

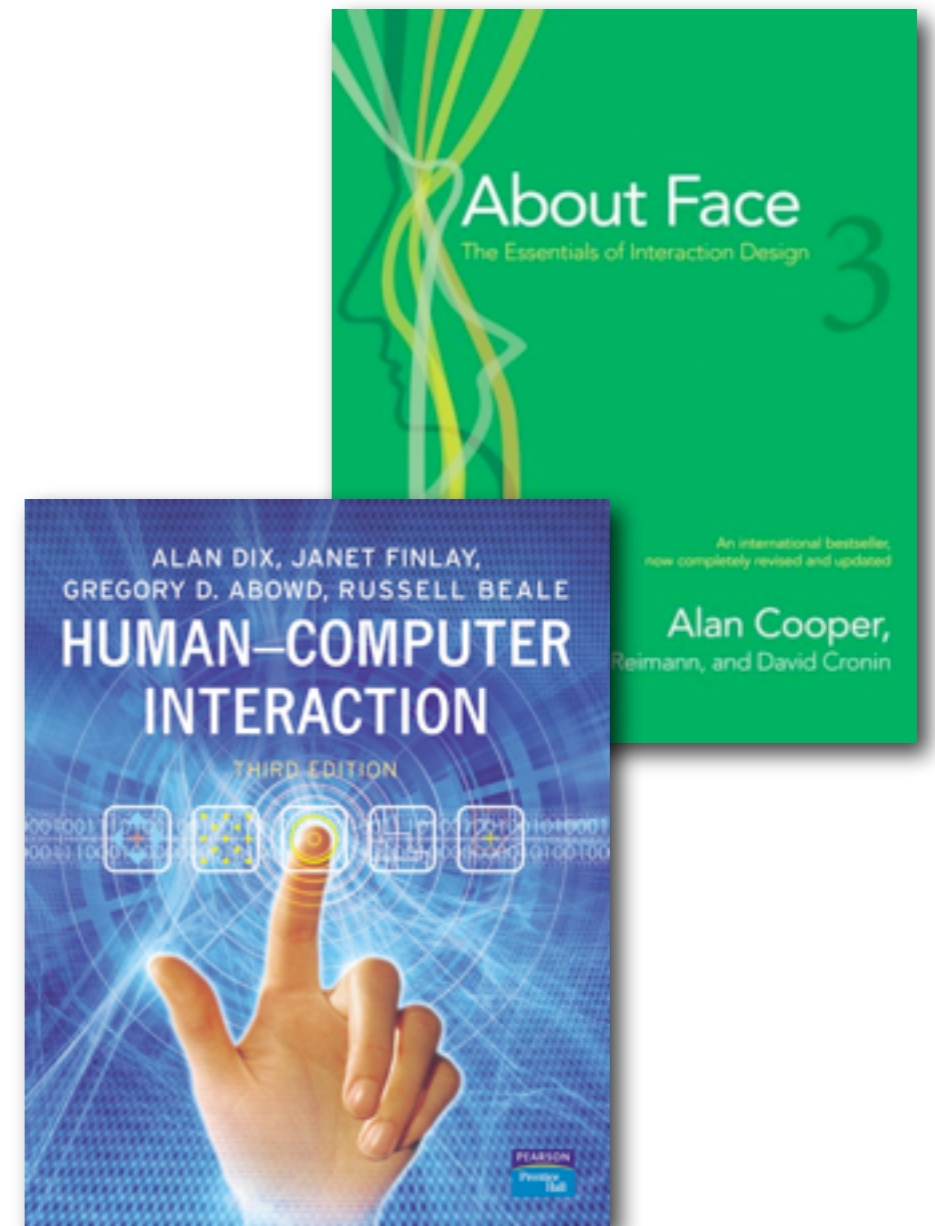


- Who are the users?
- What do the users want?
- How do they use current systems?
- What are design problems?
- What are design opportunities?



# User & Task Analysis

- **Users:** Who is using the system?
- **Goals:** What do they want to achieve with the system?
- **Tasks:** How do they achieve their goals?




# User Description: Persona

- Fictitious Character
- Representative of user type
- Representation:
  - Name
  - Photo
  - Quote
  - Background Story

**The First Time Buyer**

**Becky Broadmore**



**"I'm just not sure what I need to know to get my first mortgage. How do I know I made the right choice?"**

BECKY WANTS TO ACQUIRE THREE YEARS' WORTH OF WORKING A SMALL JOB WITH AN ANNUAL PROMOTION. SHE'S READY TO PURCHASE HER FIRST HOME.

Living in the city, a Metro is her primary mode of transportation. On long days, in raising the winner, she commutes her work on the subway.

Sandy can't see her self to be particularly smart, after all she has a small estate investment portfolio, she manages an IRA, and uses her bank's online bill payment. However, she's overwhelmed by the confusing terminology, options, and costs associated with getting a mortgage. She's absorbed all the information she receives about underivable up/down payments and rates with excessive ads and pop-ups.

She's a firm believer in "you get what you pay for" and "it's worth the good to be true, it probably is." She's heard horror stories about inflated banks and doesn't mind paying a higher rate for a recognized lender or someone local.

Becky has no clue what her credit score is. She has a few credit cards and department store cards, and a car loan. She's very good at making her payments, but sometimes late. She's not sure how this will affect her when applying for a mortgage.

<b>Referrer</b> Private label e-mail	<b>Goals</b> <ul style="list-style-type: none"><li>• Use the computer and internet without having to re-start or call a friend</li><li>• Get just what she needs</li><li>• Feel safe sharing data without worrying about sites stealing her information</li></ul>	<b>Influencers</b> <ul style="list-style-type: none"><li>• Family</li><li>• Associates and education</li><li>• Quality of information</li><li>• Her professional reputation</li></ul>
<b>Key Words</b> local realtor, buying a house, finding first house	<b>Questions</b> <ul style="list-style-type: none"><li>• What's the best mortgage for me?</li><li>• What do all these terms mean?</li><li>• Which lender is better?</li><li>• How much will it really cost me?</li><li>• What's my monthly payment?</li></ul>	<b>Websites She Visits</b> <ul style="list-style-type: none"><li>• Bing</li><li>• City/State</li><li>• Zillow</li><li>• BBB.org</li></ul>
<b>Entry Point</b> Articles		
<b>Reasons to Return</b> Blogs updated articles, short list of professional reviews		



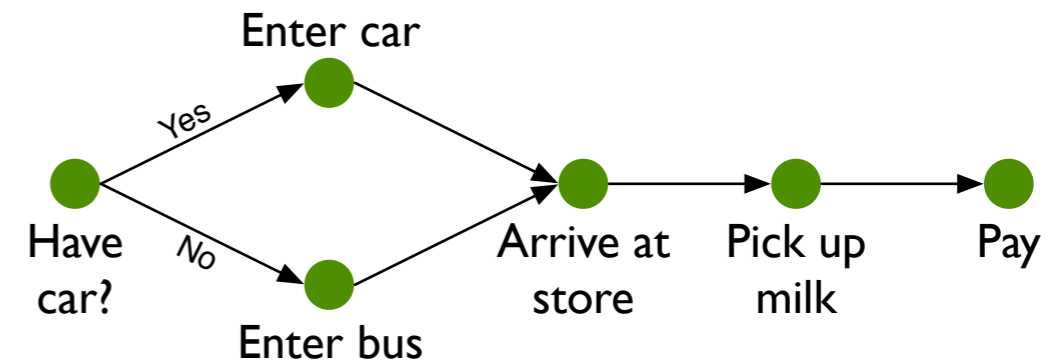
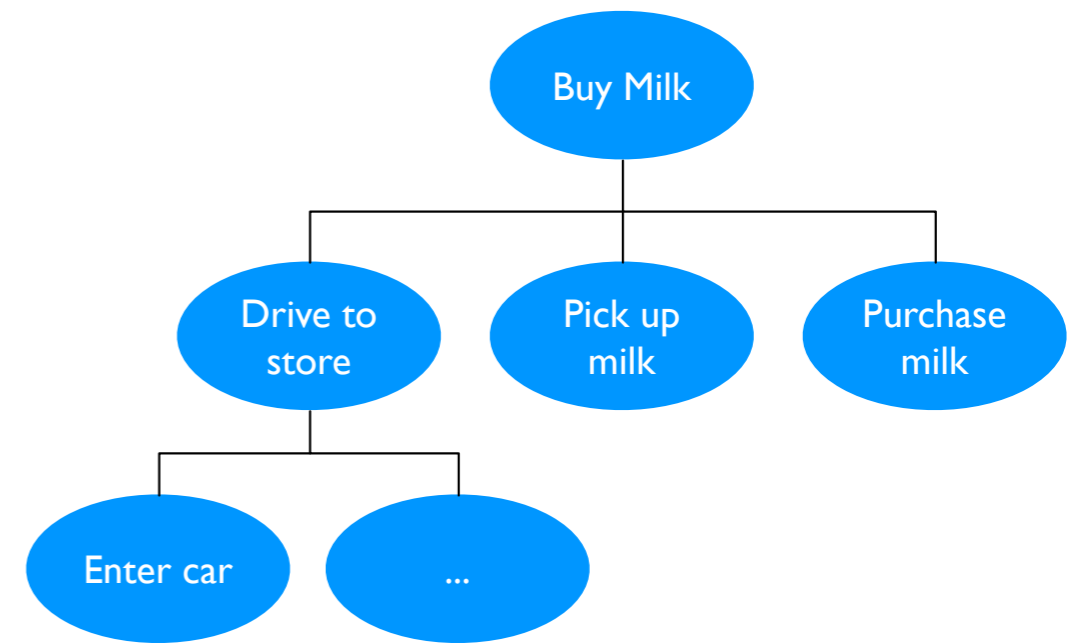
# Goals

- Life goals
  - “I want to be the best at what I do”
- Experience goals
  - “I want to feel competent and confident”
- End goals
  - “I want to watch a movie”



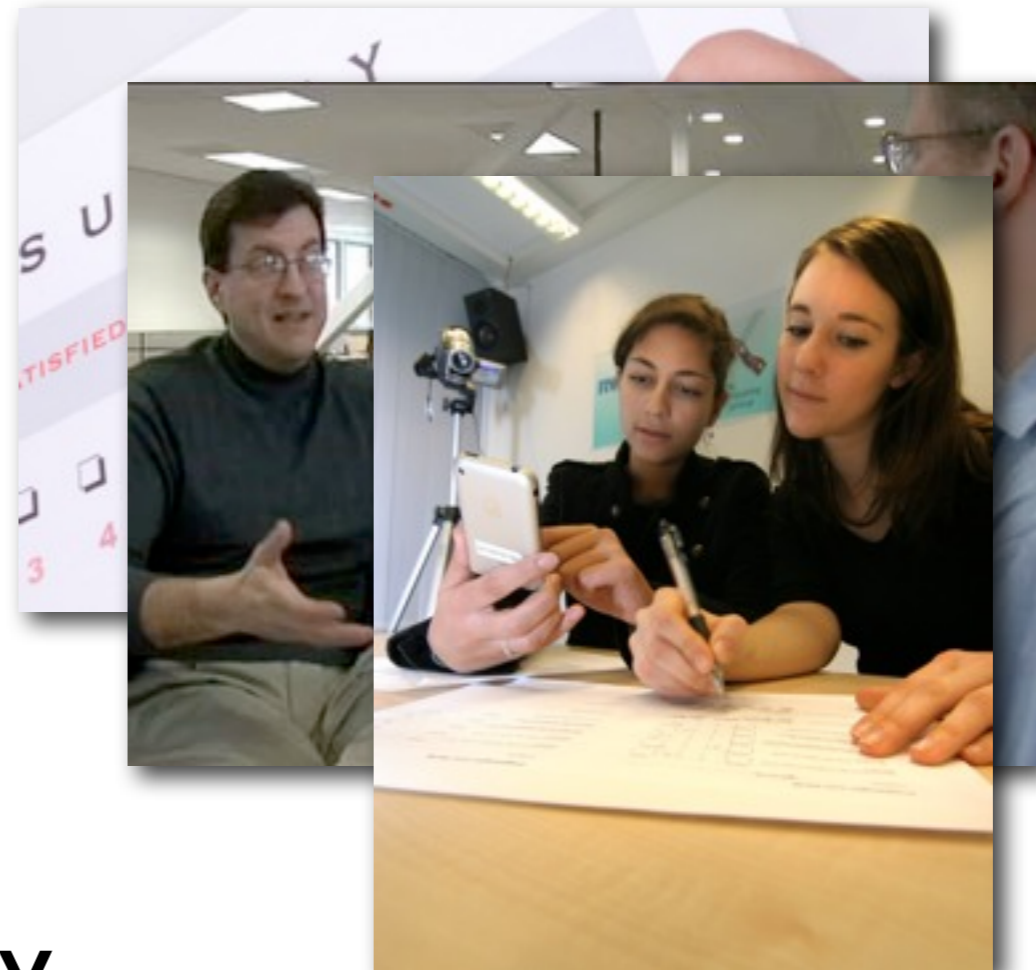
# Task Decomposition

- Divide complex task into subtasks
- State machine to define decisions



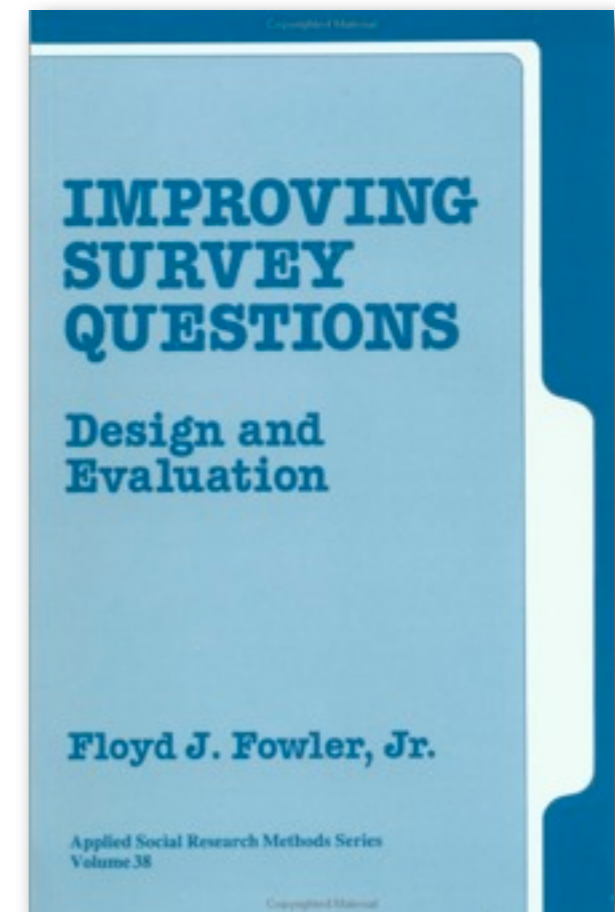
# Data Acquisition

- **Surveys**
  - mass-deployable
  - quantitative data
- **Interviews**
  - adaptive
  - qualitative data
- **Contextual Inquiry**
  - deep insights into the work domain



# Surveys

- What questions?
  - Fowler: Improving Survey Questions
- Where to deploy?
  - Internet (surveymonkey.com)
- How to interpret?
  - t-Test





# Survey Questions

- Formulate clear objectives
- Gather user profiles
- Lickert Scale
  - 1: poor, 2: fair, 3: good, 4: very good, 5: excellent
  - Allows quantification of survey results
- No leading questions
  - Which of the two systems would you prefer?
- Run a pilot study

poor	fair	good	very	excele
1	2	3	4	5



# t-Test

- Statistical hypothesis test
- Variants:
  - test whether given value is mean of measured data
    - one- / two-tailed
  - test whether two populations are equal
    - paired / unpaired
  - test whether slope of regression line is different from 0



# Interviews



- Be polite
- Do not waste the user's time
- Make the user comfortable
- Bribe (with gummy-bears)
- Inform the user



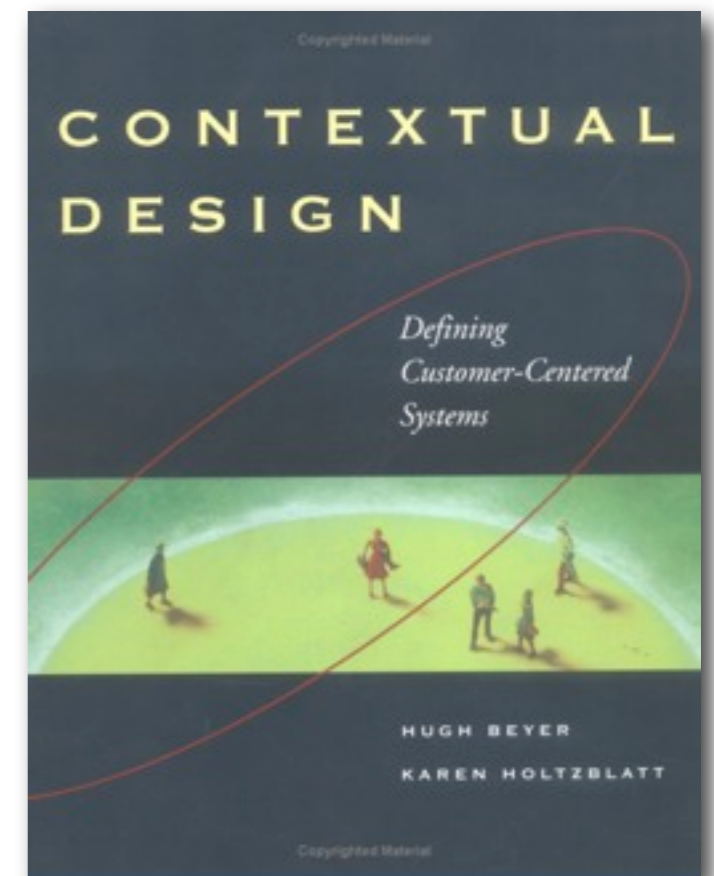
# Notes

- Paper
  - good: flexible, easy, reliable
  - bad: distracting, slow
- Audio
  - good: non-intrusive
  - bad: does not include interface
- Video
  - good: very detailed
  - bad: intrusive, time-consuming to analyze



# Contextual Inquiry

- Observe the user in her context
- Master / Apprentice Model
- Principles
  - Go where the user is
  - Involve the user
  - Interpret immediately
  - Focus on the design



# Contextual Inquiry

- Very high effort (2-4h per session)
- Very intrusive for the user
- Dependent on work situation
- Can reveal major design problems
- Findings are discussed immediately with the user



# Assignment

- Create Weblog
  - <http://www.wordpress.org>
- Perform Task Analysis
  - Who are the users?
    - create at least two distinct personas
  - What are their goals?
    - include in persona description
  - What are tasks?
    - perform tree decomposition and create state machines

