

# Analyzing User Data

Lecture 3

## Memo

- Reminder
  - No lecture session on Thursday 10/13

## Objectives

- Understand
  - Bottom up approaches to analysis
  - Affinity diagramming
  - How to build an affinity diagram
  - Personas
    - Different types of personas

## Outline

- Review Affinity Diagramming
  - Exercise
- Modeling Users
- Persona Development

## Gather-Analyze Cycle

- Requirements gathering and analysis are not separate and distinct
- Instead think - cycle or dialog
- Analysis reveals gaps in the data
- Return to the client/customer to collect more data

## Analysis Goals

- Make sense of the collected details
- Based on collected data, facts
- Often bottom up
  - inductive reasoning
  - focus on what's actually there

## Affinity Diagramming

1. Get notes, terms, examples up and viewable
2. Begin making conceptual categories and conceptual links
  - Possibly need to re-order, move, change a note position or conceptual idea
3. Generate conceptual labels
4. Organize conceptual labels
5. Record the result

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4. If there are no other similar notes, read another note, start another column

## Finish Adding Notes

1. Keep adding notes
2. Focus on goals/work activities
3. Watch out for “small” columns
  - They may belong with others
4. Watch out for “large” columns
  - They may be hiding interesting concepts

## Identify User Goals & Strategies (aka Blue Labels)

- Walk through a column of notes
  - Which belong – which are separate
- Develop a “Blue Label”
  - Written in the language of a user/customer
  - Describes a goal or activity that is relevant to design
  - Avoid “key wording”
- Notes \*can\* be move, Blue Labels can be rewritten
  - Don’t go crazy trying to get it “perfect”

## Re-organizing Affinities (aka Pink & Green Labels)

1. Identify common themes in “Blue Labels”
  - Move Blue Label columns as appropriate
2. Create a ‘temporary’ Green Label
  - Largest conceptual issues and goals
3. Create Pink Labels that address a set of “Blue Label” ideas
  - Pink Labels should still be in user/client words and language
4. Refine “Green Labels” to address logical “Pink Label”

## Exercise

- Build an Affinity Diagram

## Affinity Diagramming Comments

- Affinity diagrams help communicate important design concepts
- “Green”, “Pink”, “Blue” labels ...
  - Get serious – these are just convenient
- Classic strategy for noticing
  - similarity/difference
  - compare/contrast
  - pros/cons

## Personas and their Development

## Analyzing User Data

- We're considering modeling
  - Model of relevant concepts
    - affinity diagramming
- Why Model?
  - Represent salient features, structures, relationships
  - Formalization of patterns help with systematic design

## Starting Questions

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- Can a product be everything to everyone?
- Designing for the broadest population yields an unclear set of features
- Personas help narrow or identify the target user for a design

## Data for Personas

- Effective information to build personas
  - Interviews of users
  - Information about users from stakeholders
  - Market research
  - Market segmentation

## Persona Characteristics

- Based on hard data
- Represented by specifics
- Promote empathy for the user by designers and developers
- Archetypes not stereotypes
  - Stereotypes are generalizations
- Personas have goals/motivations

## Strengths of Personas

- Resolves problems of
  - Elastic user
  - Self referential design
  - Edge design cases

## Elastic User

- The user stretches at the convenience of the developers
- Want developers/designers all designing for the same user

## Self Referential Design

- People often design for their own wants, needs, goals
- Personas focus the design on specific users

## Design for Edge Cases

- Sometimes designers focus too much on edge cases that rarely happen
- Personas help focus on the common tasks activities

## Persona Goals

- Goals inferred from data gathered
  - User Goals
  - Life Goals - individually focused
  - Experience Goals - feelings around the artifact
  - End Goals - expectations or outcomes
- Non-user Goals
  - Customer goals
  - Corporate goals
  - Technical goals

## Persona Development in 7 Easy Steps

1. Identify behavioral variables
2. Map interview subjects to behavioral variables
3. Identify significant behavior patterns
4. Synthesize characteristics and relevant goals
5. Check for completeness
6. Develop narratives
7. Designate persona types

## Identify Behavioral Variables

- Given your data
  - Are there clusters of roles; are they distinct?
  - Are the behavioral variables clear?
- Possible Variables
  - Activities – what users do
  - Attitudes – what users think
  - Aptitudes – users training, capabilities, ability to learn
  - Motivations – why the user engages in this domain
  - Skills – capabilities of the user in this domain

## Map to Variables

- For each interviewee ...
  - Map each person onto your behavioral variables
  - Behavior is a range (e.g., high to low)
  - Approximation, not necessarily and exact fit
- Assume 15 interviews ... 5 variables
  - only 75 mappings to create

## Identify Significant Patterns

- With the mapping ...
  - Identify clusters
  - Do the clusters make sense?
  - Are there patterns, correlations among the clusters?
  
- For each of our 5 variables are there obvious clusters of each of the 15 mappings?

## Synthesize Goals

- For each of the significant clusters/patterns ...
  - Describe the characteristics of the situation, the tasks, current solutions, frustrations
  - Stick to observed/collected information
  - Outline goals
    - Life goals, experience goals, end goals
    - End goals are the most important

## Check Completeness

- Begin to compare the goals and characteristics of the developing personas
- Do two or more overlap significantly?
- Do you need to collect any additional behavioral data?

## Develop Narratives

- Persona Narrative includes
  - Introduction in terms of lifestyle or job
  - Sketch a day in the life
  - Product specific concerns interest
  - Story, several fictional events and reactions
- One to two pages
- Pick a photo for your persona

## Designate Types

- Need to prioritize your personas
  - Can only design for one principle persona
  
- Which persona is the
  - Primary
  - Secondary
  - Supplemental
  - Customer
  - Served
  - Negative

## Example

- sample

From Grudin & Pruitt - Personas, Participatory Design and Product Development: An Infrastructure for Engagement.

	Small Business	Enterprise	
			
	<b>Patrick Blakeman</b> Sales Rep. Pacific	<b>Sondra Mitchell</b> Sales Office Center	<b>Nicolas Velez</b> Marketing Manager
Customer Segment	...	...	...
Influence	...	...	...
Market Volume	...	...	...
Market Share	...	...	...
PC Usage	...	...	...
Key Reasons for Computer Use	...	...	...
Key Work Contexts/Values	...	...	...
Attitude Toward Technology	...	...	...
Barriers to Adopting Technology	...	...	...
Non-PC Technology	...	...	...