

User Research and Requirements

Lecture 9, Week 5

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CSC318HIS

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Phase 2: Components

- Detailed user research plan
- Instruments
 - Study protocol (template provided)
 - Informed consent form (template provided)
 - Three different instruments: interview scripts, observation scripts, questionnaires, etc.

Must-Read

Participant Observation (Mack 2005)

Designing useful and usable questionnaires
(Wilson 2007)

Semi-structured interviewing for user-centered
design (Wood 1997)

Must-Watch

"How to do a research interview"



http://youtu.be/9t-_hYjAKww

Week 5 To-Do List

- Watch good/bad interview video
- Submit Phase 2
- Bring at least 5 copies of instruments to tutorial this week for pilot testing

User Research & Requirements

Notes and Cautions

Users remember:

- The **lowest points**, when the system frustrated or failed the user
 - The **highest points**, when things went exceptionally well or smoothly
 - The **most recent points**, which are still fresh in the user's memory
- The lowest points are processed more and remembered in more detail. *[Baumeister 2001]*

Sources of Bias

Users not well chosen, not generalizable

Questions not appropriate or unclear

Setting familiarity, comfort, relevance

Researcher asking leading questions, judgment, feeling of being observed

Methodology poorly suited to research question

Data analysis issues such as inter-rater reliability

Reporting results not directly derived from data

User Research in ID

The purpose of conducting research on users is to understand them:

- User profiles (who your users are)
- Stakeholders (who else is affected by system)
- Tasks (what are users trying to do)
- Environment (what is happening around them)
- Artifacts (what other objects/interfaces are they using)

Requirements

You are conducting research in order to better understand the **requirements** of your users, and what they will eventually need your new design to do.

***E.g.,** Coffee shop tips: customers paying with cards are much less likely to tip than those paying cash.*

Environmental Requirements

Or the context of use for your system:

What's the physical environment like?

What's the social environment like? Would using your system inconvenience or confuse others?

What is the organizational environment?

How easy is tech support to obtain?

Are there stakeholders who control or influence your users?



Functional Requirements

Or what your system needs to be able to do:

What is your system doing in general terms?

What are the specific capabilities that the above requires?

How will your system support them?



Technical Requirements

Or how your system needs to be built:

Are there constraints to the technologies you can use (modality, emissions, battery life, etc.)

Price, size, weight, etc.

Compatibility and integration with other technologies

Data storage requirements



Usability Requirements

Or how easy to use should your system be:

Ease of learning: iPhone vs Boeing cockpit

Ease of use

Protection from, and recovery from
"errors"



DipJar



Personas

A **persona** is a hypothetical user archetype used throughout the design process.

Personas are not users, rather they are amalgamations of user goals, motivations and behaviours seen in data from real people.

The persona will include a description not only of the goals, but also of the characteristics of the user archetype: skills, attitudes, etc.

Primary personas are used to define the most common types of users.

Persona elements

Group (e.g., airline passengers)

Fictional name

Job titles/responsibilities

Demographics: age, education, ethnicity, family status

Goals and tasks

Physical, social and technological environment

A quote that sums up what matters most to them about the product

Primary persona

Demonstrates key goals and behaviour patterns.

If the design fails for a primary persona, the product will fail.

Each primary persona may require a different interface.

Example: a family electronic calendar.

Possible primary personas:

- Nancy, a career mom
- Stephen, a stay-at-home dad
- Slash, a forgetful teenager

Primary persona example

Bob is 52 years old and works as a mechanic with an organisation offering road service to customers when their car breaks down. He has worked in the job for the past 12 years and knows it well. Many of the younger mechanics ask Bob for advice when they meet up in the depot as he always knows the answer to tricky mechanical problems.



Bob works rolling day and night shifts and spends his shifts attending breakdowns and lockouts (when customers lock their keys in the car). About 20% of the jobs he attends are complex and he occasionally needs to refer to his standard issue manuals.

Bob has seen many changes over the years with the company and has tried his best to move with the times. However he found it a bit daunting when a new computer was installed in his van several years ago. Bob wonders if he will be able to cope with the new computer system. He doesn't mind asking his grandchildren for help when he wants to send an email to his brother overseas, but asking the guys at work for help is another story. *[Source: steptwo.com.au]*

Creating personas II

A persona acts as a character to designers and is written to encompass a salient range of details while helping designers relate to their user base.

Alliterating persona names with their main titles will help you talk about them:

		
Manager Molly	Slacker Steve	Tech Support Terrence

Families/Groups of Personas

A group of primary personas is useful if/when (mostly when) the range of your users cannot be represented by a single primary persona.

E.g., university students:

- Affluent Alice
- Commuter Kyle
- International Ingrid
- Mature Morris
- Limited means Larry

Scenarios

Narrative is a powerful design tool.

A **scenario** is an informal narrative description of users or personas using artifacts within environments to carry out tasks and activities.

Scenarios focus on the current state of users' activities and exclude the proposed system.

Scenarios have all the elements of narrative: characters, conflict, plot, resolution.

Scenario Example

"Bob is a project manager in an advertising company who often works from home. One day he forgot his **day-planner** at home and had meetings with clients across town. While attending an important meeting he realized that he was about to miss his lunch appointment, but he didn't have the phone number to cancel his scheduled lunch."

Questions?

This lecture is based on slides and content by:
ILONA POSNER

Materials from:

Interaction Design: Beyond Human-Computer Interaction. Rogers, Sharp and Preece. 2011

References:

Participant Observation, Mack 2005.

Designing useful and usable questionnaires, Wilson 2007.

Semi-structured interviewing for user-centered design. Wood, 1997.

An introduction to personas. http://www.steptwo.com.au/papers/kmc_personas/